Equity in Public Financing of Water, Sanitation and Hygiene (WASH)

INDONESIA

UNICEF East Asia and Pacific Regional Office
June 2016

unite for children

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PREFACE

This report is an output of the project contracted by UNICEF to OPM to assess WASH financing processes and outcomes in three countries in East Asia. The purpose of the assignment was to map and analyse decision-making, financial flows, allocation criteria and spending levels relevant to WASH services in Viet Nam, Indonesia and Mongolia to inform UNICEF programming and advocacy for promoting equitable and sustainable WASH services for children.

This **INDONESIA** report is the end product of a desk review of existing literature to establish the institutional setup and management of the WASH sector in regards to the assignment of functions and finances to local governments, and meetings with development partners and government officials at the central, provincial and district level. This is complemented by a similar set of outputs from Viet Nam and Mongolia. The other deliverables under this contract include a regional analysis report with key recommendations for improved WASH financing for children based on the findings of the three country case studies.

UNICEF EAPRO recognizes the high quality expertise and professionalism provided by the OPM team – *Mark Ellery* and *Henlo van Nieuwenhuyzen* – in undertaking this assignment. Special gratitude is expressed to *Aidan Cronin* (Chief WASH, Programme Section, Jakarta) and *Petra Hoelscher* (Chief Social Policy, Programme Section, Jakarta) for providing their generous support and expertise in the research process.

EAPRO also recognizes the crucial role of UNICEF staff from the Indonesia country office, the regional office, and national consultants, who dedicated their time and enthusiasm to ensuring that the project was a success. UNICEF also acknowledges the contributions from the various donor organizations, ministries and local government staff who made themselves available for interviews and whose dedication to addressing the challenges within the WASH sector is very much respected.

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ACRONYMS

APBN	Indonesia State Budget
BAPPEDAS	Planning Department
BAPPENAS	Ministry of Planning and Development
BOOT	Build-Own-Operate-Transfer scheme
CBO	community-based organization
CLTS	Community-Led Total Sanitation
DAK	Dana Alokasi Khusus (Specific Purpose Grant)
DAU	equalization grants
DBH	revenue sharing
GDP	gross domestic product
GNI	gross national income
JMP	WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation
MoH	Ministry of Health
MoHA	Ministry of Home Affairs
NGO	non-governmental organization
OBA	output-based aid
ODF	open defecation free
O&M	operations and maintenance
PAMSIMAS	National Rural Water Supply and Sanitation Project
PDAM	Perusahaan Daerah Air Minum (Local Government Owned Water Utilities)
PER	Public Expenditure review
SANIMAS	community-based sanitation
STBM	Community-based Total Sanitation Strategy
UNICEF	United Nations Children's Fund
WASH	water, sanitation and hygiene
WHO	World Health Organization
WSP	Water and Sanitation Program, World Bank

EXECUTIVE SUMMARY

Indonesia's decentralization of functions, funds and functionaries is yet to be accompanied by the necessary incentives to leverage the capacities of local government to deliver high quality public services. While a robust, rule-based fiscal decentralization system appears to have decentralized decision making authority, perverse incentives of compliance to lesser administrative rules appears to constrain the effectiveness of the higher level laws designed to improve the effectiveness of public services.

In spite of low levels of public investments, access to safe drinking water is relatively high. This is primarily due to household investments in wells, water boiling, and a growing reliance on bottled water. While the access to sanitation is improving again primarily due to household investments, access to an adequate and safe sanitary environment is extremely low. Irrespective of whether people defecate in the open or in a latrine, whether it is transported in drains, sewers or trucks, in the end faecal matter is discharged into the open environment contributing to a high prevalence of under-nutrition in children in Indonesia.

Growing central government investments in the Water, Sanitation and Hygiene (WASH) sector primarily directed towards piped water and sewage treatment plants are largely under-utilized, disassociated from sector progress, disconnected from the strategic priorities of local authorities and unrelated to the major health challenges posed by the WASH sector. The low effectiveness of public investments in the WASH sector are associated with specific institutional public financing issues that include:

- The 'giving away' of public WASH assets to Perusahaan Daerah Air Minum (PDAMs)/communities without any return on asset investment. This contributes to a cycle of build-neglect-rebuild, where the central agencies build, local operators neglect and then central agencies rebuild (in spite of laws to the contrary which are designed to prevent the unfunded transfer of public assets).
- A crowded system of input financing to local governments, which includes formula-based imbalance transfers, capital works finances, asset transfers and some output-based aid (OBA) without any significant performance-based financing system to create incentives for improved public service performance and efficiency.
- A weak citizen 'voice' that is associated with their acceptance of low quality WASH public services. This is compounded by weak 'client power' due to a soft budget constraint on public service providers, focusing them towards the central government (in spite of laws to the contrary designed to prevent the Government from subsidizing the viability of ring fenced service providers).

