

Diagnostic assessment of opportunities to catalyse blending of finance for climate resilient WASH in Cambodia

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ACRONYMS

ADB Asian Development Bank	IOM International Organisation for Migration
AFD Agence Française de Développement (French Development Agency)	ISEA Innovative Services Engineering & Advisory
AML/CFT anti-money laundering/ combating the financing of terrorism	JICA Japan International Cooperation Agency
ASEAN Association of Southeast Asian Nations	JMP joint monitoring programme
AUM assets under management	LAU local administration unit
BIT bilateral international treaties	LICADHO League for the Promotion and Defence of Human Rights
CBC Credit Bureau Cambodia	MEF Ministry of Economy and Finance
CCFTA Cambodia China free trade agreement	MFI microfinance institution
CIRWSS Cambodia Improving Rural Water and Sanitation Services program	MISTI Ministry of Industry, Science, Technology, and Innovation
CSES Cambodia socio economic survey	MOE Ministry of Education
CMA Cambodian Microfinance Association	MOH Ministry of Health
CSX Cambodian Securities Exchange	MPI multi poverty index
CSS Cambodian Shared Switch System	MPWT Ministry of Public Works and Transport
CSR corporate social responsibility	MRD Ministry of Rural Development
CWA Cambodian Water Supply Authority	MYSO Merry Year Social Company
DFAT Department of Foreign Affairs and Trade	NBC National Bank Cambodia
DFC Development Finance Corporation	NGO Non-Governmental Organisation
DFI development finance institution	NIS Newly Independent States of Eastern Europe, Caucasus and Central Asia
DIB development impact bond	NPL nonperforming loan
EMC Emerging Markets Consulting	ODF official development finance
EU European Union	OECD Organisation for Economic Co-operation and Development
Ex-Im Bank	OPIC Overseas Private Investment Corporation
FATF Financial Action Task Force	PII private impact investor
FDI foreign domestic investment	PPP public private partnership
FTA Free Trade Agreement	PPWSA Phnom Penh Water Supply Authority
FTB Foreign Trade Bank	RBC responsible business conduct
FY financial year	RBS risk-based supervisor system
GLAAS Un-water Global Analysis and Assessment of Sanitation And Drinking-water	RCEP Regional Comprehensive Economic Partnership
GCI global competitiveness index	RGC Royal Government of Cambodia
GDT General Department of Taxation	SDG sustainable development goals
GDP gross domestic product	SMEs Small and medium-sized enterprises
GII gender inequality index	TA technical assistance
GINI global inequality national index	TIFAs Trade and Investment Framework Agreements
GNI gross national income	UN United Nations
GRET Groupe de Recherche et d'Echanges Technologiques	UNCDF United Nations Capital Development Fund
HCI human capital index	UNDP United Nations Development Programme
HDI human development index	UNEP United Nations Environment Programme
HIC high-income country	UNICEF United Nations Children's Fund (former United Nations International Children's Emergency Fund)
HRW Human Rights Watch	USAID United States Agency for International Development
ICT information communications technology	UTS University of Technology Sydney
IFAD International Fund for Agricultural Development	WB World Bank
IFC International Finance Corporation	WEF World Economic Forum
IMF International Monetary Fund	WTO World Trade Organization
INFF Integrated National Finance Framework	

1. EXECUTIVE SUMMARY

The purpose of the method is to inform Development Partners on the status of the WASH sector and its attractiveness to private sector financing and to assist in planning future interventions and programmes in the country that mobilise private sector investments and apply blended finance modalities to the WASH sector.

The purpose of such blended finance programmes is to use Development Partners' funding to leverage additional private or institutional finance and thereby contribute to sustainable development and to achieving "effects" – such as scaled impacts and systemic change – which would not have been achieved without blending. Thus, blended finance brings along development and financial additionality to traditional Development Partners' interventions and modalities (e.g., technical assistance or grants). It provides the opportunity for Development Partners to become an investor in the sector, supplying capital which is important to sectoral ecosystem and demonstrating potential for such investments to the private sector.

In addition, blended finance offers another avenue by which Development Partners can influence the quality and characteristics of WASH services, mostly through prioritisation. Characteristics that might be prioritised include WASH services that are socially inclusive in terms of the accessibility of services delivered, the service delivery workforce, and the management and governance of WASH services. Prioritising or encouraging WASH services that are climate resilient, or perhaps also contribute to climate mitigation, is another key characteristic that Development Partners could seek to influence through their investments. This influence can be achieved in a number of ways. Development Partners can invest in the enabling environments to strengthen these particular characteristics of WASH services: for example, through supporting the development of policies, regulations, capacity development opportunities, monitoring and evaluations in order to favour, inform or regulate climate resilient and socially inclusive WASH services. Development Partners could also specify climate-resilient, socially inclusive, criteria for eligibility of WASH businesses to access blended finance funds.

The objectives of this diagnostic assessment were to identify current requirements, limitations, and opportunities for the application of blended financing approaches to scale-up water, sanitation and/or hygiene services in Cambodia. In particular, the objectives were to identify specific aspects of WASH services, as well as the enabling environment that governs, supports and influences WASH services, for which: (i) additional finance is required in order to scale-up; (ii) blended finance is an appropriate and feasible finance mechanism; and (iii) the enabling environment and WASH market are conducive to this approach.

This assessment has been conducted using a diagnostic methodology for country-level assessments that was designed alongside conducting this assessment (Tkachenko and Souter, 2021). That method was inspired by USAID's Roadmap for Blended Finance for Global Health (2015). The method, the details of which can be found in Tkachenko and Souter (2021), includes the following key steps:

1. Identify the Country archetype (based on WASH status and investment attractiveness)
2. Describe constraints to market-based WASH
3. Define financing needs and constraints
4. Evaluate the potential for blended finance
5. Identify options for a blended instrument
6. Prepare recommendations for a "*Blended Finance for WASH in country*" programme

A key principle of the assessment approach is to encourage a systems approach to identifying investment need and opportunity. This will reduce the risk that an investment in one area will fail to scale-up to climate resilience and socially inclusive WASH outcomes because that investment ignores, or even inhibits, other parts of the system.

The assessment for Cambodia demonstrated moderately high investment attractiveness, due to favourable macroeconomic conditions in the country, such as: stable economic growth, increasing consumer savings, favourable policies for foreign investments (in fact the best compared to most ASEAN countries), an improving corruption index, a favourable trend in some business indicators, and a moderately-to-highly developed WASH sector.

WASH services and systems in Cambodia are characterised by high levels of self-supported hygiene, declining open defecation rates (to levels below 10% in some areas), continuously improving latrine access in the remaining hard-to-reach segments of the population, and rapidly increasing piped water supply in viable non-networked areas. The social accessibility of piped water supplies has been improved by a well-developed pro-poor subsidy scheme. Piped water infrastructure attracts the attention of various development banks and foreign investors, with most projects (initiatives) involving the blending of financial resources from multiple partners. As an example, Access to Finance Program (a joint initiative of the World Bank, Agence Française de Développement (French Development Agency (AFD) and European Union (EU) blends financial resources from all agencies and deploys them either (1) as investments (debt) via a local bank in Cambodia for lending to water supply operators or (2) provides grants and TA to build capacities of the sector (see further details in Chapter 4, section 4.3).

The Provincial Investment Plan for piped water supply in Cambodia estimates the total investment cost required to build clean piped water systems in villages not covered by a pipe network to be USD 150 million. (That Plan was developed by the Investing in Infrastructure Program (3i) in collaboration with the Cambodian Ministry of Industry, Science, Technology, and Innovation (MISTI) in 2020, and was fully funded by the Australian Government (Embassy in Cambodia).)

Thus, opportunities for blended finance programmes exist already in Cambodia for piped water supply. These are best realised through providing intermediaries (rather than single enterprises) with access to finance, enabling them to work with multiple water supply operators and create packaged funding and engineering solutions. Support funding may be required to subsidise water connection fees for remote and/or disadvantaged communities or pay for capacity building or equipment. Additionally, to increase the climate-resilience of piped water supply, investment and technical assistance will be needed to support the government's capacity to sustainably manage its water resources.

Other remaining gaps in WASH services include drinking water quality, wastewater treatment, and faecal sludge management. Demand and supply may need to be cultivated (e.g. for faecal sludge management and household water treatment) or new service models initiated through institutional advocacy and infrastructure development (e.g. for wastewater treatment facilities). Market-based solutions may be viable for closing these service level gaps, yet in the absence of proven models, catalytic and market support funding is needed before a scale-up phase can be achieved.

This implies even broader and more significant opportunities for the sort of interventions that can fill market gaps and enable the transition of currently nascent WASH business models to more commercial investments where private sector participation is sustained. Such opportunities demand a blended finance approach.

Overall, the WASH sectors are steadily gaining attention and investment confidence by the private sector. Based on a recent¹ World Bank report on private sector participation in infrastructure, the water and sewerage sector,

¹ Private Participation in Infrastructure (PPI), Half Year report, World Bank 2021

which usually posts low investment levels, had its highest commitments in a decade at USD 7.8 billion across 23 projects globally, representing nearly a five-fold increase from 2020.

Considering the complexity and breadth of WASH gaps in Cambodia, this paper recommends a programmatic, systemic approach to WASH financing in Cambodia. Such an approach must blend various types of investment capital (hosted either within existing Development Partners' modalities or newly created) to provide investment capability and access to finance for the sector as well as subsidies (grants, technical assistance), with the intent of strengthening the market, supporting sectoral outcomes, and forming the pathway for enhanced scalability and viability.

2. COUNTRY ARCHETYPE – INVESTMENT ATTRACTIVENESS AND WASH STATUS

2.1 CAMBODIA ATTRACTIVENESS TO FOREIGN AND DOMESTIC INVESTMENTS

There has been a recent revision of Cambodia's strong growth outlook. Uncertain factors such as continuing outbreaks of the virus, decline in tourism activity (global tourism is expected to remain below pre-pandemic levels until 2023), and the threat of global trade tensions and protectionism have led to this revision. The financial stability of the country may be also impacted by the highly overleveraged microfinance (see Chapter 4) and banking sector (see Chapter 4.1), high credit growth in the banking sector and a shrinking country fiscal space due to domestic budgetary pressures, caused by the large government assistance in response to COVID-19. Furthermore, the country's external competitiveness is eroding, caused by rapidly rising wages, difficulties in doing business and uncertainties in investment reforms. These vulnerabilities are masked by the significant capital inflows to finance the construction and real estate sectors that occurred before the COVID-19 crisis.

To make matters worse, Cambodia's narrow export base and manufacturing sector – exhibiting weaknesses years before the pandemic – were hit hard by external demand shocks in 2020. Cambodia's Industrial Development Policy 2015-25 seeks to mobilise foreign and domestic investments through a number of measures: promoting large industries, expanding markets and enhancing technology transfer, diversifying FDI flows amongst a broader range of sectors and countries, creating special economic zones, providing incentives to investors, and revisiting the regulatory environment (a new investment law is currently being drafted) to strengthen competitiveness and investment conditions and to reduce the administrative burden on businesses.

Despite the above, Cambodia is on a pathway of graduating from its Low Development Country status² as defined by relevant thresholds. Cambodia has for the first time in 2021: exceeded the GNI per capita threshold (achieving USD 1,377 versus USD 1,222), exceeded the Human Asset threshold (74.3 versus 66), and achieved a stronger Economic and Vulnerability index score than the threshold (30.6 versus 32).

As an open economy with a comparatively low wage workforce and with preferential access to many of the world's largest markets, Cambodia is naturally appealing to investors. This can be seen in the sustained high FDI inflows relative to the size of its economy, in the increasing levels of foreign investments, in improvements to the country credit rating, corruption index and other metrics and in progresses to the commercial confidence of the population and businesses.

There is a well-developed banking and microfinance sector in Cambodia, a developing investment sector, increasing consumer gross savings, and improving foreign investments and business confidence. These all indicate high levels of country attractiveness to foreign investments. However, taking into consideration some of the less favourable (though improving) indicators, e.g., corruption and some business indexes, an overall investment attractiveness status is assessed as MODERATE-HIGH.

² <https://www.un.org/development/desa/dpad/least-developed-country-category/ldc-graduation.html>

i. Social development³

Cambodia's **population** as of October 2020 was 15,552,211,⁴ with 39% living in urban and 61% in rural areas. There are 3.5 million households with an average household of 4-5 people. The population growth rate is 1.4%. There is poor healthcare infrastructure in Cambodia and lack of access to such critical services as electricity and internet. 50% of households do not have access to the internet (37% in urban areas and 57% in rural).

Per capita GDP declined from \$4,574 in 2019 to \$4,422 in 2020 (as PPP in international dollars). Cambodia **GINI** index in 2018 was **36.6**.⁵ GINI index measures the extent to which the distribution of income or consumption expenditure among individuals or households within an economy deviates from a perfectly equal distribution. An index of 0 represents perfect equality, and an index of 100 perfect inequality.

Despite rapid economic growth, much of the population remains “near poor” and hence economically vulnerable. The **poverty rate is 17.7%** (rural 21%, urban 6%). The Oxford Poverty and Human Development Initiative⁶ compares multidimensional poverty levels across more than 100 countries, across 10 indicators in equally weighted dimensions—health, education, and standard of living and converts the data into a global Multi Poverty Index (MPI). The MPI for Cambodia in 2021 is **0.170** (ranked 73rd out of 115 countries analysed). The Government of Cambodia follows a participatory community approach combined with a poverty scorecard to identify households living in poverty. Since 2011, all poor people have been legally required to use **ID Poor** for eligibility of healthcare and financial benefits. Given the country's relatively large fiscal space, further boosting of the pro-poor and growth enhancing public investment is critical for economic recovery.

The **Human development index** (HDI) combines longevity, life expectancy, education index and income per capita.⁷ HDI for Cambodia is **0.59**, (144th place out of 189 countries).⁸ The **Human capital index** (HCI) quantifies the contribution of health and education to the productivity of the next generation of workers. It is very similar to the HDI but also focuses on the wellbeing of nations. The HCI reveals trends in the current education, skills and jobs agenda and the outlook for major economies, allowing countries to plan how much income they forego because of human capital gaps, and how much faster they can turn these losses into gains if they act now. The HCI for Cambodia is **0.49** on a scale where the maximum is 1.⁹

The **Gender inequality index** (GII) reflects inequalities in reproductive health, empowerment, and economic activity. Cambodia's GII is **0.474**, ranking 117 out of 162 countries in the 2019 index.¹⁰ In Cambodia, 19.3% of parliamentary seats are held by women and 15.1% of adult women have reached at least a secondary level of education (compared to 28.2% for their male counterparts). For every 100,000 live births, 160 women die from pregnancy-related causes. The adolescent birth rate is 50.2 births per 1,000 women of ages 15-19. Female participation in the labour market is 76.3% compared to 88.9% for men. About 26% of households are headed by females.

Employment in Cambodia has yet to return to pre-pandemic levels according to the High-Frequency Phone Survey of Households.¹¹ Prior to the COVID-19 outbreak, 82% of respondents were working. Following the onset

³ Refer Appendix D for the table of indicators, compiled from multiple sources by the research team

⁴ Cambodia general population census, October 2020

⁵ <https://knoema.com/atlas/Cambodia/GINI-index?view=snowflake>

⁶ Oxford Poverty and Human development Initiative, Charting pathways out of multidimensional poverty: Achieving the SDGs, 2020

⁷ <http://hdr.undp.org/en/content/human-development-index-hdi>

⁸ UNDP Human development report, The Next Frontier: Human Development and the Anthropocene, Cambodia, 2019

⁹ <https://data.worldbank.org/indicator/HD.HCI.OVRL?locations=KH>

¹⁰ UNDP Human development report 2019

¹¹ <https://microdata.worldbank.org/index.php/catalog/3859>

of the pandemic, as at December 2020, 72% were working. In December 2020, more than half of households operating non-farm businesses (58%) reported having made “less” or “no revenues” relative to the previous month. The labour force participation rate is 62%. The economically inactive rate is 38%. The unemployment rate is 1.5%.

There is a limited skilled workforce and low participation in education. Cambodia reports 97% enrolment in primary education, but enrolments in secondary and tertiary education are just 27.7% and 20% respectively. Government expenditures on education are only 2.6% of GDP.¹²

Based on the Sustainable Development Report for the achievement of **Sustainable Development Goals (SDG) status**,¹³ Cambodia is currently ranked **102nd** out of 193 countries with a score of 64.54% (out of 100%). The Royal Government of Cambodia (RGC) enthusiastically supports the Sustainable Development Agenda through a Voluntary National Review process, reporting within the framework of the National Strategic Development Plan 2019-2025. Although Cambodia’s economy remains resilient, **financing** the ambitious SDG agenda and growing public expectations, alongside declining overseas aid, **remains a challenge**. While RGC is aspiring to both mitigate and adapt to climate change, Cambodia remains highly exposed to the severe weather events and ongoing global warming due to climate change. Finally, there are several investment gaps required for public management reforms, capacity building, systems strengthening in relation to data, impact measurements, education, and stakeholder engagement.

ii. Economic development

Real growth in Cambodia was strongly impacted by the pandemic but was recovering in 2021: Cambodia’s **GDP growth rate** over the two years preceding 2020 averaged at 7% per annum, contracting to -3.4% in 2020 due to the COVID-19 pandemic. While the Cambodian economy continues to suffer impacts of the pandemic, there are signs that economic activity is beginning to pick up. The economy bounced back in 2021, with a projected growth rate of 4%.¹⁴

To mitigate negative impacts of the pandemic on poverty, to smooth consumption and to help firms avoid bankruptcy, The Royal Government of Cambodia provided a **cash transfer programme** for poor populations, approved in May 2020. An unprecedented volume of cash subsidies supported the livelihoods of the poor and the vulnerable. As of January 2021, 710,929 households, or 19.5% of all households, have received a cash transfer, with cash largely spent on food. Overall, government intervention accounted for 5% of GDP to support the affected people, including health-related spending and income assistance, equity injections and loan guarantees, development spending, and tax relief.