Potential areas of engagement for improving the accountability of service delivery in the WASH sector relate to the strengthening of the inter-governmental system to:

- Monitor WASH outcomes (i.e., open defecation density), evaluate WASH impact (i.e., under-nutrition data) and introduce performance grants for improved WASH outcomes/impact.
- Internalize the cost of WASH capital expenditures in asset transfers to publicly owned utilities by introducing the need to provide a return on assets to the government financier, while driving subsidies for the poor retrospectively against the actual delivery of WASH services to the poor.
- Link bottom-up social accountability systems to the incentives for higher quality WASH service delivery (i.e., mobile phone monitoring systems, regulatory commissions).

Local government public administration reform will also be essential to strengthen the accountability for the delivery of high quality public services in the long term.

There is potential opportunity for UNICEF to bring its child outcome focus to bear by linking the impact on child health (i.e., nutrition) through improved growth monitoring back to its engagement on sanitation. It is suggested that community graphing of weight-for-age could also potentially be used as a trigger for communities to eradicate open defecation. The monitoring and evaluation of improvements in nutritional outcomes could potentially provide a reasonable proxy indicator for an intergovernmental performance grant system. UNICEF health, nutrition, child protection and WASH are well placed to engage the knowledge aspect of this interface between impact on child growth and performance incentives within the intergovernmental fiscal transfer system.

INTRODUCTION

Indonesia has made modest progress in increasing access to improved water and sanitation services. Increasing political commitment and budget allocations in recent years have improved the trajectory of the sector. However, it is unlikely that Indonesia will have reached the MDG goal for sanitation for 2015. In order for Indonesia to achieve its target of universal access to improved water supply and sanitation services by 2019, the Government needs additional capital expenditures in the order of US$3.1 billion per year for water supply and US$1.4 billion per year for sanitation, in addition to improving the budget utilization rates of existing sector institutions (World Bank, 2014).

Over the last decade, Indonesia has transformed itself from a highly centralized system of governance to one of the most complex and highly decentralized systems of intergovernmental finance in the world. The complexity of the system is due to the gap-filling approach it has in regards to provincial-local finance to ensure revenue adequacy and local autonomy. This contributes to a lack of accountability to local residents for service delivery performance, a lack of transparency, inequity and uncertainty in allocations.[1] The current system also creates incentives for jurisdictional fragmentation and reducing own-tax effort.[1]

Since the 'big bang' decentralization of 2001, responsibility for the delivery of education, health and infrastructure services (including water and sanitation) has been assigned to local governments, primarily districts (*kabupaten*) and cities (*kota*). Local governments currently carry out more than half of all public investments and manage 38 per cent of the total public expenditures. While this has contributed to improved development indicators and increased accountability at the local level, the current framework does not reinforce service delivery performance. While transfers from the central government account for 64 per cent of local government revenues, the systems through which the central government measures and incentivizes service delivery performance remain weak.[1]

As Indonesia struggles to raise infrastructure spending above 4 per cent of GDP (which is well below other countries in the region and well below its own historical performance), there is increasing evidence to suggest that the local governments responsible for this expenditure are experiencing difficulty in managing these financial resources (World Bank, 2012). A failure to address the bottlenecks in the local government management of the increased demand for infrastructure and social services potentially risks Indonesia's growth and social stability.

Given the significant district/city government responsibility for water and sanitation, the priority focus is on improving the effectiveness of their expenditure. There are also potential areas for improving the revenues for financing public water and sanitation services.

[1] Shah, Anwar (2012), Autonomy with Equity and Accountability: Toward a More Transparent, Objective, Predictable & Simpler System of Central Financing of Provincial-Local Expenditures in Indonesia, World Bank, Policy Research Working Paper 6004.

1 PUBLIC SECTOR

Classification of the functions of government

- General administration
- Economic affairs
- Defense
- Recognized, culture and religion
- Public order and safety
- Public works and housing
- Environmental protection
- Water supply
- Higher education
- Health
- Education
- Social protection
- Agriculture and livestock

1.1 PUBLIC SECTOR CONTEXT

Indonesia continues to record significant economic growth with the country's GNI per capita steadily rising from US$2,200 in 2000 to US$3,563 in 2012. Out of a total population of 237 million, more than 28 million Indonesians still live below the poverty line, and approximately half of all households remain clustered around the national poverty line set at 200,262 rupiahs per month (approximately US$17). Public services continue to remain inadequate with Indonesia unlikely to reach all of the MDG targets in the health and sanitation sectors.

1.2 PUBLIC SECTOR STRUCTURE

Indonesia's public sector is divided into 34 provinces (*provinsi*), which in turn are composed of districts and cities. At each of these levels, the political leadership is elected by popular vote every five years. Aceh, Papua and West Papua have a special status granting them a higher degree of autonomy, while Jakarta and Yogyakarta are also recognized as special regions. A total of 416 districts and 98 cities are further broken down into 7,094 sub-districts, which are administrative sub-units of the district level. Below the sub-district level, there are 73,183 rural villages (*desa*) and 8,412 urban wards. Rural village leaders are elected exercising authority over local people in accordance to local traditions whereas urban ward members are civil servants that exercise less authority. They are both coordinated under the head of their sub-district and directly report to the head of the district/city.[2]

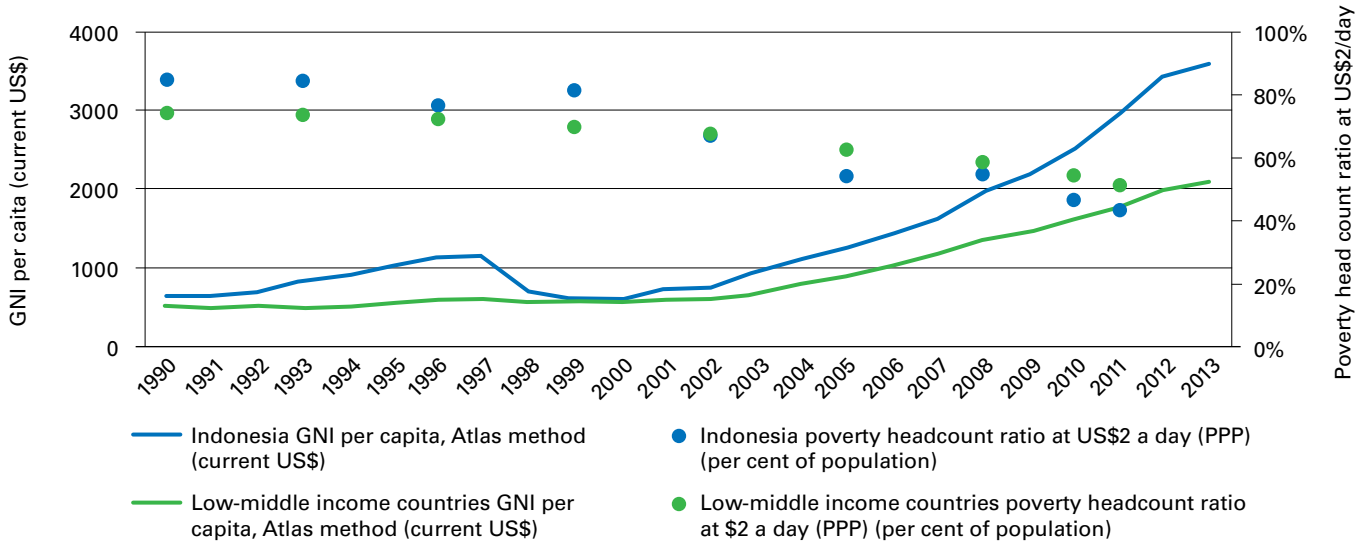
1.3 PUBLIC SECTOR SUBJECTS

Indonesia's decentralization Law 22/1999 (with revisions 32/2004 and 23/2014) shifted the responsibility for public service provision to regional and local governments for all but six exclusive national subjects (foreign relations; defense; security; judiciary; monetary and fiscal relations; religious affairs) although the service provision of land management, higher education and energy still remain centralized.

Subnational governments are responsible for the service delivery of all concurrent subjects, with district and city governments being assigned the major responsibilities for public service provision (i.e., responsibility for 11 obligatory functions that includes health, education, agriculture, communication, industry and trade, cooperatives, land administration and zoning, capital investments, environment, employment promotion). By comparison, provincial responsibilities are limited to supervision on behalf of the central government and coordination in matters that require cross-jurisdictional cooperation.

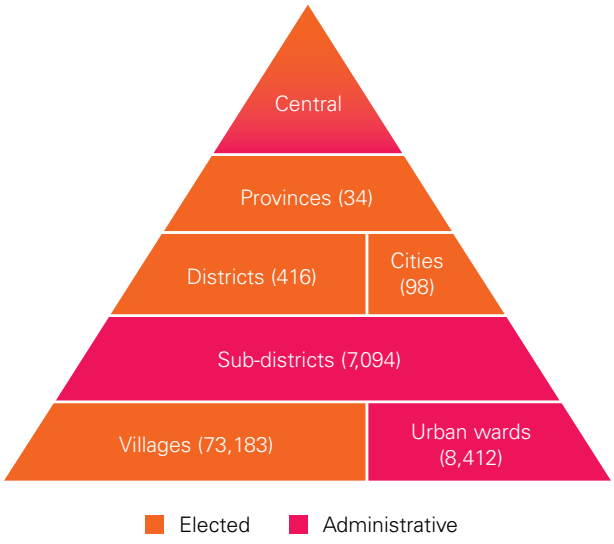
[2] Shah, Anwar (2012), The World Bank, Policy Research Working Paper 6004.