To further support the nation’s liquidity, a **monetary easing** policy was pursued. The National Bank of Cambodia (NBC) in February 2021 established Liquidity-Providing Collateralized Operation facilities to maintain exchange rate stability and allowed banking and microfinance sectors to continue to restructure loans until the end of 2021.

Historically, Cambodia’s economic growth has been underpinned mostly by strong development of the real estate and construction sectors and by years of expanding credit to the private sector. **Private debt** has

¹² <http://www.oecd.org/dev/inclusivesocietiesanddevelopment/youth-issues-in-cambodia.htm>

¹³ <https://dashboards.sdgindex.org/rankings>

¹⁴ “Cambodia Economic Update: Restrained Recovery - Special Focus Adapting to COVID-19 in an Uncertain World”, World Bank, November 2020

substantially increased over the past two decades and is susceptible to vulnerabilities, including high credit concentration, related-party lending risks, lack of consolidated cross-border supervision, and gaps in the implementation of financial institutions regulatory supervision (the risk-based supervision system (RBS)).

Credit-to-GDP-gap is 19%, above the 10% threshold (set by the Bank of International Settlement), which demonstrates the build-up of excessive credit. This gap is a central bank early warning indicator for a financial crisis. The consumer credit index report for September 2020 recorded by the Credit Bureau Cambodia (CBC) showed an 87% increase in credit card applications from the previous quarter (dropped to an increase of 38% for Q3 2021),¹⁵ while personal finance and mortgage grew at 52% and 50% respectively (Q3 2021 – 38% increase). **Household Debt** in Cambodia reached 29.2% of the country's nominal GDP in December 2020. Business lending also climbed, especially in the agricultural sector, driven by an increased appetite for investments linked to the prospect of commodity export growth from the Cambodia-China Free Trade Agreement (CCFTA), signed in 2020. Consumer and business credit growth is also attributed to improved credit access, reducing interest rates and numerous loan products associated with housing and corporate loans, complemented by growing middle class income capable of servicing greater lending volumes.

Interest rates of USD denominated loans and deposits have been stable since March 2021, with deposit rates at 3.3% per annum in March 2021, and loan rates at 8.9% per annum. Despite rising prices on retail petroleum products, **inflation** has been contained, declining to 1.7% in February 2021, partly supported by the easing of food prices and by a broadly **stable exchange rate** (which reached 4,072 riel per U.S. dollar at the end of May 2021, a slight increase from 2020).

Strong Foreign Domestic Investment (FDI) inflows and Gross International Reserves (GRI) accumulation are continuing: FDI as percentage of GDP has been growing steadily since 2017, reaching 13.6% in 2020, or USD 3.4 billion. In 2020 the current account deficit was fully financed by FDI, while gross international reserves accumulated further, reaching USD 21.5 billion, or more than 10 months of prospective imports.¹⁶ The total stock of FDI in Cambodia stood at USD 36.9 billion in 2020. In general, the main investing countries are China, followed by South Korea, Vietnam, Japan, and Singapore. Chinese FDI – largely from state-run or associated firms – was a significant driver of growth until 2019.¹⁷ Physical infrastructure projects, including commercial and residential real estate developments, continue to attract the bulk of FDI. However, there has been some increased investment in manufacturing, including garment and travel goods factories, as well as agro-processing.

Cambodia's public debt is entirely external due to the non-existent domestic debt market. Loan disbursements in 2020 included ADB, Japan, China (with a total outstanding debt of USD 3.9 billion, or 44.2% of total debt stock), and the World Bank. Total debt disbursement reached more than USD 1.2 billion in 2020. Until recently, the largest contribution to loan disbursement growth came from bilateral creditors such as China and France. By contrast, in 2020, the largest contribution came from ADB, accounting for 30.4% in total loan disbursement growth, peaking at USD 421.9 million in 2020 and up 2.5 times from 2019. The contribution of debt disbursement from Japan was next, accounting for 7.6% (USD 149.8 million) of the growth. The entire public debt stock is denominated in foreign currencies, so that Cambodia is exposed to risks from exchange rate adjustments under a highly dollarised economy. Cambodia's **debt-to-GDP** ratio reached 34.2% of GDP (USD 8.8 billion in outstanding debt) in 2020 and is projected to increase further in 2021. In 2020, external borrowing was mainly

¹⁵ <https://www.creditbureau.com.kh/report-and-publication/consumer-credit-index/>

¹⁶ "Cambodia Economic Update, June 2021: Road to Recovery, Special Focus Government-to-Person (G2P) Payments for social benefits", World Bank, June 2021

¹⁷ <https://www.state.gov/reports/2021-investment-climate-statements/cambodia/>

from the public infrastructure sector, accounting for 62.6% of total borrowings. Risk of debt distress remains low due largely to the authorities' borrowing principle of only contracting external debt on concessional terms.

Cambodia is in the process of **establishing its domestic debt market** in response to shrinking concessional borrowing as Cambodia has become a lower-middle-income economy. A new Law on Government Securities (authority of Minister of Economy and Finance) was adopted in December 2020, providing the legal and regulatory framework for issuing, trading, and managing government securities with transparency, accountability, efficiency, and effectiveness – supporting public debt management and debt sustainability.¹⁸ The domestic debt market, when established, will help gradually diversify financing sources, promoting domestic investments and savings, and will help to de-dollarise the economy (if domestic debt issued is denominated in the local currency).

Cambodia's **Foreign Exchange Reserves** were measured at USD 16.5 billion in September 2021. The Foreign Exchange Reserves equalled 6.1 Months of Imports in March 2021. The growth of **Broad money** (a measure of money supply) eased, largely due to the deceleration of foreign currency deposits. Given Cambodia's highly dollarised economy, foreign currency deposits account for more than 70% of broad money. Broad money growth was 15.2% pa in February 2021 as growth of foreign currency deposits fell, reflecting an easing of capital inflows.

Ease of doing business: Cambodia's performance in many international rankings, consistent with significant informal intelligence, suggests that it remains a difficult place to do business, particularly in light of the weak public institutions and policy uncertainty. There is a heavy administrative burden associated with registering and operating a business, complicated by poor consultation with the private sector on draft laws. However, the poor performance in "starting a business" rankings (see Table 1) has not prevented a significant foreign investor presence which has driven both economic growth and poverty reduction in the country.

TABLE 1 – EASE OF DOING BUSINESS INDICATORS

TI Corruption Perceptions Index	Ranked 160 out of 180 ¹⁹
World Bank's Doing Business Report	Ranked 144 out of 190 (2020) ²⁰
Global Innovation Index	Ranked 110 out of 131 (2020) ²¹
Starting the business rank	183 (number of days to register business – 99)
Ease of doing business rank	Ranked 138 out of 190

Cambodia is highly open for foreign investments according to the OECD FDI Regulatory Restrictiveness Index,²² particularly when compared not only to neighbouring ASEAN countries but also to the OECD average and across sectors. However, the country still faces concerns over a lack of transparency (and sometimes insufficient documentation translated into English), fairness, and low predictability of the regulatory regime. Over the past years, there were significant reforms and regulatory changes undertaken by the government to attract foreign investment into the country (for further details please refer Chapter 4.2). Cambodia scores **10 out of 12 for the**

¹⁸ Cambodia Public Debt Statistical Bulletin (March 2021), Ministry of Economy and Finance

¹⁹ <http://www.transparency.org/research/cpi/overview>

²⁰ <https://www.doingbusiness.org/en/rankings>

²¹ <https://www.globalinnovationindex.org/analysis-indicator>

²² OECD Investment Policy Reviews, CAMBODIA, 2018

strength of legal rights index, reflecting recent attempts to align local laws with international requirements. The most recent Global competitiveness index (GCI) examined 140 economies with emphasis on the role of human capital, innovation, resilience, and agility as measures for economic success in the 4th Industrial Revolution. Cambodia scored **52.08 points out of 100** on the **2019 Global Competitiveness Report** published by the World Economic Forum.²³

2.2 WASH STATUS

Cambodia has experienced a rapid transformation in WASH service levels over the past two decades. Significant improvements have been achieved in various domains, including urban and rural areas and reductions in inequalities. However, gaps remain in some segments of the service chain, including: geographical disparities (particularly unmet demand for sanitation in remote or low population density regions and for piped water in many rural areas), some services for the poor (as well as the “near poor” who aren’t eligible for social support), and elements specific to SDG Targets 6.1 and 6.2 (notably the prevalence of contaminated drinking water and wastewater and faecal sludge treatment failing to meet the standard defined as “safely managed” services). Self-reported hygiene performance is high – but may be overreported. The policy environment for market-based WASH is supportive.

Overall, Cambodia presents a **MODERATE-HIGH** potential for engagement to address unmet demand for WASH services: particularly through increasing piped water supply in viable non-networked rural areas and addressing latrine access in the remaining hard-to-reach segments of the population. There are some gaps in the WASH service chain, and for these, demand and supply may need to be cultivated, particularly for faecal sludge management and household water treatment, or service delivery models initiated through institutional advocacy and infrastructure development (e.g. wastewater treatment facilities).

i. Drinking water

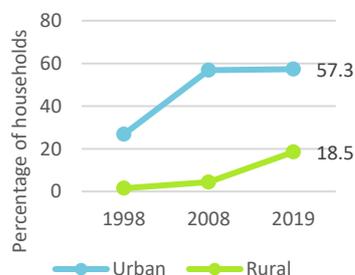


FIGURE 1 – TRENDS OF USE OF PIPED WATER FOR DRINKING 1998 TO 2019 – ADAPTED FROM NATIONAL CENSUS, NIS 2020

As a result of significant professionalisation and investment over the past two decades, piped water is now the most common drinking water source in Cambodia – consumed by one in three Cambodians (Table 2; NIS 2020)²⁴ with services delivered by 424 private water operators and 10 public utilities (CWA 2021).²⁵ Piped water is mostly consumed in urban areas where coverage is widely available; however, coverage is also rapidly expanding in rural areas (Figure 1).

The apparent lack of progress in urban piped water between 2008 and 2019 is likely the result of the expansion of the number of urban households (500k to 1.3m) and increasing consumption of non-piped water (namely bottled water) among piped water users.

The smallest administrative unit in Cambodia is the village, of which 50% are estimated to already have access to a piped network (CWA 2021). Piped network coverage gaps do persist in some urban areas (particularly smaller cities and towns, peri-urban areas) and connectivity is lower among the poor. Recent estimates by 3i

²³ <https://www.weforum.org/>

²⁴ General Population Census of the Kingdom of Cambodia 2019; National Report on Final Census Results, National Institute of Statistics – Ministry of Planning, October 2020

²⁵ Cambodian Water Supply Authority; Interview with Lim Minh and Toch Sokunthea on December 17, 2021

and the World Bank suggest that 95% of villages could viably support and be service by a piped water network (MISTI 2020).²⁶

A sizable (but not yet quantified) proportion of the connected population drinks water from other sources (particularly bottled water), typically due to negative perceptions towards piped water quality and safety. While the total proportion of households with access to a piped network connection has not yet been surveyed nor well understood, it is estimated that there are a total of 1 million legal piped connections in the country (CWA 2021).

TABLE 2 – MAIN SOURCE OF DRINKING WATER – ADAPTED FROM NATIONAL CENSUS 2019 – % OF HOUSEHOLDS (NIS 2021)

Drinking water source	National	Urban	Rural
Piped water	33.0	57.3	18.5
Tube well	25.2	12.9	32.6
Dug well	10.4	3.6	14.5
Rainwater	2.8	1.5	3.5
Surface water	10.6	5.4	13.7
Cart/tanker	9.7	8.8	10.3
Bottled water	7.1	9.8	5.4
Other	1.2	0.7	1.5
Total	100	100	100

Other non-piped water sources remain very relevant to the water sector in Cambodia, and more so in rural than in urban areas. Approximately half of all rural Cambodians drink from some form of groundwater source: mostly from hand pump fitted tube wells and to a lesser extent traditional dug wells. The prevalence of groundwater wells used for consumption varies geographically, often depending on the quality (safety and taste) and ease of access to groundwater aquifers. The presence of naturally occurring arsenic in the groundwater remains a concern in the Mekong Delta region, although widespread well testing, information campaigns, and promotion of alternative water supplies have reduced reliance on contaminated groundwater (UNICEF 2018²⁷). Shallow wells – particularly dug wells and those in higher density agglomerations – have been found to be associated with poor microbial water quality as well as elevated nitrate concentrations (Bennett et al., 2010²⁸).

From an access perspective, the greatest concern in Cambodia remains the 14% of rural dwellers who continue to drink surface water, which is prone to contamination. In the rural Cambodian context, water is commonly pumped or carried from rivers, streams, lakes and even ponds where it is subsequently stored at or near the home. In particular, surface water may be relied upon by socially disadvantaged households because it may be “free” (if collected and transported by the householder, as is common). The prevalence of surface water for drinking may be underestimated in national statistics because a significant fraction of water sources has been categorised as “cart/truck water” (Table 1) and is likely to represent untreated surface water delivered to the home by a microentrepreneur. While a very small fraction of the rural population relies on harvested rainwater as their *main* drinking water source (Table 1), it is a very common secondary drinking water source, dominating

²⁶ Provincial Investment Plan in Piped Water Supply in Cambodia, Ministry of Industry, Science, Technology and Innovation (MISTI) & Investing in Infrastructure Program (3i), 2020

²⁷ UNICEF Cambodia Evaluation and Learning Brief #7 - Global Evaluation of UNICEF’s Drinking Water Supply Programming in Rural Areas and Small Towns – Cambodia Country Case Study; April 2018, <https://www.unicef.org/cambodia/media/1206/file/Evaluation%20of%20UNICEF%20Drinking%20Water%20Supply%20Programming%20Brief.pdf>

²⁸ H. B. Bennett, A. Shantz, G. Shin, M. L. Sampson, J. S. Meschke; Characterisation of the water quality from open and rope-pump shallow wells in rural Cambodia. *Water Sci Technol* 1 January 2010; 61 (2): 473–479. doi: <https://doi.org/10.2166/wst.2010.817>

the rural water landscape during times of plentiful rainfall over the wet season months (June until November; NIS 2014).²⁹ Rainwater is commonly preferred for drinking because of its purity (lack of chemicals, in contrast to piped water, and lack of such impairing elements as iron, commonly found in groundwater).

Novel water supply systems have emerged in rural Cambodia with the aim of providing safe and affordable water, including various configurations of large-scale rainwater storage systems, modified hand pumps (such as the rope pump), and water kiosk schemes selling potable bottled water in 20 litre jugs (comprised of a water source, pumping, treatment, a packaging facility, and a retail distribution network). While several NGOs have established water kiosk programmes, the most prevalent is that of Teuk Saat 1001 (under the O-we brand) – for which there are 300 kiosk systems operating across 17 provinces and serving over 800,000 people (Teuk Saat 2021³⁰).

SDG 6.1 aims to achieve universal and equitable access to safe affordable drinking water for all by 2030 (WHO & UNICEF 2021³¹). Safely managed water services comprise of water delivered to the user by *improved* supplies³² which are also: 1) accessible to users in household premises; 2) available to users when needed; and 3) free from contamination. Access to safely managed water services is low in Cambodia, despite very high *improved* water coverage. **Nationally, 28% of the population consumes safely managed drinking water:** 57% in urban and 18% in rural areas (Figure 2; WHO & UNICEF 2021). Access to improved water supply is very high: 99% and 81% in urban and rural Cambodia respectively. Most households have access to their drinking water source on their premises (63%; NIS 2020). Availability of drinking water when needed has not yet been sufficiently assessed in Cambodia and has not yet been factored into the calculation of safely managed water services. Less than a third of households in Cambodia drink water that is not contaminated with faecal bacteria, and this represents the main factor contributing to low levels of safely managed drinking water. Two separate surveys in Cambodia have assessed the point-of-consumption drinking water quality representative of urban and rural domains, revealing that 57.5% (Chea, 2015³³) and 22.8% (Shantz 2014³⁴), respectively, are consuming drinking water free of *E. coli* (a commonly used indicator of faecal contamination). Drinking water treatment is a common practice in Cambodia (reportedly practiced by 72% of rural households), but most data is based on self-reported practices that may be inflated (MRD 2016³⁵). Boiling is the most common method employed (72%) while the use of ceramic (26%) and bio-sand (11%) filters is also moderately common (MRD 2016). However, testing of point-of-consumption water quality has revealed significant contamination – and potentially post-treatment recontamination (Shantz 2014; Poirot 2018³⁶) – resulting from unhygienic household storage and handling practices.

²⁹ National Institute of Statistics/Cambodia, Directorate General for Health/Cambodia, and ICF International. 2015. Cambodia Demographic and Health Survey 2014. Phnom Penh, Cambodia: National Institute of Statistics/Cambodia, Directorate General for Health/Cambodia, and ICF International

³⁰ Teuk Saat 1001; Interview with Frédéric Dubois on December 16, 2021

³¹ Progress on household drinking water, sanitation and hygiene 2000-2020: five years into the SDGs. Geneva: World Health Organization (WHO) and the United Nations Children's Fund (UNICEF), 2021. Licence: CC BY-NC-SA 3.0 IGO

³² Those which by their design and characteristics are more likely to provide safe drinking water

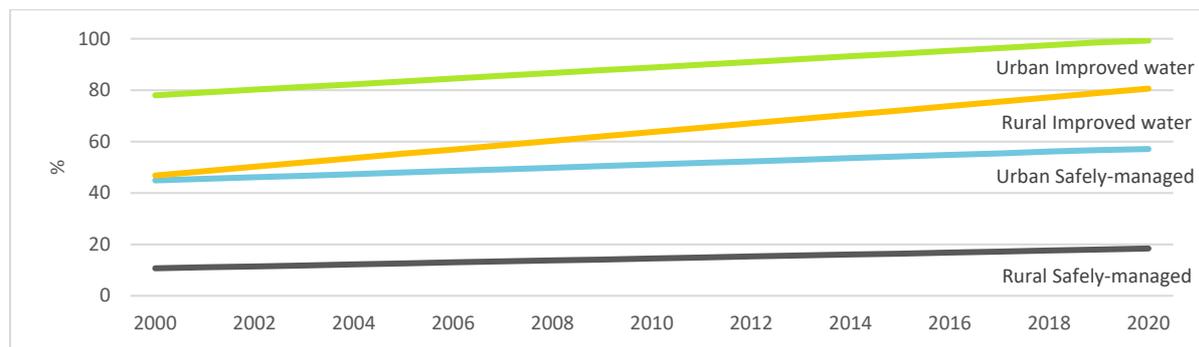
³³ Chea, Eliyan; World Health Organization. (2015). An assessment of urban household microbial quality of drinking water at point of consumption. Phnom Penh, Cambodia

³⁴ National National Microbial Assessment of Rural Household Point-of-Consumption Drinking Waters – Technical Report; Shantz, Andrew; WHO; Ministry of Rural Development, Phnom Penh. 2014

³⁵ Cambodia Rural Water, Sanitation, and Hygiene Knowledge, Attitudes and Practices (KAP) Survey; Department of Rural Health Care, Ministry of Rural Development, December 2016

³⁶ Poirot E, Som SV, Wieringa FT, Treglown S, Berger J, Lailou A. Water quality for young children in Cambodia. 2020

FIGURE 2 – ESTIMATES OF PROGRESS – ON IMPROVED AND SAFELY MANAGED DRINKING WATER SERVICES IN URBAN AND RURAL CAMBODIA (ADAPTED BASED ON DATA FROM JMP 2021)



Access to basic drinking water (defined nationally as “use of an improved water supply”) is monitored across all of Cambodia’s 26 provinces individually, revealing significant geographical disparities across the country (Table 3). Basic drinking water coverage ranges from 44% in Kampong Thom to 100% in Oddar Meanchay, while the national average is 75% (MRD 2021).³⁷ Access is also being monitored within the segment of the population issued with ID Poor cards,³⁸ of which 51% have access to basic drinking water (MRD 2021).

Access to services may be lower among poor households that are not poor enough to qualify for an ID card and thus unable to benefit from social programmes.

Among health facilities and schools, 95% and 90% respectively have access to basic drinking water (MRD 2021).

TABLE 3 – ACCESS TO BASIC DRINKING WATER BY PROVINCE (ADAPTED FROM MRD 2021)

Name (alphabetical)	% families with basic drinking water	Name (ranked highest to lowest)	% families with basic drinking water
Banteay Meanchey	86.8	Oddar Meanchey	100
Battambang	44.8	Svay Rieng	99.5
Kampong Cham	91.7	Phnom Penh	98.9
Kampong Chhnang	76.4	Kampong Cham	91.7
Kampong Speu	69.1	Banteay Meanchey	86.8
Kampong Thom	44.4	Prey Veng	85.5
Kampot	55.7	Kandal	84.6
Kandal	84.6	Kratié	78.7
Kep	53.1	Koh Kong	78.3
Koh Kong	78.3	Tboung Khmum	76.8
Kratié	78.7	Kampong Chhnang	76.4
Mondulhiri	63.9	Siem Reap	74.2
Oddar Meanchey	100	Pursat	73.4

³⁷ Cambodia National Rural Water & Sanitation Report 2021 Q4; Monitoring Information System; Ministry of Rural Development; 30 November 2021

³⁸ Physical cards given to qualifying households based on indicators of socio-economic status. At present, valid cards have been issued to 11% of Cambodian households (mostly in rural areas). Cards may be used to prove eligibility for social subsidies or other benefits

Pailin	68
Phnom Penh	98.9
Preah Sihanouk	66.2
Preah Vihear	56.8
Prey Veng	85.5
Pursat	73.4
Ratanak Kiri	57.9
Siem Reap	74.2
Stung Treng	64.8
Svay Rieng	99.5
Takéo	51.7
Tboung Khmum	76.8

Kampong Speu	69.1
Pailin	68
Preah Sihanouk	66.2
Stung Treng	64.8
Mondulkiri	63.9
Ratanak Kiri	57.9
Preah Vihear	56.8
Kampot	55.7
Kep	53.1
Takéo	51.7
Battambang	44.8
Kampong Thom	44.4

ii. Sanitation

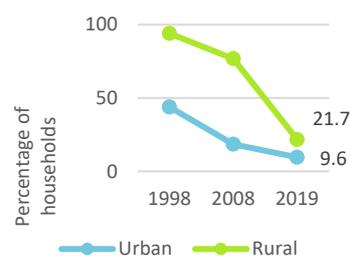


FIGURE 2 - TRENDS OF OPEN DEFECACTION 1998 TO 2019 – ADAPTED FROM NATIONAL CENSUS, NIS

Access to sanitation services has increased even more dramatically over the past two decades than that for water. Currently, approximately 83% of the population uses a toilet facility, with only 17% practicing open defecation (10% in urban areas and 22% in rural; Figure 3; NIS 2020). A breakdown of toilet facility types is presented in Table 3 (with figures from the CSES 2020 differing slightly from Census 2019).

Detailed figures from the CSES 2020 have been presented rather than from Census 2019 due to the potential misclassification of sewer connected facilities in the census. Most households with a toilet/latrine facility use a pour flush toilet (Table 4). In urban areas this facility is often connected to a sewer, while in rural areas it is almost always connected to a concrete ring lined pit. Dry pits exist in the country but are increasingly rare due to strong social preferences for a pour flush toilet.

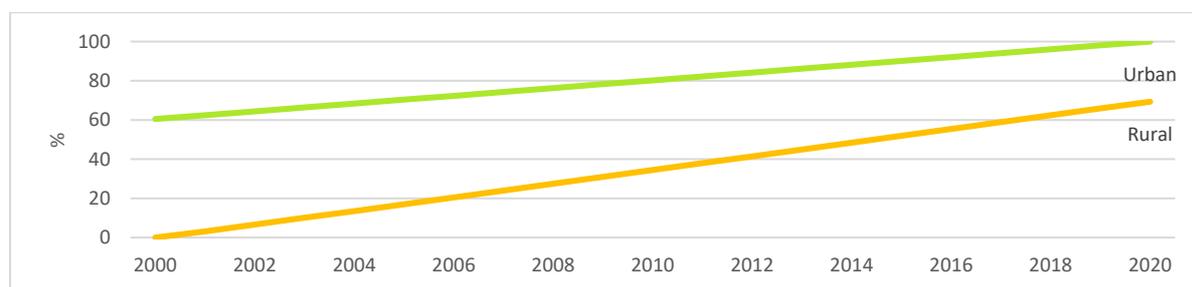
TABLE 4 – TOILET FACILITY – ADAPTED FROM THE CAMBODIA SOCIO-ECONOMIC SURVEY 2020 - % OF HOUSEHOLDS (NIS 2021)

Type of toilet facility	National	Urban	Rural
Open defecation (no facility)	17.8	8.5	23.3
Pour flush to sewer	14.2	30.5	4.6
Pour flush to pit/tank	63.0	57.5	66.2
Pour flush to elsewhere	2.3	1.8	2.5
Dry pit	2.6	1.6	3.2
Total	100	100	100

SDG Target 6.2 aims to achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, while also paying particular attention to the sanitation and hygiene needs of special groups: namely, women, girls and the vulnerable. For sanitation services to be “safely managed” they must provide access to an

improved³⁹ sanitation facility not shared with other households, where excreta are either: 1) treated and disposed of in situ (i.e. in the pit or tank to which it has been conveyed); 2) stored in situ temporarily and subsequently emptied and treated off-site; or 3) transported via sewer and treated off-site (i.e. at a wastewater treatment plant) (WHO & UNICEF 2021). In Cambodia, there is insufficient nationally representative data on wastewater and faecal sludge management (emptying, disposal, and treatment practices) thus prohibiting the calculation of access to safely managed sanitation services. However, **access to safely managed sanitation services is likely to be low in urban areas due to very low levels of sewer wastewater treatment**⁴⁰ – and higher in rural areas due to most pits not yet needing emptying (SNV 2019)⁴¹. Access to improved sanitation services has been calculated, and the latest figures reveal 80% coverage nationally – 91% in urban areas and 74% in rural areas (NIS 2021). These figures are in contrast to the modelled estimations by the Joint Monitoring Programme (JMP) for 2020, which predicted 100% urban and 69% rural coverage.

FIGURE 4 – ESTIMATES OF PROGRESS ON IMPROVED SANITATION SERVICES IN URBAN AND RURAL CAMBODIA (ADAPTED BASED ON DATA FROM JMP 2021)



Access to basic sanitation (defined nationally as “use of an improved toilet/latrine”) is also monitored across all of Cambodia’s 26 provinces – and like that for drinking water, the data presents notable geographical disparities (Table 5). Basic sanitation coverage ranges from 51% in Stung Treng to 95% in Svay Rieng, while the national average is 78% (MRD 2021). Sanitation coverage is notably lower in the provinces in the north and north-east (Plains region) of the country – likely due to their remoteness, lower priority, higher latrine cost, and lower affordability.

TABLE 5 – ACCESS TO BASIC SANITATION BY PROVINCE (ADAPTED FROM MRD 2021)

Name (alphabetical)	% families with basic sanitation	Name (ranked highest to lowest)	% families with basic sanitation
Banteay Meanchey	78.5	Stung Treng	50.8
Battambang	77.9	Koh Kong	52.1
Kampong Cham	78.8	Monduliri	54.4
Kampong Chhnang	79.2	Ratanak Kiri	54.7
Kampong Speu	78.9	Preah Vihear	58.3
Kampong Thom	64.9	Kratié	59.1
Kampot	75.9	Tboung Khmum	63.1

³⁹ Sanitation facilities which are more likely to ensure the separation of excreta from human contact

⁴⁰ Functional systems only exist in Sihanouk Ville and Siem Reap (however the later receives a small fraction of total sewer flows).

⁴¹ Learning Brief –

What can be done when latrines become full? An exploration of faecal sludge management challenges and solutions in Banteay Meas, Cambodia.; Shantz, Andrew; SNV Netherlands Development Organisation; 2019, <https://snv.org/assets/explore/download/2019-fsmchallengessolutions-banteaymeas-cambodia.pdf>

Name (alphabetical)	% families with basic sanitation	Name (ranked highest to lowest)	% families with basic sanitation
Kandal	90.1	Kampong Thom	64.9
Kep	89.8	Pursat	68.6
Koh Kong	52.1	Takéo	73.7
Kratié	59.1	Pailin	74.9
Mondulkiri	54.4	Kampot	75.9
Oddar Meanchey	77.4	Siem Reap	76.4
Pailin	74.9	Oddar Meanchey	77.4
Phnom Penh	93.7	Battambang	77.9
Preah Sihanouk	81.9	Banteay Meanchey	78.5
Preah Vihear	58.3	Kampong Cham	78.8
Prey Veng	93.3	Kampong Speu	78.9
Pursat	68.6	Kampong Chhnang	79.2
Ratanak Kiri	54.7	Preah Sihanouk	81.9
Siem Reap	76.4	Kep	89.8
Stung Treng	50.8	Kandal	90.1
Svay Rieng	94.8	Prey Veng	93.3
Takéo	73.7	Phnom Penh	93.7
Tboung Khmum	63.1	Svay Rieng	94.8

Access to basic sanitation among ID Poor households was 54% in 2021 (MRD 2021).

Among health facilities and schools, 95% and 88% have access to basic sanitation respectively (MRD 2021). Progress in sanitation coverage can also be measured by Open Defecation Free (ODF) status, of which 8.4% of districts, 14.7% of communes, and 28.4% of villages have met government standardised requirements and formally been granted the status (MRD 2021).

iii. Hygiene

Access to hand washing facilities is high in Cambodia. Only 7% and 14% of urban and rural households respectively do not have a hand washing facility within their dwelling (NIS 2021). Hand-poured washing facilities are most common (49% and 73% of urban and rural households respectively). However, 40% of urban households wash their hands via running water from a piped system or tank (NIS 2021). Most households also have soap available for handwashing (90% of urban households and 82% of rural households; NIS 2021). Various challenges with menstrual hygiene management exist in the country, most notably a poor environment for girls in schools (lack of privacy and security, toilets not adequately segregated by sex, lack of sufficient knowledge and sanitary materials and a designated location for their disposal (UNICEF 2016⁴²)).

⁴² Assessing accessibility, safety, and menstrual hygiene management across school WASH facilities in Cambodia – Final Report; UNICEF – Cambodia, 2016

2.3 CAMBODIAN ARCHETYPE

The concept of a country archetype⁴³ (adapted)⁴⁴ provides guidance and shortlisting of blended finance instruments that are most relevant for the given country context, and determines the general objectives for any subsequent blended finance programme. The three archetypes (Build, Strengthen and Transition) are determined by two composite indicators, one to measure a country's WASH system status and the other assessing attractiveness to investors.

TABLE 6 – COUNTRY ARCHETYPE BY WASH STATUS AND INVESTMENT ATTRACTIVENESS SCORE

		WASH STATUS (UNMET DEMAND, POLICY SUPPORTIVENESS)		
		Strong	Moderate	Weak
INVESTMENT ATTRACTIVENESS	Strong	TRANSITION	TRANSITION	STRENGTHEN
	Moderate	TRANSITION	STRENGTHEN	BUILD
	Weak	STRENGTHEN	BUILD	Consider alternative programme

Based on an Investment attractiveness rated as MODERATE-HIGH and WASH status as MODERATE-HIGH, Cambodia meets the criteria for the **STRENGTHEN** archetype, suitable to the design of a **mix of simple and complex** blended finance tools which will gradually prepare the country's **transition to self-reliance** in partnership with private and commercial sectors. The country's archetype, based on available metrics, should be read in conjunction with other variables that reflect specific attributes of the WASH and financing sectors. Such analysis is undertaken in Chapters 3 and 4. Other factors are also considered to determine the suitability for blended finance in Chapter 5, where the most appropriate blended finance instruments and the enabling environment interventions are confirmed.

It is recommended, based on this example for Cambodia, that Development Partners should undertake archetype assessments for other target countries, updating the assessments on a needs basis to inform future blended finance strategies for these countries, and using this mapping as an input into the priorities across countries in the Development Partners' blended finance programme.

⁴³ USAID. (2015), Blended finance Roadmap for Global Health

⁴⁴ International WaterCentre, Lean Finance – Methodology for country-level diagnostic assessment of opportunities to catalyse blending of finance for climate resilient WASH, November 2021

3. CONSTRAINTS AND APPROPRIATENESS OF SCALING-UP MARKET-BASED WASH

Demand. Further realisation of demand for WASH services is needed in Cambodia, most notably:

- increased access to piped water supply in rural areas,
- increased access to toilets in provinces where coverage is lowest,
- improved drinking water quality (particularly in rural areas),
- rapid development of wastewater treatment plants, and
- access to viable faecal sludge management options (for both urban and rural non-sewered areas).

Market-based solutions are viable for addressing piped water supply coverage (particularly in the peri-urban and rural domains that do not fall under the coverage area of publicly operated utilities), where there has already been significant momentum. Market-based solutions may be viable to address the large service level gaps on drinking water quality, wastewater treatment, and faecal sludge management. Yet in the absence of proven models, further research and development are likely to be needed before a broader scale-up phase is viable.

Social inclusion. Cambodia has in place an imperfect but practical system for connecting social subsidy programmes to poor families, and WASH subsidies will continue to be needed to minimise inequalities in access.

Capacity of enterprises. Most WASH enterprises in Cambodia are small, informal, and lack much of the professionalisation needed to achieve high level of efficiencies, quality of service, reliability of services in the face of climate change and urbanisation, and investment interest. Significant inputs have been made to address capacity gaps, yet as the marketplace for WASH products and services continues to grow, significant gaps remain. The capacity of enterprises to develop WASH services that are both climate-resilient and socially inclusive is not well-developed, and the enabling environment is not well-equipped to strengthen this capacity. Intermediaries, whose role is evolving and growing, especially in piped water supply, present greater opportunities for investments as they combine multiple water operators or enterprises into a packaged approach for funding and for engineering solutions.

Enabling environment. The WASH enabling environment is strong, with an overall high level of clarity of WASH-related institutional responsibilities and policy, clear targets and goals, and support for market-based models. However, the requirements and enablers for WASH services to be climate-resilient, for these services to also be socially inclusive (in terms of universal accessibility and utility), and for WASH workforces to be socially inclusive and diverse, have not yet been fully integrated into existing governance instruments and enabling activities. Additionally, the RGC continues to rely on development partners for loans and grants to support the sector.

3.1 MARKET-BASED WASH SOLUTIONS

As described in Chapter 2, further progress on WASH service delivery is clearly needed in Cambodia to reach national and global targets. However, due to rapid developments in the sector (particularly related to toilet and piped water coverage), the scale and scope of the progress needed has been significantly reduced compared to that of 20 or even 10 years ago (particularly regarding national targets which are less stringent than the SDGs).

Drinking water supplies

To achieve the safely managed targets associated with the SDGs, solutions will need to be found to address chronically poor drinking water quality. Quality is presently assessed periodically, the results of which reflect the often-unhygienic handling and storage practices that occur before the point of consumption (Shantz 2014).

Solutions that address the lack of wastewater and faecal sludge treatment (wastewater treatment plants and emptying services respectively) will also need to be found. Otherwise, sector performance may approach national targets but may remain far from SDG targets.

There are numerous opportunities for scaling-up market-based WASH in Cambodia, but scaling will require clearly established business models. The most readily accessible opportunity for market-based WASH is for privately operated piped water suppliers to increase network coverage by expanding existing systems and establishing new ones. The landscape for private piped water supply service delivery is characterised by small systems (typically 500 to 2,000 connections) that have typically been initiated by the private sector based on unmet local demand, with investments, which are usually fully privately financed, ranging from USD 0.09 to 1 million per facility (World Bank 2020⁴⁵). Water consumption is almost always metered and billed. Licensing (on 20-year terms) and tariffs are regulated by the Ministry of Industry, Science, Technology, and Innovation (MISTI) and most operators are now licensed. Metrics gauging the health of the sector reveal strong performance, with reportedly high levels of operational and full cost recovery fuelled by the low cost of labour, market-driven tariffs, and corresponding willingness to pay driven by increasing disposable income (World Bank 2016⁴⁶).