FIGURE 1: GROWTH AND POVERTY REDUCTION



Source: World Bank, www.data.worldbank.org

FIGURE 2: INDONESIA PUBLIC SECTOR STRUCTURE



Source: Updated from http://localpublicsector.org

1.4 PUBLIC FUNCTIONARIES

Eckardt and Shah (2007) report that provincial, district and city governments employ over three quarters of Government staff with the district and city governments alone, accounting for half of the total public sector wage bill. District/city governments (see Figure 4) are semi-autonomous subnational government bodies with their own elected political leadership, elected every five years. City and district governments have a considerable degree of discretion over their own administration, such as the ability to recruit, hire, and dismiss staff, and the authority to procure their own capital infrastructure. In addition, provincial, city and district governments prepare, adopt and implement their own budgets, and control and manage their own bank accounts. While local governments can collect their own revenues, they remain heavily dependent on transfers from the national government. Dependence on transfers and national regulations on salary levels and recruitment procedures constrain local government's ability to employ suitable numbers of qualified staff, particularly in finance functions.[3]

1.5 PUBLIC SECTOR FINANCE

The APBN (Indonesia State Budget) is the annual state fiscal plan, consisting of revenue, expenditure and financing (income and outflow) for one calendar year (1 January – 31 December). For the last five years, Indonesia has been experiencing positive growth in its APBN revenues. Despite this positive growth, Indonesia is still struggling to achieve fiscal sustainability and economic stability with annual APBN expenditure consistently exceeding annual revenues.

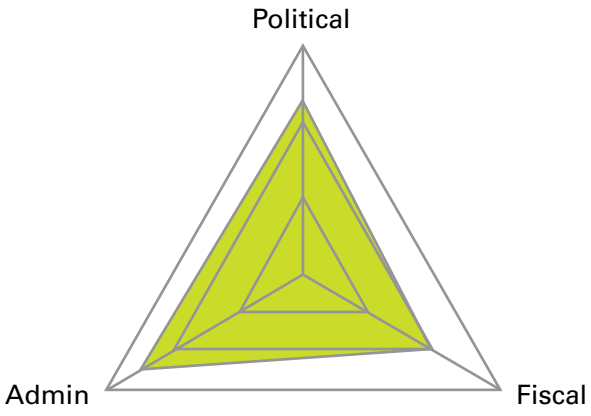
Article 7 of Law 25/1999 requires the central government to transfer at least 25 per cent of its domestic net revenues (total domestic revenue minus revenue sharing) to subnational levels of government. Law 33/2004 increased the subnational share to a minimum of 26 per cent of net domestic revenue. The proportion of this fund allocation

[3] World Bank (2005), Indonesia: *Local Government Financial Management, A Measurement Framework.*

FIGURE 3: ASSIGNMENT OF PUBLIC SUBJECTS

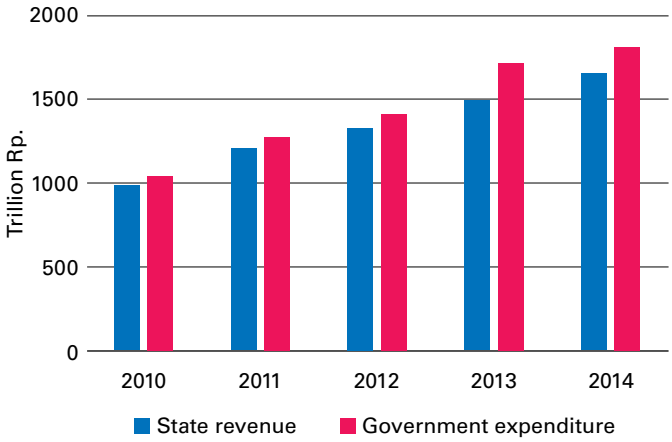
Source: Local Public Sector Initiative, http://www.localpublicsector.org

FIGURE 4: DISTRICT/CITY GOVERNMENT DISCRETION AND ACCOUNTABILITY



Source: Local Public Sector Initiative, http://www.localpublicsector.org

FIGURE 5: INDONESIA STATE REVENUE AND EXPENDITURE (APBN)



Source: www.kemenkeu.go.id Financial note 2014

between provinces and districts/cities is based on their functions. If the allocation of funds to functions is unclear an estimate of 10 per cent to the province and 90 per cent to the district/city (which carry the bulk of the expenditure responsibilities) has been adopted.[4]

Indonesia's National Long Term Development Plan (RPJPN 2005-2025), promulgated through Law 17/2007, provides the framework for the National Medium Term Development Plan (RPJMN, 2010-2014). The plan forms the basis for ministries to formulate their respective Strategic Plans, against which the budget plans of ministries and local governments should be developed.