Recently completed Provincial Action Plans by the World Bank, 3i, and the MISTI have clearly articulated the potential service gaps for piped water and the potential investment needs (MISTI 2020). Just 53% of Cambodian households live in a local administrative unit (LAU) – such as a village – that already has at least some piped water supply coverage. After assessing the country, only 3% of Cambodian LAUs were found to be non-viable for piped water supply. Significant growth potential for piped water therefore remains.

Notable investment needs in the piped water supply sector include:

- An estimated 780 new piped water systems covering approximately 5,000 villages and 1 million households are needed to fulfill coverage potential across LAUs that are not yet serviced, at an estimated cost of USD 150 million (MISTI 2020);
- Expansion of existing piped water supply systems within viable parts of LAUs that already have at least some coverage (total investment required not yet studied);
- Improvements to piped water quality and to the promotion of existing and potential customers of piped water as a potable drinking water source;
- Improvements to water source efficiency and sustainability (particular in light of the future impacts of climate change), improvements to water quality testing, minimising non-revenue water, and increasing the efficiency of energy usage;
- Social support for ID Poor households to facilitate connectivity to local piped water networks.

Despite the high level of opportunity and appropriateness for scaling-up of piped water supply in Cambodia, various practical constraints to future growth are identified as follows.

⁴⁵ Scoping Out the Potential for Delivering Water Services Through Public Private Partnership in Small-Scale Water Supply Systems in Cambodia. February 2020. World Bank

⁴⁶ Strengthening Sustainable Water Supply Services through Domestic Private Sector Providers in Cambodia. January 2016. World Bank

- **Professionalisation.** Most current private operators have emerged from local family businesses. Their degree of professionalisation (financial reporting, management structure, financial and business planning, accounting, quality of facility construction) varies considerably but is generally low. Several initiatives are ongoing to address these issues (i.e. membership in the Cambodia Water Supply Association, linkages to local companies to support accounting and reporting, and targeted technical assistance in the form of capacity building programmes). The low proportion of operators that meet the due diligence requirements of potential investors is likely to significantly constrain access to future financing without external intervention.
- **Access to Finance (by operators).** Most current private operators have already expended their potential collateral on active loans. Operators generally view typical loan requirements as overly constraining, which represents another key barrier impeding access to finance (World Bank 2021⁴⁷). The potential among active operators to receive additional loans may therefore be low, and risk-offsetting initiatives are likely to be needed to hasten investments into the sector.
- **Maintaining cash flow.** Poor financial and business plans and challenging lending terms can lead to cash flow issues, particularly during periods when piped water supply systems are being constructed or expanded.
- **Lack of coordination.** In some settings, piped water operators have reported that their services are being undermined by parallel development programmes promoting non-piped water solutions within their coverage area (i.e. tube wells). Greater coordination is needed between local operators, local government, and water supply related implementors such as the Ministry of Rural Development (and its Provincial Departments), and Non-Governmental Organisations (NGOs). Piped water business plans are based on connectively assumptions, and if such assumptions are undermined by other initiatives this may add an additional layer of uncertainty and risk to operations and profitability.
- **Unstable or over-estimated water consumption.** Some piped water operators report concerns that a significant proportion of households are not consuming anticipated quantities of piped water from their connections in order to avoid cost, particularly in cases where other low or no cost water sources (such as boreholes, pumped river water, or rainwater during the wet season) are readily accessible. While there remains some lack of consumer preference for piped water in some situations, and where multiple sources provide householders with increased resilience to climate change and other shocks, the use of multiple sources is likely to remain a practice that operators need to accommodate. A strengthened ability to forecast likely water consumption would assist in business management.
- **Water source sustainability in the face of climate change and urbanisation.** Cambodia has discrete wet and dry seasons, offering an overabundance of water in most settings in the wet season and water scarcity in the dry season in some areas. Further, Cambodia also has among the smallest but fastest-growing urban populations, doubling from 20% to 40% between 2008 and 2019 (NIS 2020) thus rapidly adding to water consumption in urban areas. Integrated water resource management has not been widely implemented in Cambodia and water extraction has yet to be formalised and regulated. Some piped water operators, left to source water directly, face issues with water source management, particularly in terms of ensuring sufficient quantities, and commonly construct ponds to store enough water to cover periods of water scarcity. Further exploration is needed of water source vulnerabilities, particularly considering the greater future unpredictability and disturbances associated with climate change – including anticipated greater flooding wet seasons and prolonged drought in dry seasons.⁴⁸

⁴⁷ Presentation – Blended Finance in Practice: The case of water supply in Cambodia, OECD – Korea Knowledge Exchange Sessions, June 2021, PROPARCO, AFD, World Bank; Phyrum Kov & Pheaktra Thlang

⁴⁸ Climate Change Strategic Plan for Water Resources and Meteorology (2013-2017). Ministry of Water Resources and Meteorology, 2012

- **Social inclusion** – The prevalence of subsidy programmes to support piped water connectivity among the poor has not been estimated, however, such subsidy programmes appear to be widespread. Eligibility for subsidies relies on the ID Poor programme, which has been largely effective but is not without its challenges (including that the programme is only updated every 3 years, that there are problems with misclassification and misallocation, and that the programme creates a disincentive for the near-poor to pay for services in full). Broadly accessible subsidies will be needed to minimise inequalities as piped water coverage in rural areas increases in the future.
- **System efficiencies.** Various solutions may reduce inefficiencies and increase profitability, including reducing non-revenue water and energy costs. However, these solutions often require significant upfront capital costs (i.e. improved pipe, solar panels, etc.) which may not be viable for all operators.

Just as for piped water supply, there has been rapid growth of the **private container-based water industry** in Cambodia. Various brands of bottled container water are sold throughout the country, the marketplace for which is already well developed. To serve customers who desire bottled water as a primary drinking water source, 20 litre potable water jugs are commonly available in urban areas (typically re-treated piped water). Some brands have also established distribution channels for potable water jugs into rural areas. However, the O-we brand is the only one which produces and packages bottled water jugs in rural communities themselves; a short supply chain increases the resilience of supplies to shocks that can disrupt transport channels. O-we is also continuing to expand its coverage with over 300 systems currently operational. Individual facility operators function semi-independently under the O-we brand, maintaining payment transfers and profit sharing with a private platform established under Teuk Saat (a local NGO). The Teuk Saat platform provides water quality testing, technical and maintenance support to their network of operators. Funding for the construction and establishment of new facilities continues to be fully subsidised by philanthropic sources and the organisation does not currently have plans to seek external financing to support future growth. Teuk Saat is however advocating for the national government to begin investing in the construction of new systems, with the aim of eventually establishing one bottled water kiosk in each rural commune of the country. As it stands, the attractiveness is very low for the scale-up of fully market-based bottled water enterprises to achieve national and global targets, which reflects the high market competitiveness in urban areas and the likely insufficient profitability in rural areas (particularly when compared to Teuk Saat’s ongoing, expansive, and successful philanthropic model which appears to be demonstrating cost recovery only in a situation of fully subsidised initialisation).

Tube well drillers continue to operate throughout the country, drilling household wells for domestic use and serving the commercial and agriculture sectors, particularly in predominantly rural areas not serviced by piped water. Some larger and more professional well drilling enterprises focus on large scale development projects (typically associated with truck-rig drilled deep wells fitted with Afridev hand pumps, which can cost several thousand dollars each). At the same time many smaller well drilling businesses operate throughout the country and typically employ hand drilling techniques, often utilising lower cost VN6 hand pumps for several hundred dollars each. The well drilling sector has been established for several decades and demand is well satisfied in most areas. Overall reliance on tube wells (particularly for drinking) is likely to gradually decrease in the future as piped water supply coverage in rural areas continues to increase. As such, the scale-up of well drilling enterprises is not a priority.

Water haulers – typically in the form of tanker trucks and carts – commonly transport water from source (usually rivers, lakes, and reservoirs) to domestic households in need of water. This occurs in the dry season months when water from primary sources may no longer be available (i.e. dried up shallow wells or surface water). Water haulers typically transport unimproved water (raw surface water), and the inefficiencies associated with transporting water by road result in very high costs per volume. As a result, the future scale-up of water hauling enterprises is not a priority.

Rainwater harvesting is already a well-established practice and serves as a secondary water source for most rural Cambodians (Shantz 2014). Large 100 to 200 litre jars are commonly available throughout the country and are employed domestically. They are used to capture and store rainwater conveyed from rooftops during wet season months, and to store water from other sources during the dry season. The market for rainwater storage has already been well developed, with traditional rainwater jars available throughout most parts of the country. More recently, large plastic reservoirs are entering the market. Scale-up of rainwater harvesting enterprises (jar masons and product retailers) is not a priority as rainwater is unlikely to serve as a primary water source due to its intermittent nature.

Various efforts have been made over the past two decades to promote an array of household water treatment solutions – most notably bio-sand filters and ceramic water filters – for which prevalence has increased substantially (MRD 2016). Besides boiling, these two water treatment solutions are the only ones to have reached scale. Bio-sand filters have been promoted as part of several large-scale NGO and subsidy-led programmes but are not offered by the current market owing to their weight and therefore the need for on-site construction. Ceramic water filters however have penetrated the marketplace in recent years. Various water filter products are being imported from neighbouring countries and made available for re-sale in local markets. Additionally, Tunsai Water is a local enterprise that constructs and retails ceramic filters in three formats covering several price points and market segments (Tunsai 2021).⁴⁹ Tunsai's retail sales model has several components, including fixed retail purchase points and mobile door-to-door sales agents (IDE 2016⁵⁰).

Household water treatment solutions have a moderate potential to improve point of use drinking water quality in support of Cambodia's target of 100% coverage of safely managed drinking water services (SDG Target 6.1). However, demand creation is a key barrier, as enterprises currently rely primarily on latent demand and do not have significant resources to promote the social and practical benefits of practicing water treatment. The demand potential for such water treatment products in the marketplace may be significantly constrained unless novel approaches can be found to increase uptake significantly (for which there are few successful examples in the international context). Additionally, associations between correct and consistent use of water treatment products and point of use water quality have also been found (Brown 2012⁵¹). If household drinking water treatment is to significantly raise the level of safely managed drinking water services in Cambodia, household water hygiene and handling practices will also have to be improved, most notably through education and awareness raising initiatives. The water filter marketplace is therefore appropriate for potential future scale-up. There will be challenges in building demand and new models and approaches may need to be tested and developed. Strategies may include that of subsidising safe drinking water awareness campaigns; these campaigns can create higher levels of product demand and encourage consistent and correct usage (leading to practices that would represent a major change from the present).

Sanitation

Regarding sanitation, latrine access has increased rapidly and substantially due to the coordinated effort of the government, NGOs, and the private sector to raise demand and ensure supply of affordable toilets and latrines. Subsidy programmes have been vital for providing access to the poor and national guidelines ensure that poor households continue to provide some financial contribution and thus demonstrate ownership. Despite strong progress, clear regional and provincial disparities remain (particularly between northern provinces and the rest of the country), mainly due to poorer economies of scale that result from sparse population habitations, difficult transportation links, and the higher cost of consumables. The MRD does not yet have a clear strategy to resolve

⁴⁹<https://www.tunsaiwater.com/bottles/>

⁵⁰ Hydrologic – Infiltrating the Market: Evolution of a Social Enterprise. Hydrologic Social Enterprise. June 2015

⁵¹ High Adherence is Necessary to Realize Health Gains from Water Quality Interventions. Brown J, Clasen T. PLoS One 7(5): e36735

these barriers in hard-to-reach areas. Market-based solutions are potentially appropriate for scale-up to address the remaining geographical sanitation service gaps. However, further study may be needed to assess the viability of businesses operating in such economically challenging environments, and whether subsidies may be needed to reduce unit costs while maintaining profitability.

To date in Cambodia, user fees are not charged to collect and dispose of sewer-based human faecal waste, and therefore wastewater management is not a revenue generating service. Fee-for-service pit emptying services do exist, but so far play a very small role in the sector. As a result, wastewater and faecal sludge management represent a long-neglected sector, and yet are critical to Cambodia's goal to reach 100% safely managed sanitation by 2030 (SDG indicator 6.2). In urban areas, the appetite among potential consumers to pay for sewerage, faecal waste management and wastewater treatment is likely to be very low, particularly considering the lack of service quality to date. In rural areas, most households plan to handle and dispose of their faecal sludge in unsafe ways, leaving their pit unemptied or having the contents emptied into nearby fields or rice paddies (World Bank 2019⁵²).

Advocacy, incentives, and viable and sustainable solutions will need to be developed and implemented as part of a broader strategy and plan for wastewater management in urban areas and faecal sludge management in both urban and rural areas. The RGC does not yet have a history of infrastructure investment using its public budget, as it has been relying on externally provided grants and loans. With Japan International Cooperation Agency (JICA) recently announcing investment in Phnom Penh's first wastewater treatment plant, this trend is likely to continue. External infrastructure investment in wastewater treatment facilities will have to be drastically scaled-up over the coming years if SDG targets are to be achieved. The implementation model for the operation of wastewater treatment facilities remains undefined (i.e. whether operations will be performed by public utilities or contracted out to private wastewater treatment plant operators, and how user tariffs or national transfers will fund operators).

In rural areas, pit emptying services are sparsely available, mainly because the proportion of pits that have become full to date has been very small (World Bank 2019). In coming years, a greater proportion of pits will need to be emptied. It is apparent that without external intervention most households will empty their pits into nearby fields, rice paddies, or water bodies, constituting non-safely managed sanitation. Twin pit latrines are being promoted as a solution for safe household faecal sludge management. Some latrine enterprises have added twin pit latrines and upgrades of existing single pit toilets to their product offerings. Pit emptying enterprises could be made viable if demand were to increase substantially and if unit costs for pit emptying were reduced significantly. Further research may be needed to explore business models for rural pit emptying; however, demand will surely exist in the future as many households will not want to engage with excreta directly. Controlling the disposal locations used by pit emptiers may be a subsequent challenge if and when pit emptying becomes a common service.

Various challenging physical environments in Cambodia pose difficulties to household sanitation. Much of the Mekong River basin floods during the peak period of the rainy season, inundating many communities for which households and structures are elevated off the ground to account for expected floods. However, sanitation facilities are rarely elevated, and as a result, toilets and their pits – where they exist in such conditions – are temporarily flooded until flood waters recede. Greater flooding resulting from climate change may expand the proportion of households living in such challenging environments. Additionally, the increasing drought associated with anticipated changes to the climate may impede the use of pour flush toilets when water is scarce.

⁵² Household pit emptying and reuse practices in rural Cambodia. World Bank. 2019

Summary of water and sanitation markets

TABLE 7 – SUMMARY OF APPROPRIATENESS FOR SCALE-UP OF MARKET-BASED WASH

Type of enterprise	Appropriateness for scale-up	Rationale	Notable capacity, social inclusion and climate change considerations
Private piped water supply operator	Yes	<ul style="list-style-type: none"> - Potential for additional coverage remains very high in rural areas - Small private operator model demonstrated to be largely successful - Need for greater financing, despite bottlenecks 	<ul style="list-style-type: none"> - Significant capacity gaps exist among the many small/medium enterprises - Connection subsidies remain important to realise connectivity and reduce inequalities - Increased regulation of water extraction and allocation required given increasing variability in water resources and demand for water resources (due to both climate change and urbanisation)
Bottled water kiosk operator	No	<ul style="list-style-type: none"> - O-we model largely successful - High potential to address drinking water quality gap associated with SDG Target 6.2 - Operators are not fully independent and are tied to NGO's private platform and philanthropic model - NGO does not intend to seek private finance to fuel future growth currently 	<ul style="list-style-type: none"> - Services may not suitably target those that cannot afford to pay - Capacity gaps among operators can be addressed through the support system offered by the NGO platform
(Large) Bottled water enterprise	No	<ul style="list-style-type: none"> - Market already saturated 	<ul style="list-style-type: none"> - Services may not be suitable for those that cannot afford to pay
Tube well driller	No	<ul style="list-style-type: none"> - Market already saturated and likely to shrink in the future 	<ul style="list-style-type: none"> - Quality of services, especially water quality, reliability and sustainability is difficult to ensure - Affordability is variable
Water hauler (truck/cart)	No	<ul style="list-style-type: none"> - Not an improved water supply (typically raw surface water) 	
Rainwater harvesting jar/tank manufactures	No	<ul style="list-style-type: none"> - Market already saturated - Not commonly a primary water supply 	
Water filter enterprises	Yes (requires further exploration)	<ul style="list-style-type: none"> - Various products available in the marketplace - Some demonstrated success with reaching scale - Large potential for household water treatment (namely water filters) to address drinking water quality gap associated with SDG 6.2 – particularly in rural areas - Broader behaviour change and promotional efforts needed if household water treatment is to make a more meaningful contribution towards SDG 6.1 	<ul style="list-style-type: none"> - Minimal competition as water treatment remains a niche marketplace - Historically, some programmes have existed to subsidise filter sales to the poor

Toilet/latrine enterprises	No	<ul style="list-style-type: none"> - Market already saturated in most higher population density provinces - Some growth potential in more remote parts of the country, where profitability may be lower due to higher operational costs and lower affordability 	<ul style="list-style-type: none"> - Capacity issues do not present bottlenecks to implementation - Subsidies remain critical to serving the poor, and may be needed more broadly to prop up enterprises in less economically attractive settings
Sanitation (pit emptying) enterprises	Yes	<ul style="list-style-type: none"> - Small-scale demand and supply operational in urban areas - Clear that demand will emerge as the proportion of pits that become full increases - Services not broadly established or well known - Unit prices remain far too high to be viable - May require subsidisation during initial stages 	<ul style="list-style-type: none"> - Capacity issues do not present bottlenecks to implementation at this early stage - Poor more likely to gravitate towards low/no cost self-emptying solutions - Ideally should be accompanied by cost-recovering faecal sludge treatment services (below)
Wastewater / faecal sludge treatment enterprises	No, but immense industry need exists	<ul style="list-style-type: none"> - No viable model currently exists - Lack of institutional/functional clarity from government - Remains in advocacy stage 	

3.2 WASH ENABLING ENVIRONMENT

The WASH sector in Cambodia benefits from an open and increasingly well-articulated enabling environment, including strong political priorities reflected in policy. The RGC has been open to and has depended on external inputs (concessional loans, grants, foreign aid) to support the sector, with a transition over the past decade to greater roles for the private sector. As a result, a greater need for regulation has emerged, particularly in the piped water supply sub-sector. The WASH sector at-large is governed by the National Water Supply and Sanitation Policy (CoM 2004)⁵³ which addresses policy and service delivery covering the urban and rural domains – and recognises the role of private sector.

Rural WASH is led by the Ministry of Rural Development (MRD). The National Strategy for Rural Water Supply, Sanitation, and Hygiene 2011-2025 (MRD 2012)⁵⁴ sets the vision for the sector (100% water and sanitation coverage by 2025), outlines roles and approaches to meet sector targets, and identifies the core strategies to be employed by sector stakeholders at all levels. Private sector engagement forms a key component of the strategy – particularly for sanitation where social marketing and development of local markets are prioritised. Oversight, coordination and support are designed to be provided by sub-national departments of rural development at provincial and district level. Overall, cultivation and strengthening of the private sector hinges on creating a competitive environment through transparency, access to capital, and developing business and technical expertise.

The oversight of piped water supply has been relegated to the Ministry of Industry, Science, Technology, and Innovation (MISTI) – including privately operated small-scale systems that serve rural communities. Water supply is also delivered by two state-owned enterprises which function as autonomous utilities: the Phnom Penh Water Supply Authority and Siem Reap Water Supply Authority. The Ministry of Public Works and Transport (MPWT) is responsible for urban sewerage, septage, and treatment facilities. WASH services in health centres and schools are the respective responsibilities of the Ministry of Health (MoH) and the Ministry of Education (MoE). To-date, rural-based water kiosk operators are not externally regulated.

One of the weakest parts of the enabling environment for WASH services is that of water extraction. The regulation of water extractions will be needed to ensure sustained access to viable water resources by piped water providers, particularly in light of the current and future unpredictability and pressures associated with climate change. In support, more modelling will be needed on implications of climate change for water resources and thus for water-related service providers. Additionally, there is insufficient research and development to define what constitutes climate-resilient sanitation, particularly given the reliance on sanitation infrastructure that depends on water supplies and is thus vulnerable to water scarcity and household waste containment systems that are vulnerable to floods.

Government investment in the WASH sector remains minimal at 0.11% of total GDP in 2017⁵⁵ with budget reductions made over the past two years to re-allocate public funds to the government's COVID response (MRD 2021⁵⁶). Sector investments are primarily funded through external loans, grants, and foreign aid, while government staff salaries are covered by the national budget. Despite the lack of public investment, the RGC has embarked on an ambitious set of decentralisation and de-concentration reforms, including functional transfers for rural water and sanitation. While this process has been ongoing for several years, key bottlenecks

⁵³ National Water Supply and Sanitation Policy; Council of Ministers; Royal Government of Cambodia, 2004

⁵⁴ National Strategy for Rural Water Supply, Sanitation, and Hygiene 2011-2025, Ministry of Rural Development, 2012

⁵⁵ Cambodia Highlights based on country reported GLAAS 2016/2017 data

⁵⁶ Interview with Mr. Lon Sayteng, Director of Rural Health Care, Ministry of Rural Development, December 31, 2021

remain and weak local capacities impede the financial flows from national down to sub-national levels (WaterAid 2021⁵⁷). Continued attention will be needed towards social inclusion for WASH services through the ID Poor programme to ensure that existing programmes and approaches are made available to support service delivery among disadvantaged groups, particularly related to piped water connections and toilets.

⁵⁷ Fiscal decentralization and WASH sector in Cambodia: The case of rural and urban water supply (Presentation). WaterAid Cambodia. 2021

4. FINANCING NEEDS AND CONSTRAINTS

Demand. According to the latest Global Assessment of Drinking Water and Sanitation Report (GLASS⁵⁸), 20 countries and territories, including Cambodia, reported a WASH funding gap of 61% between identified needs and available financing for WASH. Official Development Assistance covers only a small portion of the water sector needs in Cambodia, but acts as a critical catalyst to leverage additional resources missing in the region.

In accordance with the Cambodia National Adaptation Plan,⁵⁹ the climate adaptation financing gap has been estimated at a total USD 865.5 million for implementation, a gap of 92.7% in relation to available finance.

Overall, globally, to make all development investments in infrastructure climate compatible, an additional USD 0.6 trillion a year is required. Such additional investment is likely to be offset over time by fuel savings resulting from low-emission technologies and infrastructure.⁶⁰ WaterAid estimated the new costs of climate adaptation measures required to achieve climate-resilient WASH services average USD 83.7 billion annually⁶¹.

Supply. There is a strong supply of microfinance lending to households to access water and sanitation services in Cambodia, with a highly saturated microfinance sector: over 70 microfinance institutions and over 50 banks operate in a country with the relatively small population of 16 million people. It is easy to get a loan, but around 70% of the population remain formally “unbanked”. An oversupply of microfinance institutions has been a long-standing (over a decade) concern to the market and global economic community, both aggravated by claims that the microfinance sector’s low nonperforming loan (NPL) ratio is only made possible due to coerced land sales, child labour, debt-driven migration, food insecurity, and other human rights abuses.⁶² There is an increasing presence of impact investors in Cambodia; however, most are driven by commercial interests and investment preferences for high performing sectors such as finance, agriculture, and energy. The Cambodian government’s commitment to change domestic and foreign investment policies is contributing to the increased interest of private sector players, though mainly foundations, with commercial and institutional investors being less active. Despite growing investor presence, there is still limited access to finance for small enterprises.

There is an increasing trend of investors favouring investments that adapt to or mitigate climate change. Asia, and Cambodia in particular, remain the main beneficiary region of climate finance provided and mobilised by developed countries (USD 30.6 billion on average per year over 2016-2019, or 43%), significantly ahead of Africa and the Americas.⁶³ In 2019, total climate finance provided and mobilised by developed countries for developing countries was USD 79.6 billion, an increase of 2% from 2018, with mitigation finance representing two thirds of the share compared to adaptation finance: water sectoral climate finance grew from 4% in 2016 to 7% in 2019.

Investability of WASH enterprises. WASH enterprises, utilities, and infrastructure have the potential to offer attractive market rate returns to investors; however, the current constraints include insufficient qualified skills, low availability of collateral by enterprises, the small scale of enterprises (with high administration needs compared to returns), difficulty in doing business, weak finance and business regulations, and uncertain and slow-changing policies for domestic and foreign investments. These gaps need to be bridged, mostly through subsidies or concessional capital and through strengthening the enabling environment.

⁵⁸ GLAAS NATIONAL SYSTEMS TO SUPPORT DRINKING-WATER, SANITATION AND HYGIENE: GLOBAL STATUS REPORT 2019

⁵⁹ Cambodia National Adaptation Plan Financing Framework and Implementation Plan, 2017

⁶⁰ Investing in Climate, Investing in Growth, OECD 2017

⁶¹ Blueprint: financing a future of safe water, sanitation and hygiene for all. WaterAid, 2021

⁶² COLLATERAL DAMAGE Land loss and abuses in Cambodia’s microfinance sector, LICADHO, 2019

⁶³ Climate Finance Provided and Mobilised by Developed Countries, AGGREGATE TRENDS UPDATED WITH 2019 DATA, OECD

Cambodia's culture is referred to as "a very entrepreneurial culture and a very hard-working culture",⁶⁴ valuing harmony, mutual trust, and family linkages. Gender disparity in enterprise activity is still very high, though improving.

Despite identifying some challenges and signalling several deficiencies, this assessment indicates a satisfactory environment for blended finance programmes in the country that can be appealing to both development and commercial partners in terms of pronounced social impacts and financial returns on investment.

The purpose of this chapter is to highlight financing and business opportunities and challenges in more detail, compared to the analysis in Chapter 2, as these are relevant to doing (or setting up) WASH business in Cambodia and drive decisions to invest in the WASH sector.

4.1 FINANCING SECTOR STATUS IN CAMBODIA

In blended finance, the majority (~70%) of deals structured have provided financing to domestic banks or local microfinance institutions for on-lending to target populations (e.g. to business owners, households, SMEs). It is observed that the proportion of such deals has been declining over time, while the proportion of blended finance for direct lending and venture capital has been increasing.⁶⁵ Based on evidence that the microfinance (MFI) sector plays a significant role in blended finance transactions, the main emphasis of this chapter is on MFI sector analysis.

From 2014 the Cambodian MFI sector has continued to grow remarkably and sustainably in the scope and scale of operations, achieving profitability and attracting unprecedented levels of external investments. Over the period 2014-2018 the total assets of MFIs grew at an average annual rate of 33.3% and the lending pool at 46.7%. As at end-December 2020, total assets in the sector stood at USD 8.5 billion.⁶⁶ As of December 31, 2020, The National Bank of Cambodia data showed that nearly 78% of the paid-up capital in MFIs – or some USD 700 million – was financed by foreign shareholders. Cambodian MFIs, which reported a cumulative net profit of USD 234.2 million last year, remain enticing to investors, particularly microfinance deposit-taking institutions.

NBC regulates operations of the banking systems in Cambodia. Foreign banks and branches are freely allowed to register and operate in the country. There are 44 commercial banks, 14 specialised banks (set up to finance specific turn-key projects such as real estate development), 74 licensed microfinance institutions, and seven licensed microfinance deposit taking institutions. The Cambodian Microfinance Association (CMA) sees a clear link between access to credit and reduced levels of poverty. The benefits of microfinance, offering lower interest rates, helped Cambodia to develop and expand economically.

However, economic growth and the strength of the banking system in Cambodia are prompting a slow decline of the sector, signalling that MFI business may be coming to an end.⁶⁷ Within a few years, the highly saturated market is likely to consolidate, as microfinance institutions move into commercial banking to write consumer loans. Additionally, the 18% cap on MFI interest rates imposed by the NBC in 2017 has become a cost "impediment" for MFI operations. The market has been consolidating over the last few years with commercial

⁶⁴ Vision Fund CEO interview, December 2021

⁶⁵ <https://www.convergence.finance/news-and-events/news/4NAqkCZqDPAnITeBotEwLR/view>

⁶⁶ <https://www.phnompenhpost.com/special-reports/cambodias-microfinance-sector-running-its-course>

⁶⁷ <https://www.phnompenhpost.com/special-reports/cambodias-microfinance-sector-running-its-course> David Van, a Cambodian investment expert

banks acquiring MFIs that have become cash tight. The economic slowdown has compounded this issue through an increase in risky loans.

The average microloan borrower in Cambodia has USD 3,800 worth of debt, the highest in the world.⁶⁸ A recent study by the Cambodian League for the Promotion and Defence of Human Rights (LICADHO)⁶⁹ highlighted that some 2.1 million Cambodians collectively owed approximately USD 8 million in MFI debt. The IMF and the World Bank have warned that an improperly regulated microfinance industry can push Cambodians further into debt and further into poverty. In 2017, when the Cambodian government responded with policies to cap the interest rates (at 18%), microfinance institutions, in turn, gained more money through increasing loan fees. The poverty brought on by COVID-19 has worsened the debt crisis in Cambodia. The CMA reports that in March 2020, in response to the impacts of the pandemic, repayments were paused for 25,000 people and roughly the same number of loans were restructured to ease financial pressures, help borrowers meet their financial obligations and manage their cash flows.

Current trends show that, as banks are now flush with liquidity, there is an increasing prudence on lending, reduced credit appetite and more restricted borrowings processes. There are state-developed mechanisms – such as the low interest SME co-financing scheme and the Credit Guarantee Corporation – to ensure that credit demands are met; however, these are only working to some extent and depend on the private sector remaining resilient and managing credit risks. Despite easing monetary policy to support the financial sector, NBC is unlikely to disincentivise credit growth in the private sector.

Many Cambodian families are selling their homes and land to pay back debts. Human Rights Watch⁷⁰ (HRW) recommended that Cambodia “urgently suspend debt collection and interest accruals for micro-loan borrowers who are no longer able to meet their debt payments due to the COVID-19 pandemic” as “many Cambodians fear losing their land more than catching the novel coronavirus because they can’t pay back their loans and the government has done little to help them”. When land collateral strips Cambodians of their homes, their ability to remain out of poverty is severely threatened. The poorly regulated microfinance industry in Cambodia risks failing because of the lasting effects of the pandemic with insufficient support. In June 2020, Hun Sen (the Prime Minister of Cambodia) committed to dedicating about USD 25 million per month to help roughly 600,000 indebted and impoverished families in Cambodia.

In Cambodia, private sector debt is larger than public sector debt (a general trend in many countries, including member nations of the Organisation for Economic Cooperation and Development), with small business loans forming the largest segment at 60%, followed by mortgage and personal finance at 15% each. Some SMEs that took loans from microfinance institutions or commercial banks are on the brink of collapse or have closed because of COVID-19. The total value of loans that need to be restructured will likely increase further, from last year’s reported 285,000 accounts with a total of USD 4.2 billion – or 11.2% of the total outstanding credit of the banking and microfinance sectors. Non-performing loans in 2020 have raised to their current levels of 2.7% and 1.8% for the banking sector and microfinance sector respectively.⁷¹

In a move designed to address the need for capital markets in Cambodia, the Cambodia Securities Exchange (CSX) was founded in 2011 and started trading in 2012. Though the CSX is one of the world’s smallest securities markets, it has taken steps to increase the number of listed companies, including SMEs. It currently has five

⁶⁸ <https://borgenproject.org/microfinance-in-cambodia/>

⁶⁹ <https://www.licadho-cambodia.org/>

⁷⁰ <https://www.hrw.org/news/2020/07/14/cambodia-micro-loan-borrowers-face-covid-19-crisis>

⁷¹ <https://www.phnompenhpost.com/special-reports/raising-alarm-rising-private-debt>

listed companies: the Phnom Penh Water Supply Authority, Taiwanese garment manufacturer Grand Twins International, the Sihanoukville Autonomous Port, Phnom Penh SEZ Plc, and the Sihanoukville Autonomous Port.

Cambodia's **bond market** too is at an early stage of development. The regulatory framework for corporate bonds was bolstered in 2017 through the publication of the Prakas on Public Offering of Debt Securities, the Prakas on Accreditation of Bondholders Representative, and the Prakas on Accreditation of Credit Rating Agency. The country's first corporate bond was issued in 2018 by Hattha Kaksekar Limited. Four additional companies have since been added to the bond market: LOLC (Cambodia) Plc., Advanced Bank of Asia Limited, Phnom Penh Commercial Bank Plc, and RMA (Cambodia) Plc. RMA issued its bonds in early 2020 and was the first non-bank financial institution to be listed. There is currently no sovereign bond market, but the government has stated its intention of making government securities available to investors by 2022.⁷²

Financial technology (**Fintech**) in Cambodia is also at an early stage of development. Available technologies include mobile payment, QR code, and e-wallet accounts for domestic and cross-border payments and transfers. A FAST payment system was introduced in 2016 to facilitate instant fund transfers. The Cambodian Shared Switch (CSS) system was launched in October 2017 to facilitate access to network ATM and POS machines. In February 2019, the Financial Action Task Force (FATF),⁷³ an intergovernmental organisation combating money laundering, cited Cambodia for being "deficient" with regard to its anti-money laundering and countering financing of terrorism (AML/CFT) controls and policies and included Cambodia on its "grey list". Should Cambodia not address these deficiencies it could risk landing on the FATF "blacklist", something that could negatively impact the cost of capital as well as the banking sector's ability to access international capital markets.

4.2 POLICIES TO ATTRACT FOREIGN AND DOMESTIC INVESTMENTS

The primary law governing investment in Cambodia is the 1994 Law on Investment.⁷⁴ The government permits 100% **foreign ownership** of companies in most sectors. In some sectors foreign investment is subject to local equity participation or prior authorisation from authorities. Although Cambodia has been at the forefront of privatisation in the region, some enterprises remain in government hands. Currently, the government has not yet published a policy for state ownership.

FDI restrictions involve land and real estate and a few other sensitive sectors. **Ownership of land** is permitted only to Cambodian citizens and entities, the latter defined in the Law on Investment as a company which has a place of business and is registered in Cambodia and in which 51% or more of the shares are held by Cambodian nationals. The legal framework permits foreign investors to hold interests in or over immovable property in Cambodia through leases, land concessions and mortgages. During the land concession or lease period, and subject to the terms of these agreements, investors may mortgage or sub-lease immovable property on the land. The only prohibition here is the transfer or mortgage of concession land which has not yet been exploited.

Cambodia is offering **investment protection** from improper treatment through the Investment Law. Protections include: a guarantee of national treatment, protection against nationalisation, a guarantee of non-interference of the government in the price setting of products and services, a guarantee on the purchase of foreign currencies and the remittance of these currencies for specific payments, and a governance mechanism for disputes. Yet clauses are relatively vague, which creates uncertainty for investors as to the protection and

⁷² <https://www.state.gov/reports/2020-investment-climate-statements/cambodia/>

⁷³ Anti-money laundering and counter-terrorist financing measures Cambodia Mutual Evaluation Report, The Asia/Pacific Group on Money Laundering (APG) September 2017

⁷⁴ This section is influenced by findings of OECD Investment Policy Reviews: CAMBODIA, 2018

obligations available. According to public statements, the ongoing revision of the Investment Law does not appear to be focused on protection, but rather on investment incentives (Phnom Penh Post, 2013). The new Investment Law currently being drafted moves towards a system of “**smart investment incentives**” to target activities that shape specific outcomes. Such an approach could be less costly and more effective than the current system, but must be weighed against the administrative burden it imposes on the government and investors and any potential distortion in capital allocation in the economy.