1.5.1 PUBLIC EXPENDITURES

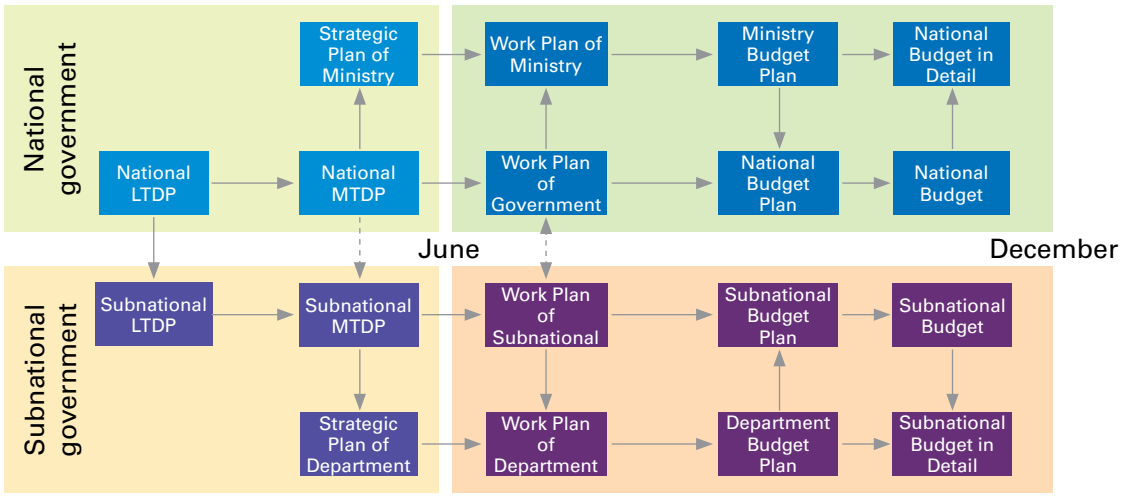
The national government is responsible for just over half of all public expenditures (51.7 per cent) on national functions while the remaining (48.3 per cent) is directed towards the local public sector for local functions. Just under one third (29.1 per cent) of total public expenditures take place at the district/city level[5] while another 9.5 per cent of public expenditures are made at the provincial level. The central government ministries spend an additional 9.7 per cent of total public expenditure on public services that are delivered at the local level.[6] According to the Constitution, the central, provincial and district governments are required to spend 20 per cent of their budget on education.

[4] Shah, Anwar (2012), The World Bank, Policy Research Working Paper 6004.

[5] ADB estimates that district/city expenditures accounted for 40 per cent of public expenditures in 2014.

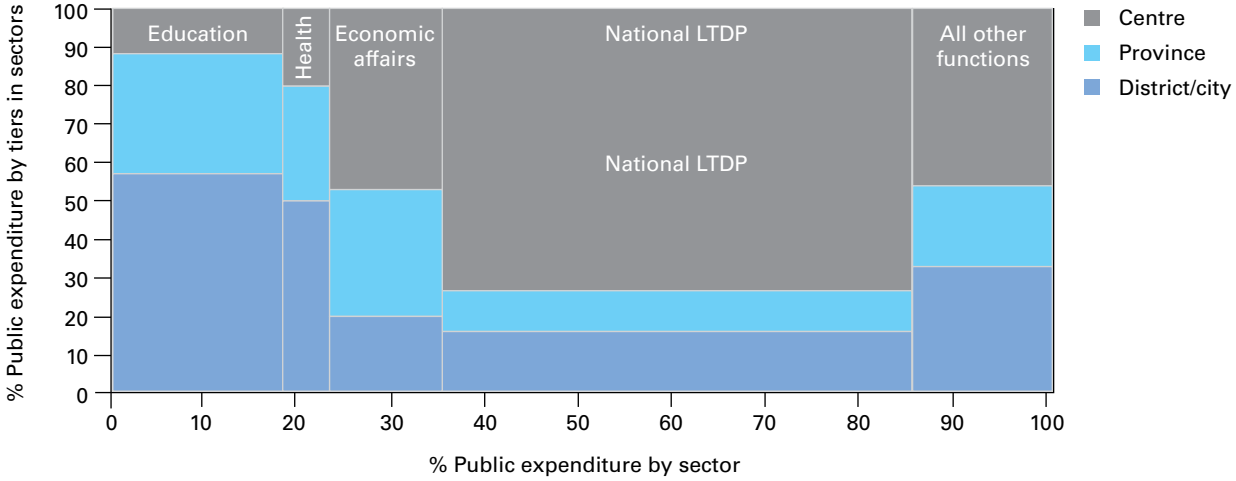
[6] Boex, Jamie (2014), Urban Institute, Local Public Sector Profile - Indonesia, 2011.

FIGURE 6: OVERVIEW OF DEVELOPMENT PLANNING PROCESS



Note: LTDP: Long-Term Development Plan, MTDP: Medium-Term Development Plan.

FIGURE 7: PROFILE OF PUBLIC EXPENDITURES IN INDONESIA (2011)



Source: http://www.localpublicsector.org

The provision of local public services are burdened with large numbers of staff, resulting in a significant share of public expenditure being allocated to salaries. District/city budgets are heavily skewed towards operating expenditures with wages accounting for half of their total expenditure (but this varies significantly across districts) with limited funds allocated to capital investment. National development expenditure on capital represents more than 60 per cent of the total development spending with significant outlays on decentralized service sectors, such as health, education, and infrastructure.[7]

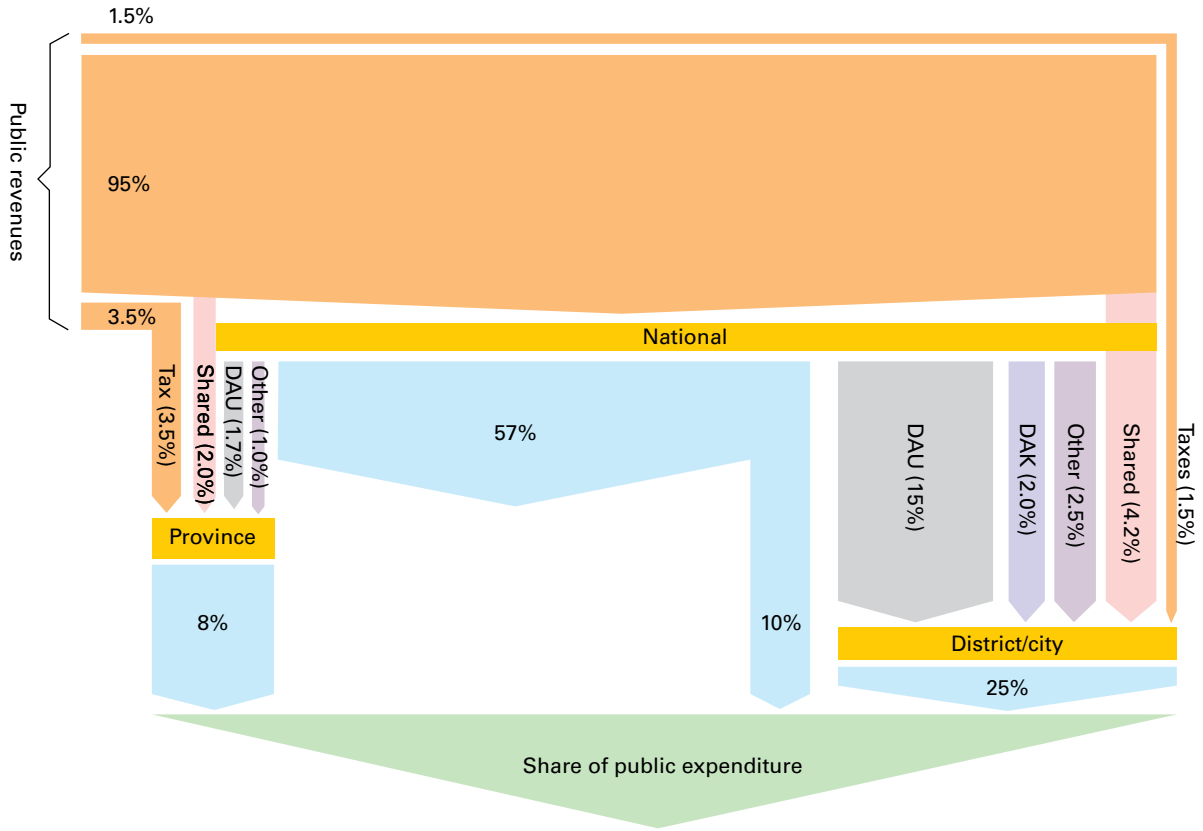
1.5.2 PUBLIC REVENUES

Central government accounts for 95 per cent of revenue collection and 67 per cent of direct spending. The difference being transferred to the local public sector primarily as general purpose transfers (revenue sharing, known as DBH; and equalization grants, known as the DAU) with a smaller fraction in the form of earmarked transfers (known as the DAK). Public revenues consisting of tax revenues (69 per cent), non-tax revenues (30 per cent) and grants (0.02 per cent) are shared between the central and local level on a derivation basis.[8] Since Law 28/2009 on local taxes and user charges, the property taxes have been gradually transferred to district and city governments.

[7] Shah, Anwar (2012), The World Bank, Policy Research Working Paper 6004.

[8] Boex, Jamie (2014), Urban Institute, Local Public Sector Profile – Indonesia, 2011.

FIGURE 8: INDONESIA PUBLIC REVENUE PROFILE



Source: Adapted from Shah, Anwar (2012), The World Bank.