Additional protection is provided under investment **treaties**. There is an existing Trade and Investment Framework Agreement (TIFA) with the United States.⁷⁵ As of 2020, Cambodia has signed bilateral investment treaties (BITs) with 27 countries: Austria, Bangladesh, Belarus, China, Croatia, Cuba, the Czech Republic, the Democratic People’s Republic of Korea, France, Germany, Hungary, India, Indonesia (later terminated), Japan, Kuwait, Laos, Malaysia, the Netherlands, Pakistan, the Philippines, the Republic of Korea, Russia, Singapore, Switzerland, Thailand, Turkey, the United Arab Emirates, and Vietnam. (There is no BIT with the United States.) Cambodia also signed a free trade agreement (FTA) with China in 2020 and the Regional Comprehensive Economic Partnership (RCEP) free trade agreement in early 2021. None of these FTAs has been implemented yet. The FTA with the Republic of Korea was signed in October 2021. Cambodia is conducting a feasibility study on a potential FTA with the Eurasian Economic Union. As a member of ASEAN, Cambodia has signed regional investment agreements, including ASEAN Comprehensive Investment Agreements with Hong Kong, India, China and Korea. ASEAN and WTO membership require Cambodia to comply with certain rules and regulations regarding free trade agreements, including tariff-free importation of information and communication technology (ICT) equipment and compliance with tax regulations on multi-activity businesses.

Cambodia has entered into seven double **taxation** agreements with Brunei, China, Hong Kong, Indonesia, Singapore, Thailand, and Vietnam. Details of these agreements are available on Cambodia’s General Department of Taxation (GDT) website.⁷⁶ In the past, Cambodia’s GDT has not been collecting taxes on a large scale, resulting in the evasion by corporates of salary taxes, VAT and real estate taxes, despite being required to pay these taxes under Cambodian laws. Application of Cambodia’s tax laws, while improving, remains inconsistent. In some cases, foreign investors face greater scrutiny to pay taxes than domestic counterparts.

Cambodia’s regulatory system, while improving, still lacks sufficient transparency. This is the result of limited legislation and capacity of key institutions, and by a still developing court system. Greater consistency and coherence in decision-making by Cambodian regulatory agencies and consultation with external stakeholders could facilitate advancement of the regulatory system. There is room for further strengthening mechanisms for **contract enforcement** in Cambodia to ensure adequate dispute settlement mechanisms for investment and business disputes. A draft **antitrust and competition law** is near completion, and a Law on Consumer Protection was enacted in November 2019 but has not been implemented.

Corruption is the most problematic factor for doing business in Cambodia and is a barrier for investment (see Table 5 for ranking). Corruption is also present in the judiciary with rulings often seen as inconsistent and unpredictable. Similarly, the ability of civil society to voice concerns is not sufficiently strong. Some improvements have occurred through a Public Financial Management Reform Program, an Anti-Corruption Law in 2010 and an Asset Declaration Law in 2011, together with the establishment of an Anti-Corruption Unit.⁷⁷ The

⁷⁵ <https://www.state.gov/reports/2020-investment-climate-statements/cambodia/>

⁷⁶ <https://www.tax.gov.kh/en/>

⁷⁷ OECD Investment Policy Reviews: CAMBODIA, 2018

establishment of special economic zones has introduced a zero-corruption strategy which, if successful, may help to improve the perception of Cambodia among potential foreign investors.

The **Investment licensing system** (under existing investment law) regulating the approval process for foreign direct investment has been simplified in 2015. An online business registration system has been introduced to reduce the number of steps, application forms and number of signatories needed in business registration, with the ultimate aim to increase transparency and limit opportunities for corruption.

The **high minimum paid-in capital requirement** for the establishment of a generic business operation in Cambodia is the highest among ASEAN countries, constraining the development of entrepreneurship. For Cambodia, this requirement represents 76.2% of income per capita, against zero, or close to zero, minimum capital requirements in most ASEAN economies. This measure affects particularly the less capital-intensive industries, and notably SMEs.

There is a growing awareness of responsible business conduct (**RBC**) and corporate social responsibility (**CSR**) among businesses in Cambodia (mostly in large multinational companies), even though the government does not have explicit policies to promote RBC and CSR. Mainstreaming RBC good practices for financial and non-financial disclosure and strong corporate governance principles would help overcome country risk perceptions, attract quality foreign and domestic investment and promote linkages with multinational enterprises.

Delays in drafting and implementing laws are often present in the Cambodian public system, weakening the ability to properly govern investments. The amendment to the Investment Law and the enactment of the Law of Special Economic Zones and Competition Law have been debated for several years and are still pending. Improving public governance is a long-term process, involving capacity-building for officials, simplified procedures, and reduced opportunities for corruption such as through electronic filing, together with clear drafting of legislation, regulatory impact assessments and public consultations. Cambodia is moving forward in all of these areas.

Public consultations as part of the legal drafting process can also improve the quality of laws. According to the business community, the private sector in Cambodia is inconsistently and insufficiently consulted on policies and procedures affecting their operations, with adverse effects on their business. There is no current mandate nor framework to guide consultations, and there are few platforms or processes allowing interested individuals and organisations to keep abreast of new regulations, plan ahead and gather information and views from their members.

4.3 PRESENCE OF PRIVATE AND PUBLIC INVESTORS AND DONOR FUNDERS

There is substantial presence and interest of donors, investors, and intermediaries (funds, blended vehicles, the microfinance sector), active in the country.

Impact Investors: From 2007 to 2017, Private Impact Investors (PIIs) deployed more than USD 904 million through 226 deals in Southeast Asia. Indonesia, the Philippines, and Vietnam received over 30% of all impact capital deployed (more than USD 281 million) through 135 deals. Brunei, Cambodia, East Timor, Laos, Malaysia, Myanmar, Singapore, and Thailand attracted nearly USD 622.5 million through 90 deals. Of that capital deployed, Cambodia received USD 400.9 million through 37 deals, with an average deal size of USD 10.8 million, earning number 1 ranking amongst 10 South East Asian countries for the total capital deployed over a 10-year period and the average deal size, with most investments supporting **Cambodia's financial services sector** (and mostly supporting **MFIs**). Instruments with a higher use of equity are deployed more in developed economies

like Singapore and Malaysia, with economies such as East Timor, Cambodia, and Laos attracting debt capital. Excluding the unusual size of MFI deals in Cambodia, the average deal falls to USD 2.6 million for the ten markets. Most of these deals have been made since 2013. Other sectors – such as energy, agriculture, and workforce development – have received limited investment, with no investments in education, healthcare, consumer goods, or ICT.⁷⁸

Some **Impact Investors** active in WASH in Cambodia are:

Incofin is a global leading impact fund manager focused on investing in dynamically managed enterprises in emerging countries, with over 20 years of experience working with private debt and equity investments. Incofin has over EUR 1 billion in assets under management and a team of 60 professionals located in Cambodia, France, Belgium, India, Colombia, and Kenya. In partnership with Danone, Incofin is in the process of closing final capital contributions for the Water Access Acceleration Fund, aimed to launch in 2022. Current investors include the Development Finance Corporation, BNP Paribas, Mirova (a B-Corp certified French impact investment manager) and Aqua for All. The Fund will invest in social enterprises that improve access to safe and affordable water to below USD 8/day per capita in Asia (~60%) and Africa (~40%).⁷⁹

Blue Earth Capital,⁸⁰ wholly owned by Blue Earth Foundation and headquartered in Switzerland, is gradually entering the Cambodian market. It is currently supporting gender investments in affordable leasing and structured housing finance, fintech and financial solutions tailored to the Cambodian population and representing USD 15 million in debt, with aspirations to increase reach and adopt climate resilient solutions.

WaterEquity, headquartered in the US, has set up several impact investing funds which blend capital from impact investors and commercial investors. These include Niagara Cares, Skoll Foundation, Ceniarth, Conrad N. Hilton Foundation, Bank of America, U.S. International Development Finance Corporation, IKEA Foundation, Osprey, Johnson & Johnson, high net worth individuals and some others. In Cambodia, WaterEquity primarily lends to seven microfinance institutions (MFIs) for on-lending to households seeking water and sanitation improvements (mainly for latrines and piped water connection). WaterEquity works in close collaboration with Water.org, which provides technical assistance, coordination between stakeholders, support with marketing of WASH products and capacity building for credit reviewers that are interacting with potential customers. In addition, it supports MFIs to conduct supply and demand studies for WASH products, it coordinates contract agreements between MFIs and enterprises, and it builds capacity in accounting, financial and business skills.⁸¹

Uberis Capital, founded in 2012 by Anthony Orsatelli, Cyrille Antignac, Pierre Tami, and Kim Tan, supported the Truestone Impact Fund as its local investment manager in Southeast Asia. Uberis has USD 2.4 million invested in early-stage social enterprises in Cambodia, Vietnam, Laos and Myanmar, and has catalysed USD 5 million from co-investors.

Wellers Impact, chaired by Cyrille Antignac, is a UK-based Impact Investment Manager that unlocks community impact through SDG-focused impact investing. Wellers Impact applies innovative investment models to originate opportunities globally across real estate developers, agriculture and private water, sanitation, and plastics recycling firms. Currently in its pilot phase, Wellers Impact and Water Unite have partnered to create the Water

⁷⁸ THE LANDSCAPE FOR IMPACT INVESTING IN SOUTHEAST ASIA, GIIN, August 2018

⁷⁹ Interview with Dina Pons, Incofin

⁸⁰ <https://blueearth.capital/>

⁸¹ INTERNATIONAL WATERCENTRE, LEAN FINANCE & AGUACONSULT, Case study assessment: Blended Finance in Water, Sanitation and Hygiene (WASH) – Lessons for DFAT, July 2021

Unite Pilot Investment Vehicle (WUPIV), which will provide risk-tolerant capital to Small and Medium Enterprises (SMEs) in the water, sanitation, and plastics recycling sectors.

Vision Fund (the microfinance arm of World Vision) has recently sold the microfinance business to Woori Bank (South Korea) and no longer has a presence in Cambodia. The reason for selling was the high saturation of the MFI sector in Cambodia and the diminishing potential for high impact interventions due to changing economic conditions in the country.

Good Return Impact Fund,⁸² Australia based, works with over 20 MFIs in Cambodia to secure responsible financing for small and medium sized businesses, with a focus on women. Most of its focus is on ensuring social mission compliance by MFIs and consumer behaviour change for responsible debt taking. From January to September 2021, during the COVID-19 pandemic, the fund helped create or sustain 465 jobs in Indonesia and Cambodia. 74 SMEs in chilli, maize, paddy, and aquaculture value chains have received AUD 1.38 million in funding backed by Good Return's loan guarantees. Of these 74 SMEs, 46 are women-owned enterprises.

Vitol Foundation and **Give2Asia** are supporting the 1001fountaines organisation to scale up the Water Kiosk model in Cambodia, providing safe drinking water to rural populations, purified through an environmental-friendly process. The goal is to ensure safe water delivery through boats, or connecting to other water sources in case the main one dries up, and thus to sustain access to safe drinking water in regions vulnerable to climate change.

Stone Family Foundation (UK) and iDE, supported by **USAID**, are supplying latrines to rural communities to address open defecation through the Cambodia Rural Sanitation Development Impact Bond. Another initiative of the foundation is the Cambodia Revenue Finance Facility,⁸³ which provides finance (or pays) for piped water connection and facilitates the provision of working capital loans for operators.

MYSC (Merry Year Social Company) (South Korea) is supporting CAST CO., LTD., a company that manufactures Eco-friendly ozone sterilisation for food, water, and space. It disinfects viruses and bacteria through ozone generated from oxygen in the air and through advanced low-temperature micro plasma technology.

Aqua for All and Roots for Impact co-designed and implemented Social Impact Incentives for Water, Sanitation and Hygiene (SIINC for WASH), an impact-linked finance programme. It provides innovative funding to water and sanitation enterprises in Asia, in Sub-Saharan Africa, and in the Middle East and North Africa (MENA). SIINC for WASH is an innovative and catalytic financial instrument where an outcome payer (e.g. a philanthropic organisation, development agency or other donor) agrees to make time-limited payments to the enterprise based on the impact generated by their operations. Water enterprise Khmer Water Supply Holding (KWSH) is one of the funding recipients.⁸⁴

UN: Working closely with the Ministry of Economy and Finance (MEF) in Cambodia, the United Nations has launched two joint programmes to expand financing options for the Royal Government of Cambodia (RGC). The objective is to meet growing demands for development investments and to maintain financial lifelines for micro, small and medium-sized enterprises (MSMEs), particularly women-owned enterprises. Both programmes support the realisation of Cambodia Sustainable Development Goals (CSDGs). The first programme is the Integrated National Financing Framework (INFF) to catalyse Blended Finance for Transformative CSDG Achievement. This programme is financed by the Joint SDG Fund with a budget of USD 1 million and will be implemented by the UN Development Programme (UNDP) and UN Capital Development Fund (UNCDF). The

⁸² <https://www.goodreturn.org.au/impact-investing-good-return>

⁸³ <https://www.thesff.com/water-and-sanitation/enterprises-in-safe-water/gret/>

⁸⁴ SIINC for WASH Impact-linked finance for KWSH July 2021

second programme is Unlocking Cambodian Women’s Potential Through Fiscal Space Creation (A Credit Guarantee Scheme for Women-owned Enterprises). This programme is funded by the UN COVID-19 Response and Recovery Multi-Partner Trust Fund for USD 0.8 million and will be implemented by four UN agencies: UNCDF, UNDP, the International Organization for Migration (IOM) and the International Fund for Agricultural Development (IFAD).⁸⁵

World Bank: The current focus of World Bank initiatives in Cambodia is in the provision of piped water supply. Amongst recent World Bank projects in WASH was a partnership with the Stone Family Foundation to help the government of Cambodia unlock key constraints and regulatory bottlenecks in the water and sanitation sector. Before this partnership the Bank had been working with the government on WASH at the sectoral level, while the Foundation supported a large-scale sanitation marketing programme that helped to significantly increase sanitation coverage in rural areas. The Bank and the Foundation joined forces through a programme of technical assistance (TA) – the Cambodia Improving Rural Water and Sanitation Services (CIRWSS) programme – which began in 2016 and concluded in February 2020. CIRWSS focused on building the capacity of institutions that deliver and manage water and sanitation services and on reforming the sector. For water supply, this work included supporting the Ministry of Industry, Science, Technology, and Innovation in processing licenses for water operators, strengthening the tariff regime, and developing models for private sector participation in water service delivery. For rural sanitation, the TA supported the development of the National Action Plan for Rural Water Supply, Sanitation and Hygiene, particularly the decentralisation of rural sanitation responsibilities to the provincial, district, and commune levels. The TA also supported early analysis of faecal sludge management in rural contexts.⁸⁶

Asian Development Bank (ADB): Since 2005, ADB has supported rural water supply and sanitation through the Tonle Sap Rural Water and Sanitation Sector Project (completed) and the Second Rural Water Supply and Sanitation Sector Project (ongoing). It has also supported the Government of Cambodia through technical assistance provided on several project preparations, and on smaller sector studies such as the Feasibility of Sanitation-Linked Biogas Options in Rural Cambodia (completed) and the Sanitation Microfinance pilot demonstration activity (ongoing). Recently, ADB has approved a USD 180 million loan for urban services in Cambodia, with a focus on wastewater and solid waste management. The money will support the construction of wastewater treatment facilities and sewerage infrastructure in the cities of Poipet and Bavet, and the expansion of the sewerage network in the city of Kampot. The project, due for completion in 2027, will also help municipal governments boost revenue collection and become more self-sufficient through tariff reform, efficiency enhancements, and leveraged private sector participation. The loan was approved under the Livable Cities Investment Project to support ADB’s Strategy 2030, which aims to facilitate sustainable growth in developing member countries while eradicating poverty. The Cambodian government will contribute an additional USD 14.1 million.⁸⁷

Islamic Finance: Islamic finance is one of the fastest growing segments of international finance. The total worth of the Islamic finance industry across its three main sectors – banking, capital markets, and takaful – is forecasted to reach USD 3.5 trillion by 2021.⁸⁸ (Takaful is Islamic insurance where members contribute money into a pooling system to guarantee each other against loss or damage.) This industry is based on a Sharia compliant Islamic

⁸⁵ <https://www.kh.undp.org/content/cambodia/en/home/presscenter/pressreleases/2021/united-nations-launches-joint-programmes-to-support-sustainable-.html>

⁸⁶ <https://www.worldbank.org/en/results/2020/07/22/partnering-for-impact---strengthening-institutions-to-bring-water-and-sanitation-services-to-cambodias-rural-areas>

⁸⁷ <https://www.globalwaterintel.com/news/2021/47/adb-funds-to-support-cambodian-wastewater-build-out>

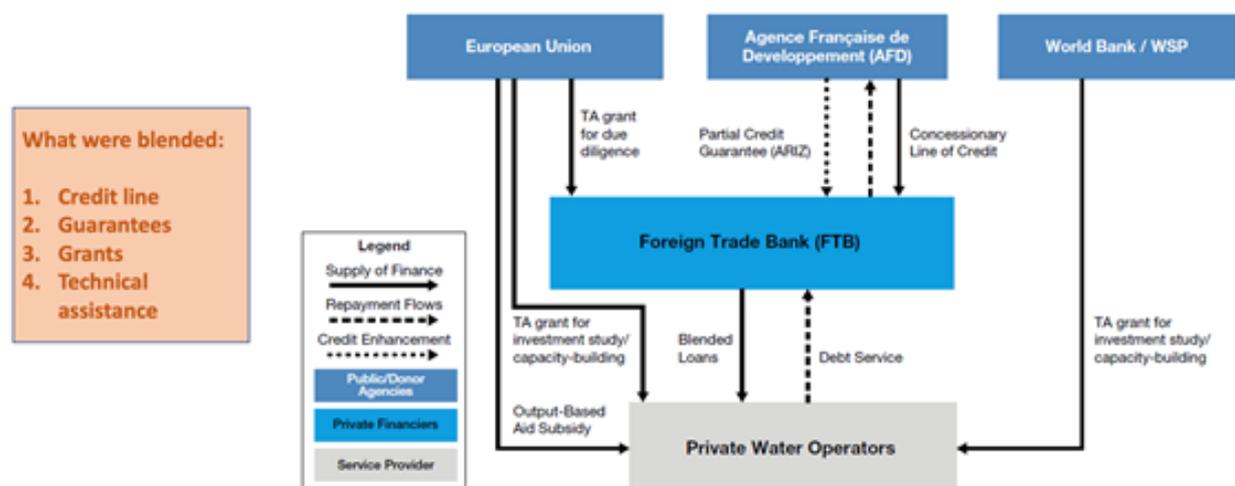
⁸⁸ Islamic Finance for Inclusive Growth (Financed by the Investment Climate Facilitation Fund under the Regional Cooperation and Integration Financing Partnership Facility), ADB, December 2017

banking system and encourages profit and loss sharing and asset-based investments, promoting financial inclusion for all. Islamic Finance is gaining popularity in Cambodia, mainly providing finance for water wells. Osman Hassan, secretary of state at the Ministry of Labour and Vocational Training and president of Cambodian Muslim Development Foundation, said Muslims in the country were reluctant to access the kingdom's financial services because paying interest is not allowed under Islamic law. "A Muslim cannot lend money to, or receive money from, someone and expect to benefit. Interest (known as *riba*) is not allowed. To make money from money is forbidden – wealth can only be generated through legitimate trade and investment in assets".⁸⁹ Prime Minister Hun Sen had given the green light for adding a "fee charge" (1 to 1.3% per month) instead of interest for Muslims accessing financial services, with the Ministry of Economy and Finance changing the term "interest rate" to "loan service fee". There are two Malaysia-based Islamic financial institutions active currently in Cambodia.