Provinces account for approximately 3.5 per cent of public revenues and 8 per cent of public expenditures. Motor vehicle registration and transfer taxes, fuel and water excises form the bulk of their own source revenues financing 43.8 per cent of their expenditures. Central government revenue sharing from personal income taxes, property taxes, oil and gas taxes as well as mining and forestry royalties accounts for an additional 24.5 per cent of provincial income. Other central transfers contribute 10 per cent of their revenue with the remaining fiscal gap filled by general purpose (DAU 21.1 per cent) and specific purpose transfers (DAK 1.8 per cent).[9]

District and city governments contribute 1.5 per cent to public revenues and 25 per cent of public spending. Hotel, restaurant, entertainment, advertisement, street lighting and mining taxes for class C minerals, parking charges and user fees are the major revenues for districts/cities but they only contribute 6.5 per cent to district expenditures. (NB: District/city governments should soon have access to property taxes as their own source revenues). They receive an additional 17 per cent from tax sharing from the same revenue sources as the provinces, 10 per cent as miscellaneous revenues and 61 per cent from general purpose and 8 per cent from specific purpose transfers. In 2008, 90 per cent of district and city expenditures were financed by central transfers.[10]

[9] Shah, Anwar (2012), The World Bank, Policy Research Working Paper 6004.
[10] Shah, Anwar (2012), The World Bank, Policy Research Working Paper 6004.

2 PUBLIC SECTOR (DE FACTO)

2.1 DE FACTO LOCAL GOVERNMENT EXPENDITURES

The low allocative efficiencies of district/city government expenditures seems to be a result of over half of the district/city government budget being associated with the cost of staff (with a further >10 per cent of the budget on incidental costs associated with the management of those staff). As a result, the city/district governments generally have low operational budgets (>10 per cent budget) and low capital work expenditures (<20 per cent budget).[11]

Local government expenditures are also heavily biased toward the last quarter. This could reflect uncertainty in regards to revenues (i.e., stockpiling of revenues) or the complexity of managing expenditures. What is interesting is that local governments tend to deposit any surplus revenue as short term deposits in provincial banks rather than investing into local government owned enterprises. This is evidenced by growing district/city government reserves in these provincial banks (primarily from large urban centres and natural resource rich local governments).

In addition to the low investments in public enterprises by district/city governments, regulatory systems are grossly underfunded. Not unsurprisingly, licensing by district/city governments generates meagre revenues that are insufficient to even cover the administrative costs of the licensing office.

2.2 DE FACTO LOCAL GOVERNMENT REVENUES

While the expenditure assignment for public services has been highly decentralized, most of the local government revenues are still centralized. In spite of increased revenue assignments to local governments (i.e., property tax) and improvements particularly in cities, central transfers still account for an estimated 64 per cent of local government revenues in 2014. Even though most of the fiscal transfers are formula-based and most central expenditures are constrained by rules, the dominant revenues of the central government tend to reinforce the relatively strong authority of the central ministries.

The weak revenue assignment to local governments and their reliance on various forms of fiscal transfers undermines the downward accountability of local governments. Good governance, however, appears to be relatively well correlated with higher economic growth (*see Chapter 7*).[12]

[11] Lewis, Blane (2014), Twelve Years of Fiscal Decentralization; Regional Dynamics in a Decentralized Indonesia.

[12] Patunru A.A. and Rahman E.A. (2014), Local Governance & Development Outcomes; Regional Dynamics in a Decentralized Indonesia.

This suggests that further decentralizing buoyant own source revenues (i.e., property tax, income tax, land tax) to local governments could potentially establish a virtuous cycle for improved public services that can lead to economic growth. This further enhances local government revenues that when invested in improving services leads to further growth. This suggests a need to focus on local government expenditures which enhance economic growth and local government revenues. This recently led to the Ministry of Home Affairs (MoHA) cancelling all district laws enhancing own source revenues that are perceived to restrict economic growth.

2.3 *DE FACTO* LOCAL GOVERNMENT ACCOUNTS

While the central and local governments have a strong rule-based budgeting system, however, *de facto* there isn't a consolidated accounting system for tracking public expenditures. Local governments have adopted the use of accounting software developed by the MoHA, but this does not comply with international economic classification and activity coding standards. Furthermore, the accounting coding system uses an itemized book of accounts developed by the MoHA which does not incorporate a tiered system of accounting codes. As this is not correlated with the layered chart of accounts developed by the Ministry of Finance and utilized by the central ministries it is impossible to interrogate activity level expenditures by economic classification by ministry.

2.4 *DE FACTO* LOCAL GOVERNMENT CAPACITY

Central government intervention in the creation of assets for district/city governments has been justified on the basis of a lack of local government capacity. District/city governments do employ a huge number of public sector employees.

The expenditure on public sector employees is enormous and the skills mix reflects the legacy of a large number of low grade workers.