Agence Française de Développement (AFD), (France): AFD in partnership with the World Bank, European Union and Foreign Trade Bank (FTB) in Cambodia, continue to support private water and electricity operators in Cambodia with the aim of broadening access for people to meet their basic needs.⁹⁰ The *Access to Finance Program for Small Water and Rural Electrification Enterprises in Cambodia*, launched in 2014 and currently in stage 2, includes provision of a concessional loan/credit line (USD 15 million, with USD 5 million dedicated to water supply) to the FTB, a risk sharing guarantee of USD 5 million, and grants (funded by WB and EU) to support FTB in loan structuring and water finance capacity building. Also included is the provision of technical assistance to Groupe de Recherche et d'Echanges Technologiques (France) (GRET), Innovative Services Engineering & Advisory (ISEA), Emerging Markets Consulting (EMC), and See-saw for business plan preparation, technical studies, as well as construction work supervision and a USD 0.9 million subsidy to encourage water operators to reduce costs connecting the poor to water and to improve water quality. The *Access to Finance Program*⁹¹ is an example of blended finance facility, which structures capital from three agencies and channels funds through FTB in Cambodia (Figure 5).

FIGURE 5 – ACCESS TO FINANCE PROGRAM STRUCTURE

Blended finance was used to facilitate access to finance for water operators



⁸⁹ <https://www.khmertimeskh.com/74711/islamic-finance-debut-soon/>

⁹⁰ <https://www.afd.fr/en/actualites/broadening-access-water-rural-cambodia>

⁹¹ Presentation -Blended Finance in Practice: The case of water supply in Cambodia, OECD – Korea Knowledge Exchange Sessions, June 2021, PROPARCO, AFD, World Bank; Phyrum Kov & Pheaktra Thlang

In addition, AFD has provided Cambodia with a sovereign loan of 118 million euros (USD 121 million) for two projects: one (100 million euros) to build the Bakheng water treatment plant and another (18 million euros co-funded with ADB) to develop competitive skills.

Development Finance Corporation (DFC) (U.S.): Through 2019, several Cambodian companies have received financing from the Overseas Private Investment Corporation (OPIC), including loans to financial institutions for purposes of onward lending. OPIC’s successor agency, the DFC, is expected to carry these programmes forward in Cambodia. The Export-Import Bank of the United States (Ex-Im Bank) provides financing and insurance to local companies to help them purchase U.S. made products and services; repayment terms are generally up to seven years. In 2018, Ex-Im Bank facilitated the sale of a U.S.-made grain silo through a loan guarantee, its first commercial transaction in Cambodia. Cambodia is also a member of the Multilateral Investment Guarantee Agency of the World Bank, which offers political-risk insurance to foreign investors.⁹²

Department of Foreign Affairs and Trade (DFAT) (Australia): The Australian Aid relationship with Cambodia has a total overseas development aid of AUD 66.1 million and a bilateral allocation of AUD 43.4 million (2020–2021).⁹³ Australia, through the Investing in Infrastructure (3i) programme, also has extensive cooperation in the water and renewable energy sectors. This creates opportunities for Australian businesses to provide technological solutions in those sectors at scale. The 3i (via Palladium) in Cambodia is currently working on the design of the Water Development Fund (WDF) and specialists are currently seeking consultations with all key water sector stakeholders in Cambodia to collect important inputs and recommendations on:

- What financing products and instruments the new WDF should provide to best meet the specific needs and priorities of water suppliers, investors, lenders, donors, and consumers
- What institutional design and governance options would best fit the objectives and the requirements of both public sector and private sector donors, contributors, and investors
- What additional technical support services and management capabilities are needed to sustain the WDF and meet the specific needs of its beneficiary parties and key stakeholders

3i is considering viability gap funding grants, concessional loan products, limited credit guarantees, connection-based subsidy products and other related financing instruments to be included in the Fund structure.

Other significant funders in Cambodia include but are not limited to: Canadian and Austrian governments, Bill and Melinda Gates Foundation, and the Conrad N. Hilton Foundation.

4.4 INVESTABILITY OF THE WASH SECTOR AND ENTREPRENEURIAL ACTIVITY

The following deficiencies (gaps) of the WASH sector are noticeable in Cambodia (this section is to be read in conjunction with Chapter 3):

- weak opportunities for WASH entrepreneurship (especially outside the major cities)
- weak legal framework to support businesses
- low levels of technology application and value add
- poor human resources and skills (technical, financial, and business)
- low access to finance
- poor investability of the sector

⁹² <https://www.state.gov/reports/2021-investment-climate-statements/cambodia/>

⁹³ Market Insights, connecting Australian businesses to the world, DFAT, 2021

- inadequate infrastructure
- social and gender disparity

Entrepreneurship: The concept of social entrepreneurship in Cambodia is developing but still nascent, with many NGOs and SMEs facing a funding gap estimated in aggregate at USD 3.7 billion (2017).⁹⁴ There is also a missing middle of medium-sized firms, and a widespread informality with over 98% of microenterprises, 63% of small enterprises and 29% of medium-sized enterprises not formally registered.⁹⁵ A similar trend is observed in relation to WASH enterprises. To encourage the development of stronger SMEs, policies should aim to promote formalisation, simplify the process of registering and doing business, improve technology adoption by SMEs through public-private-academia partnerships, facilitate SME financing and encourage participation of SMEs in economic zones. Such encouragement can enable SMEs to work in clusters, thereby enhancing their productivity, increasing the quality of Cambodia’s exports and reducing the country’s reliance on imports. Equally crucial to the effective enabling environment will be supporting the incubation and acceleration of the provision of funding networks by intermediaries.

Regulatory framework: Policies and the enabling business environment are analysed in detail in Chapter 4.2 of this document. Overall, change and strengthening of existing regulations is required to improve the legal environment with a focus on trade, tax and other aspects so as to improve the ease of doing business and thus attract domestic and foreign investments.

Skill: Foreign investors often complain about the low quality of the Cambodian labor force.⁹⁶ A widely held view among foreigners is that there is a need for systematic efforts from the government to remedy the lack of well-trained workers. Despite the existence of vocational training schools, skills are often not in line with economic ambitions or with foreign investors’ needs. Human resource needs in Cambodia’s water sector are emerging as a key constraint to achieving the Sustainable Development Goals. Cambodia’s population is expected to grow to 20 million in 2028. An additional five million people will require services, and new and existing facilities and infrastructure systems will need to be maintained. This will require effective local institutional structures to be developed, and long-term investment in human capital. According to UNEP, “in the United States, every USD 1 million invested in the country’s traditional water supply and treatment infrastructure generates between 10 and 20 additional jobs. Meanwhile, the U.S. Department of Commerce’s Bureau of Economic Analysis found that each job created in the local water and wastewater industry creates 3.68 indirect jobs in the national economy. Another study in Latin America found that investing USD 1 billion in expanding the water supply and sanitation network would directly result in creating 100,000 jobs”.⁹⁷ While a challenge, this gap points to potentially important gains from market-responsive skills upgrading policies. There are potentially high returns from investments in training too.

Low access to finance: In Cambodia, over the past two decades, a large number of small enterprises have invested “spontaneously” in unstructured water supply and electricity utilities. They face two challenges though. First, they are impeded by poor technical, financial management, infrastructure planning, design, financing and business skills. And second, they have relatively low access to finance to overcome these constraints and to support, grow or scale up their business. Despite an oversupply of microfinance, there are limited opportunities for business owners to apply for additional credit, not least because their collateral is generally locked by earlier debts. Low access to finance is also aggravated by limited private domestic and foreign investments into the

⁹⁴ The Landscape For Impact Investing In Southeast Asia, GIIN, August 2018

⁹⁵ OECD Investment Policy Reviews: CAMBODIA, 2018

⁹⁶ OECD Investment Policy Reviews: CAMBODIA, 2018

⁹⁷ <https://www.unep.org/news-and-stories/press-release/three-four-jobs-global-workforce-depend-water-says-un-world-water>

WASH sector, despite increased interest and local office presence on the part of investors. This is partly triggered by perceived low investability of the sector and uncertainty of the regulatory framework.

Public funding for WASH-resilient climate change should be used catalytically to mobilise additional investment. This point is argued in the OECD Investment Policy Reviews Report: Cambodia, 2018. Development finance historically has provided support to government institutions through multi-donor initiatives and the roll-out of important environmental policies – including climate change policies and action plans. Going forward, there is a need for cooperative WASH and climate change-related development efforts to focus on catalysing private sector engagement and investments using ODA and other public finance. Blended finance programmes which target private sector development and strengthen climate change and WASH sector policies and capacities are offering mechanisms to achieve such an ambition (see Chapters 5-7 for details).

Poor investability of enterprises: The WASH sector is very often regarded as not attractive for private investments due to perceived low commercial viability and high investment risks. A recent case study performed by WaterSHED Cambodia,⁹⁸ funded by USAID, explored whether sanitation enterprises (in Cambodia) could be made viable (profitable) and sustainable (viable over a prolonged period) without external, non-market-based support. The report highlighted a very limited number of standalone WASH enterprises in Cambodia, finding that businesses often operated their sanitation enterprise alongside another related business such as the manufacturing of concrete products or the retailing of construction material, sharing such costs as rent, utilities, and transport. Analysis of the three enterprises revealed four key drivers of gross profit differences: the sale of additional sanitation-related products, the common product mix, costs, and the number of customers (networks). With proper leverage, **WASH enterprises are proven to be viable and sustainable.**

A recent case study, undertaken by Water Global Practice,⁹⁹ revealed that, using circular economy efficiency principles to minimise water losses and reduce waste, a water utility can increase profitability, improve cost recovery and prolong its sustainability. This analysis was based on the example of the Phnom Penh Water Supply Authority (PPWSA). Although PPWSA is publicly owned (yet listed on Cambodia Stock Exchange), such best practices could be applied to 300-plus private water operators in Cambodia. PPWSA has achieved significant progress by installing the mandated metering of existing customers and the creation of a customer database to improve revenue collection. These efforts have rehabilitated the water supply network and production facilities, increased production capacity and expanded the network through massive infrastructure investment. Improving the PPWSA's governance structure allowed the utility to operate like a business. PPWSA's operating cost coverage has improved from 66% in 1993 to 170% in 2019, with the utility reaching full cost recovery in 2004.

Households' ability to pay for tariffs (both water access and sanitation) is "significantly greater than...what tariffs are today",¹⁰⁰ which could lead to profitability advantages for service providers. However tariff increases are not widely supported by government.

Infrastructure: Cambodia has a history of degrading infrastructure, dating back to its major civil conflict, which has been followed by chronic underinvestment over the years. Since 2019 though, efforts have been made to significantly boost public capital investment in physical infrastructure¹⁰¹ and to accelerate public investment management and debt management reforms. Yet transport, sanitation (see Chapter 3) and electricity are still

⁹⁸ CREATING VIABLE AND SUSTAINABLE SANITATION ENTERPRISES, Case Study: A Retrospective Analysis of Rural Sanitation Enterprises in Cambodia, USAID, WaterSHED, 2020

⁹⁹ Water in Circular Economy and Resilience (WICER), The Case of Phnom Penh, Cambodia, 2021

¹⁰⁰ Morten Kvammen, Lotus Capital, Cambodia. Palladium interview, 3i, 5th of January 2022

¹⁰¹ Policy in Focus, The International Policy Centre for Inclusive Growth, Volume 19, Issue No. 1, March 2021

among the top ten underinvested sectors. As rapid economic growth continues, donor financing will further decline, underlining the need to mobilise domestic public and private resources, as well as foreign capital, for infrastructure investment. Private investment has so far been limited and largely confined to power generation, international air transport and small-scale projects, but public-private partnerships are becoming increasingly common.

Social and gender inequality in enterprise activity: The literature on women’s entrepreneurship in developing countries suggests that entrepreneurship is a pragmatic solution for women to provide financial support for their families and reduce household poverty.¹⁰² In Cambodia, roles of women in WASH include business owner, manufacturer and product distributor. A University of Technology Sydney (UTS) study in 2019¹⁰³ found that, whilst there was evidence of empowerment reported by female water enterprise owners, gender norms and social stigma still constrained women. This study observed complexities and challenges of the ongoing empowerment process. In Cambodia, people say¹⁰⁴ that women should “just make extra money”, which is already a great contribution to the family. The mindset that Cambodian women are family caretakers exerts a great deal of pressure on them and suppresses their ambition and great vision for their business. As such, targeted strategies are needed to address such constraints. Research from the World Bank (2019)¹⁰⁵ identified that women make up 20% of the Cambodian water and sanitation utilities workforce. Gender disparity in Cambodia generally, and in the WASH sector particularly, is still very high.

¹⁰² New Perspectives on Women in WASH: Integrating Women’s Empowerment Programming into a Market-Based Sanitation Intervention, WaterSHED, 2019

¹⁰³ Rural Piped-Water Enterprises in Cambodia: A Pathway to Women’s Empowerment?, UTS, 2019

¹⁰⁴ <https://focus-cambodia.com/article/the-importance-and-challenges-of-female-entrepreneurship-expansion/>

¹⁰⁵ WOMEN in WATER UTILITIES BREAKING BARRIERS, Water Global Practice, WB, 2019

5. POTENTIAL FOR BLENDED FINANCE

Asia is a growing market for blended finance: Analysis provided in previous chapters establishes that Cambodia is on the trajectory of becoming an attractive middle-income economy with a growing potential for blended finance. Asia overall, according to the latest Convergence report on the state of blended finance,¹⁰⁶ has emerged as an increasingly important destination for blended capital. In 2020, Asia (i.e., East Asia and the Pacific, and South Asia) accounted for 36% of blended transactions. This finding aligns closely with the results from the OECD’s 2020 Funds and Facilities Survey, which found that 36% of blended vehicles had a geographic focus that included Asia. Direct lending and greater access to equity and quasi-equity capital can be important sources of early-stage growth funding for entrepreneurs and SMEs. In addition, blended finance remains a high-potential tool for supporting the domestic banking sector to promote economic growth and resilience through reduced foreign exchange risk and reduced reliance on international capital markets.

Some Development Partners, including DFAT, have strong in-country presence, stakeholder relationships, and support: There is a strong presence of local actors with a longstanding partnership history with DFAT. These include impact investing funds, donor banks, UN organisations, foundations, intermediaries, NGOs (such as iDE, Good Return, CARE, SNV, Credit Union Foundation Australia) and active utilities. Such businesses have entrepreneurial mindsets and resilience, now tested by the COVID-19 pandemic, plus adaptability and a strong work ethic. Moreover, the Cambodian government has proven to be ready for change, with multiple reforms currently under way. The Australian in-country presence and footprint are supported by significant aid contributions across multiple sectors. Australia’s flagship programme (3i) invests AUD 49.4 million in infrastructure for piped water supply and water treatment. The Australian Embassy in Cambodia is supportive of the efforts of the Water Security Section of DFAT via the International WaterCentre and Lean Finance, who both engage directly with the 3i team and with the broader water community in Cambodia with the aim to facilitate private sector investments in water. During research team interviews, all stakeholders expressed their willingness to partner with DFAT.

The investability and enterprise scale within the WASH sector has potential to improve: Market-based WASH can be scaled up without compromising the quality of service, subject to sectoral capacity gaps being addressed through incentivised subsidies or other forms of innovative financing.

Recent Uptime research¹⁰⁷ analysed how working ratios (proportions of costs to revenues) change with the addition of results-based funding and contractual flexibilities to accommodate variations in the size and scope of service delivery models for water service providers. Uptime’s evaluation was based on assessing the feasibility of a contract of USD 900 million (results-based grants, working out to ~USD 0.69 per serviced person) to water service providers for 2,800 waterpoints, servicing 1 million people in four countries. The infrastructure maintained by these service providers was functional for 94% of the time and users were paying 30% of the total service cost. Assuming satisfactory performance against contract requirements, results-based funding under the proposed contract design **incentivised improvements in scale and financial performance** while supporting all water services in meeting target ratios.

Findings of Uptime are similar to observations of Total Impact Capital, a fund manager of the Azure blended finance facility in Latin America. Total Impact Capital claims that access to concession finance, technology and

¹⁰⁶ CONVERGENCE, The State of Blended Finance, 2021

¹⁰⁷ UPTIME, Results-Based Contracts for Rural Water Services, July 2020

innovation led to improved profitability and scalability of water service providers. High client satisfaction leads to stable client revenues, uninterrupted even during COVID-19 lock downs.¹⁰⁸

WaterSHED research¹⁰⁹ (see Chapter 4), focusing on sanitation enterprises in Cambodia, concluded that with proper leverage such enterprises are proven to be viable and sustainable. Further support is offered by a recent Harvard Business School study,¹¹⁰ which concluded that impact investing is more valuable than grants, especially when firms face less competition in their product markets (although deviation from social mission may occur). (This study delineates the role of impact investors relative to “pure” philanthropists in social enterprise.)

Blended finance structures have the potential to improve WASH social inclusion: In pursuit of profits, WASH investments are mostly focused on the commerciality of deals, prioritising market-based WASH, infrastructure, and microfinance for WASH for capital deployment purposes. Such selectiveness sometimes leads to certain remote areas, or groups of populations, or services, being excluded from access to finance. **To avoid social exclusion**, blended finance facilities can be designed to combine various revenue sources and funding through scale and diversification of the portfolio, which could include multiple regions and sectors and could embed the capacity for social inclusion subsidies or incentives, or if necessary or preferred by consumers, complementary affordable services (e.g. water kiosks linked to piped water systems). These subsidies and alternative and complementary services can be cross-subsidised at the portfolio level through the net income generated by other sources. If a requirement at the Fund level, the Fund could and would invest in building appropriate capacity and systems for enterprises to assist in achieving social inclusion.

Blended finance structures have the potential to increase the climate resilience of WASH markets: The United Nations World Water Development Report 2020 for Water and Climate Change states that “climate change adaptation and mitigation through water management is critical to sustainable development, and essential to achieving the 2030 Agenda for Sustainable Development, the Paris Agreement on Climate Change and the Sendai Framework for Disaster Risk Reduction”. With water being at the root of climate-induced risks and impacts, investments in water and WASH provide the essential entry point for sustainable climate actions. Blended finance may have the potential to increase the focus and requirements for enterprises to be climate resilient by targeted incentives (e.g., reduced interest rates on lending), technical assistance for capacity building, pilot funding for climate resilient initiatives and by encouraging regulatory reforms to support scaling of such initiatives.

Blended finance structures have the potential to be sustainable with a proper enabling environment: Blended finance facilities are considered sustainable over a multi-year investment timeframe if the portfolio of investments can generate income sufficient to meet operating and maintenance expenditures and to provide returns to various groups of investors. For water supply and sanitation there are three sources of revenue available: tariffs, taxes, and transfer. Up until recent years, Cambodia drew heavily on transfers from overseas development assistance and philanthropy. The regulation of the piped water sector has recently evolved, including the control of water tariffs. The regulation of the wastewater sector remains lacking and sewer connection tariffs do not yet exist. With improving national wealth there is now a favourable economic environment and a good social system so that tax reforms can also be enacted to improve domestic and foreign investments. Blended finance structures – by combining multiple revenue sources and investment flows, and diversifying deployment of capital across sectors and regions – will work well in Cambodia. Where the design is

¹⁰⁸ INTERNATIONAL WATERCENTRE, LEAN FINANCE & AGUACONSULT, Case study assessment: Blended Finance in Water, Sanitation and Hygiene (WASH) – Lessons for DFAT, July 2020

¹⁰⁹ CREATING VIABLE AND SUSTAINABLE SANITATION ENTERPRISES, Case Study: A Retrospective Analysis of Rural Sanitation Enterprises in Cambodia, USAID, WaterSHED, 2020

¹¹⁰ Impact Investing: A Theory of Financing Social Enterprises, B.N. Roth, Harvard Business School, June 2021

fit-for-purpose, these structures can work in conjunction with other programmes to provide sustainable financial and development returns while sending a broader message to the global community that the market is investable.

Engaging with private sector funders is beneficial for blended finance partnerships: There are several benefits and efficiencies from partnering with the private sector in blended structures. Commercial investors typically commit **larger amounts of capital** (the median investment size between 2015 and 2020 was USD 20 million) to larger transactions (the median transaction size between 2015 and 2020 was USD 68 million),¹¹¹ and they invest both debt (47% of commitments from 2015 to 2020) and equity (50%). Institutional investors (pension funds and insurance companies), sovereign wealth funds, banks, and asset / wealth managers have a particular need for larger deal sizes, as they have significant assets under management (AUM) and require large deal sizes to avoid the high relative transaction costs associated with managing many small deals.

Financial institutions, corporates and intermediaries have large **local presences** in developing markets, and **in-house expertise**. Also, there is an increasing prevalence of blended private **equity funds** (funds primarily taking equity positions) as a percentage of overall blended funds, as is captured in the Convergence blended finance database in 2021. This is also reflected on the investor side, with increased private equity / venture capital firms providing financing to blended structures.

Philanthropic organisations, including foundations and NGOs, represented a 9% share in all blended finance transactions in 2018-2020. Most investments provided by foundations and NGOs for blended finance have been **risk bearing** – either on concessional terms (60% of commitments invested since 2015 are priced at below-market terms), or first-loss debt, or equity (10% of commitments), compared to other funders. Despite being a modest share of total commitments to blended deals, foundations and NGOs have more frequently participated in **social sectors** such as health and education compared to other funders.

There are obvious **financial and development additionalities** arising from blended finance arrangements. *Financial additivity*, as an example, may increase private lenders' provision of finances (in case of MFIs) and/or improve the financial condition of targeted credible clients (in the case of SMEs). Improvements in financial conditions may include, for example, larger loan size, longer loan maturity, decreased interest rates or lower collateral requirements.¹¹² *Development additivity*, for example from a *guarantee* such as might be provided by a Development Partners or a private partner, may have such positive impacts on beneficiary enterprises as increased investment probabilities, improved productivity, higher employment – that is, in greater chances that the firm will survive. There could be **adverse development impacts**, such as the risk of default among those enterprises (with lenders bearing risk losses), or the possibility of weakening credit disciplines of stakeholders. To avoid these adverse impacts, and to achieve a more profound development impact and balanced financial returns, blended finance should be implemented with a **diverse mix of financial instruments** and **diverse funders**. The portfolio should offer a balanced mix of risk, return and impact expectations.

There are some tactical implications in blended partnerships: It needs noting that blended finance may be challenged by **differences in the why rationale** for its creation, how it is used and the way the terms concessional, mobilisation and impact are understood by development and private sector partners.

¹¹¹ CONVERGENCE, The State of Blended Finance, 2021

¹¹² CORE CONCEPTS IN BLENDED FINANCE: ASSESSMENT OF USES AND IMPLICATIONS FOR EVALUATION © OECD 2021

Blended finance provides a medium where different partners in the development community can **work together** with investors and other stakeholders in a complementary way to fill knowledge gaps and benefit from each other's expertise and efficiencies.

There is a potential for blended finance in Cambodia in WASH based on the following *ex ante* criteria:

1. There is an existing market gap (see Chapters 3 and 4) which Development Partners capital in various forms can be used to fill: and that gap *can* be filled without creating market distortions or crowding out the private sector.
2. There are stakeholders (with relationship track records) who can commit to blended partnerships and are motivated to play their part in such arrangements.
3. There is a favourable economic and investment climate, and the national government is adapting to change in line with global trends in developed markets.
4. There are some available solutions (see Chapter 7) that are either ready for execution and scale-up now, or first require advocacy, research, and/or development.

Overall, the success of the structure will depend on how coherently the enabling environment and financing interventions are interwoven, how effectively funding is staged, how performance gaps are managed over time, and ultimately how the execution would achieve the right balance between risks, returns and impacts.

6. OPTIONS FOR BLENDED INSTRUMENTS

Based on the findings of this research, Cambodia is assessed to have the country archetype of **STRENGTHEN**. Such an archetype is amenable to deploying a mix of simple and complex blended finance tools to prepare for self-reliance with financing support from private and commercial sectors. Potentially, appropriate instruments (a mix of simple and complex) have been split into one of two categories: the enabling facility and the finance facility. The following proposed instruments,¹¹³ which for the purposes of this paper will be referred to as **enabling facility** instruments, can be used by Development Partners to:

- provide **grant** (seed capital) for prototyping innovative or emerging models and solutions (including trials of new technologies, or hardware or business models) with the potential for substantial impact
- provide **Technical Assistance (TA)** to facilitate and cultivate an environment between WASH enterprises and potential funding sources that improves access to finance and investability of WASH by improving efficiencies and strengthening capacities and skills
- provide **output-based payments (results-based)** to incentivise achievement of output milestones by enterprises or by an intermediary (particularly suitable to initiatives that integrate social inclusion subsidies)
- act as **outcome-funder** by paying for achievement of WASH milestones through a grant in the form of a Development Impact Bond
- provide **subsidies for the poorest** to increase WASH product and/or service affordability (boost demand among marginalised groups)
- provide **subsidies to utilities** to incentivise piped water network expansion in less economically attractive communities
- provide **viability gap funding (a PPP concept)** to water service providers or other WASH businesses

The above instruments offer the benefit of creating and strengthening the WASH sector enabling environment. This is an important precondition for financial viability and sustainability of more complex financial mechanisms, such as a **blended finance facility** (a collective investment vehicle, structured fund – based on the OECD definition¹¹⁴).

The second component, the blended finance facility, is a pool of financial resources from different investors in financial assets, nonfinancial assets or both. A blended facility has a defined legal statute and can take on many forms. Structured funds are a good example of a blended facility, offering a financial approach that combines different asset classes with distinct risk and return profiles (also known as a waterfall structure). Typically, aid invests in the riskiest, junior tranche, or Class C shares, which are tapped first if the fund experiences financial losses. Development Finance Corporation, for example, usually invests in the mezzanine tranche, or Class B shares, which are drawn upon second. Private investors can buy Class A shares (the senior tranche), which are the least risky because they are protected from losses by the Class C and Class B shares. Class A shares are first to receive dividends and last to be drawn on to cover potential losses. The investments provided by structured funds are often accompanied by technical assistance, specified through *enabling environment* instruments.

By offering different asset classes, structured funds cater to the development objectives of public donors and development finance institutions, and to the investment objectives of private investors. Private investors benefit from the reduced risk that the waterfall structure provides, enabling them to invest in sectors and regions with

¹¹³ International WaterCentre, Lean Finance - Methodology for country-level diagnostic assessment of opportunities for DFAT to catalyse blending of finance for climate resilient WASH, November 2021

¹¹⁴ EVALUATING BLENDED FINANCE INSTRUMENTS AND MECHANISMS: APPROACHES AND METHODS © OECD 2021

high development potential and higher perceived risk. Publicly funded donor agencies benefit from the continuous use of their funds for sustainable development (although there is a choice to exit). Further, structured funds pool money from a variety of sources to invest in many different sectors and regions, which enables risk diversification and reduces the risk of losses. Financial sustainability and development orientation need to be considered in relation to each other, because there is usually a tension between the two: instruments and mechanisms that are highly financially sustainable typically need to sacrifice aspects of development orientation, and vice versa.

Aid providers utilise the following financial instruments to mobilise private capital and to de-risk investments (*financing facility* instruments): they...

- provide a **grant** for structuring the fund and/or initial capital to attract private, institutional and commercial investors
- provide **first loss** capital or a **guarantee** (including limited credit guarantees) to catalyse private investments
- buy debt – use a **grant** to partially re-pay a loan, contingent on achieving WASH milestones
- provide **concessional** investment capital (debt or equity) at a later stage of the blended facility's life, following satisfactory market testing

More new innovative approaches are required for financing climate resilient WASH in Cambodia. There are financial innovations that are already working and these need to be continued and scaled-up, while new solutions need to be found to address evolving challenges. More funding is required from current national budget commitments and private investments. Financing mechanisms available to support stakeholders in the sector may need to be structured in a different way to attract returns for private investors, while strengthening the enabling environment and achieving social inclusion.

Some previous approaches have not established scalable solutions. One of the most advanced solutions developed to date are Development Impact Bonds (DIBs). These can offer the balance of scale and a shift from inputs to outcomes; they can also focus on specific social or development issues. The Cambodia rural sanitation DIB, as an example, addressed a challenge of demand creation through strong marketing and created an environment of social pressure. The DIB involved the government for policy support and supported Cambodia in achieving high toilet coverage, currently at nearly 80% in rural areas.

DIBs, however, do not offer a whole of system sectoral approach and may at times impede commercial rigor of the business community even while they are solving social problems.¹¹⁵ Market based solutions, in turn, are mostly focused on commerciality and sometimes run the risk of bypassing the most disadvantaged. Evidence suggests that standalone efforts, although gradually improving the market and social wellbeing of communities, are not cutting it at scale. Development finance, known for improvements of the enabling environment, must be integrated with “real market” commercial finance, offered by the private sector. Such a combination can achieve development goals while also delivering SDGs and improving nations’ resilience to economic fluctuations and climate change.

¹¹⁵ https://ssir.org/articles/entry/the_downside_of_social_impact_bonds

As noted previously, blended finance offers a variety of instruments which allow development finance to allocate available funding in a strategic way, in particular, by mobilising commercial finance which is not currently being directed towards development-related investments.

All factors and findings outlined in this report signify that Cambodia offers a favourable landscape for blended finance. Taking into consideration the strong disparity between on one hand Cambodia's relatively **developed** financial sector and its strengthening policies and economy, and on the other hand the country's nascent though **still developing** WASH sector, Development Partners could:

1. Continue to fund WASH through standalone programmes, utilising financial instruments suited to the *enabling environment*.
2. Take a systemic perspective, investing in multiple points of the sectors, and implement a blended finance programme in Cambodia, which combines two facilities under the same mandate, mission, and theory of change: a *blended finance facility* (an investment fund, operating on commercial terms, and either a new or existing modality within the Development Partner), combined with an *enabling facility* which offers a range of subsidies, technical assistance and grants to support development of the climate resilient WASH sector.

7. RECOMMENDATIONS FOR BLENDED FINANCE FOR WASH IN CAMBODIA

Convergence refers to blended finance as a structuring approach¹¹⁶ – not an investment approach, instrument, or end solution: that is, a combination of multiple options. The following four are most common blended financing structures:

- Public or philanthropic investors provide funds on below-market terms within the capital structure to lower the overall cost of capital or to provide an additional layer of protection to private investors
- Public or philanthropic investors provide credit enhancement through guarantees or insurance on below-market terms
- The transaction is associated with a grant-funded technical assistance facility (enabling facility) that can be utilised pre- or post-investment to strengthen commercial viability and developmental impact
- Transaction design or preparation is grant-funded (including project preparation or design stage grants)

This assessment has generated recommendations that include combining some of these structural approaches and elements.

Based on the identified WASH service or sector gaps, Table 8 below outlines examples of some of the financial instruments suitable for funding solutions – identifying blended structures that are applicable to the context of each sector gap. This list is not comprehensive and serves as a starting point to make the market gap more visible and to link financing instruments to these gaps.

TABLE 8 – WASH SERVICE/SECTOR GAPS AND POTENTIAL FINANCIAL INSTRUMENTS

Sub-sector	WASH Gaps	Solution	Blended Finance Facility instruments	Enabling Facility instruments
Water Supply (mostly rural in Cambodia; urban piped water coverage has been mostly addressed)	Unrealised connectivity to existing piped water supply systems	Increase affordability of piped water connection among poorest households		Viability gap funding to the water operator (or a group – e.g., TapEffect model – see Options) to subsidise household connection fees for ID Poor households
		Incentivise water operators for connecting piped water to remote and poor areas		Performance based grants (e.g. output based aid) for water operators to expand services
	Professional and business skills gap for piped water operators	Capacity building		TA from intermediaries, NGOs, to develop enterprise WASH skills to deliver quality water services that are financially viable, socially inclusive and climate resilient
		Institutional training		TA, grants to establish training programmes

¹¹⁶ The State of Blended Finance, Convergence, 2021

		Sector skills policy reform		TA, grants to introduce industry certification, advocacy
Limited access to finance by piped water operators to expand services		Improve credit rating of water operators	Guarantees, buy debt (to improve credit ranking of enterprises – piped water operators, NGOs etc)	TA to support coordination and design details
		Increase diversity of investments and funders	Pooled investments, various forms of capital deployment (debt, equity)	
		Increased debt or other finance affordability of water operators	Concessional finance , tailored to the industry, offered through blended finance facility	
		Increased capacity of MFIs to offer industry tailored loans to water operators	Debt provision to MFIs	TA to MFIs to develop WASH tailored loan products for enterprises; TA to MFIs to build capacity in WASH sector financing and demand creation Results based grants to incentivise MFIs for lending targets
		Increased capacity of water operators to negotiate financial deals and raise investment capital		TA to either intermediaries, building such capacities or to enterprises directly
Poor point-of-consumption drinking water quality		Improved household water hygiene and treatment practices though changed behaviour		TA to governments/intermediaries to lead behaviour change interventions
		Increased demand for water filters and piped water		TA, grants to intermediary or enterprise for piloting demand creation and supply in conjunction with piped water coverage gap solutions
		Increased monitoring of safely managed drinking water		TA for monitoring of point-of-consumption drinking water that feeds into SDG calculations
Lack of management of water resources		Improved capacity to manage water resources and adapt to climate changes		TA to support capacity development and system strengthening for water resource management and sustainability

Sanitation	Low sanitation coverage in remaining harder to reach segments of population (mostly remote provinces)	Increased viability of latrine businesses in lower density, more remote, poorer parts of the country		Development Impact Bond, Results based grants that include subsidies to latrine enterprise to maintain low unit costs and ensure affordability
	Lack of wastewater treatment in urban areas	National sanitation management plan and established operational model for wastewater treatment facilities and cost-recovery		TA to support the government to develop the plan and establish the model
	Lack of affordable faecal sludge management solutions in urban and rural areas	Research & development and piloting of business models to meet emerging demand for pit emptying services while ensuring affordability		TA to explore prototype pit emptying technologies, model development, and pilot
	Lack of understanding of the threats to progress posed by climate change	Research to identify sanitation-related vulnerabilities given the Cambodian context		TA to study sanitation and climate change vulnerabilities and mitigation measures
Social inclusion in WASH enterprises	Gender inclusion in WASH enterprise management and labour force	Increased prevalence of WASH enterprises owned and operated by women	Provision of debt , with incentivised interest percentage discount for women-led WASH enterprises	TA to MFIs to develop loan product tailored to address social and gender gaps TA on capacity building targeting women interested in establishing a water supply enterprise
	Employment opportunities for the poor in WASH enterprise activity	Increased opportunities for ID Poor for employment in WASH enterprises		Subsidies to WASH enterprises to employ ID Poor
		Increased opportunities for ID poor skills training in WASH	Provision of investment (debt/equity) to training institution with incentivised conditions to enrol ID poor to training	Subsidies to training institution to enrol ID Poor

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