While the skills mix of staff is theoretically within the domain of the district/city government, the number and grade of the staffing posts needs to be negotiated centrally with the various ministries. The challenge for local government seems to be less of a lack of capacity and more a challenge of the effective deployment of the idle capacity.

2.5 *DE FACTO* SATISFACTION WITH VILLAGE GOVERNMENT

Democracy International surveys have shown that satisfaction with government increases with the proximity to the people i.e., satisfaction with the village government > sub-district > district > province > centre, and when satisfaction with the administration is greater than satisfaction with the elected officials.[13] What is evident is that citizens have relatively low expectations of the Government. It is surprising that the village government, which has relatively small revenue, scores higher than upper tiers of government with far greater responsibilities and far greater funds. It is also surprising given the limited authority of the village government, as compared to the district government's authority over most public services and exercise of ownership over public land and planning authority of private land.

Indonesia has issued Law 6/2014 regarding the strengthening of the village (*desa*) government and regulation 60/2014 (amended 22/2015) regarding the transfer of finances to the village government, which has been a significant breakthrough. The transferring of block grants from the central government to village governments through the district government was anticipated to start in 2015. This law and regulation, enables the village fund to be utilized only for village government infrastructure and affairs, community development and empowerment.

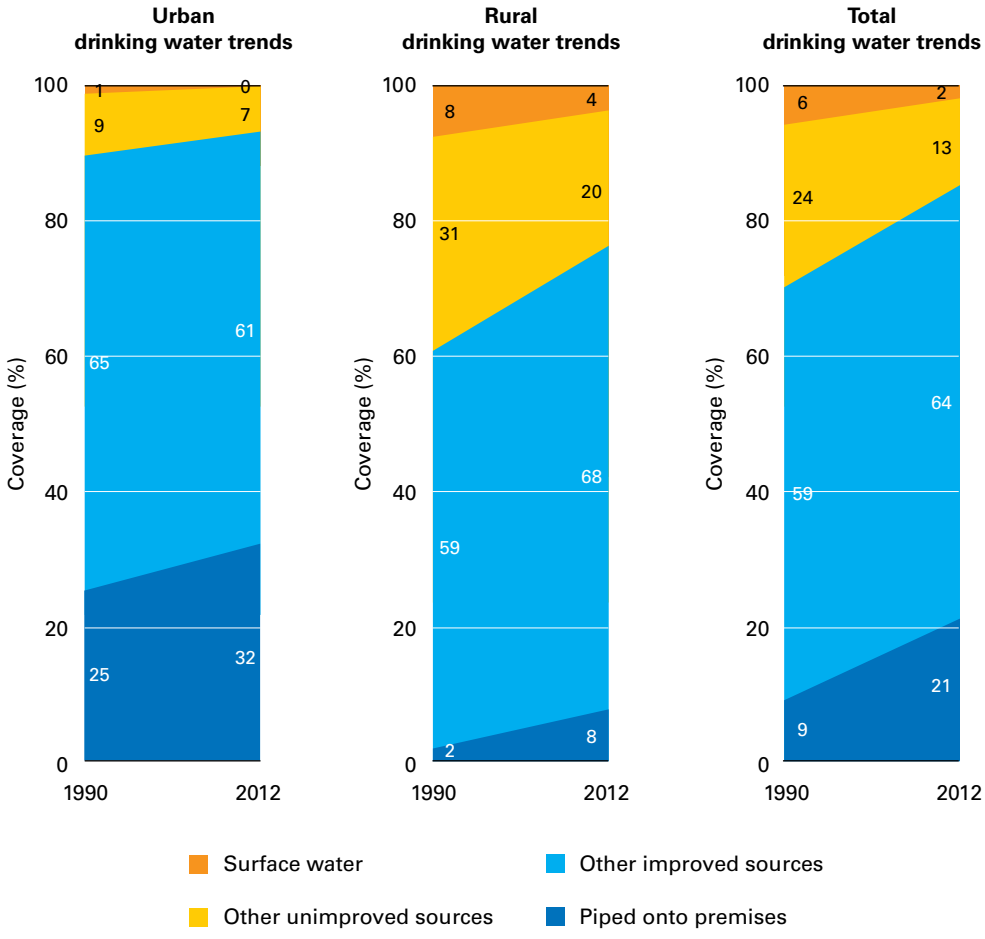
[13] Mietzner, M. (2014), Indonesia's decentralization: The rise of local identities and the survival of the nation state.

3 WASH SECTOR CONTEXT

Under the auspices of this study, the WASH sector is being defined as the hygienic containment/transport/treatment/storage/use of a bundle of WASH services that include drinking water, sanitation, solid waste, waste water, hygiene both within households and public institutions (i.e., utilities, communities, schools, health clinics, offices). The public financing for the WASH sector is examined through the lens of the responsibilities for policy, planning, capital creation, operation and maintenance, and monitoring and evaluation.

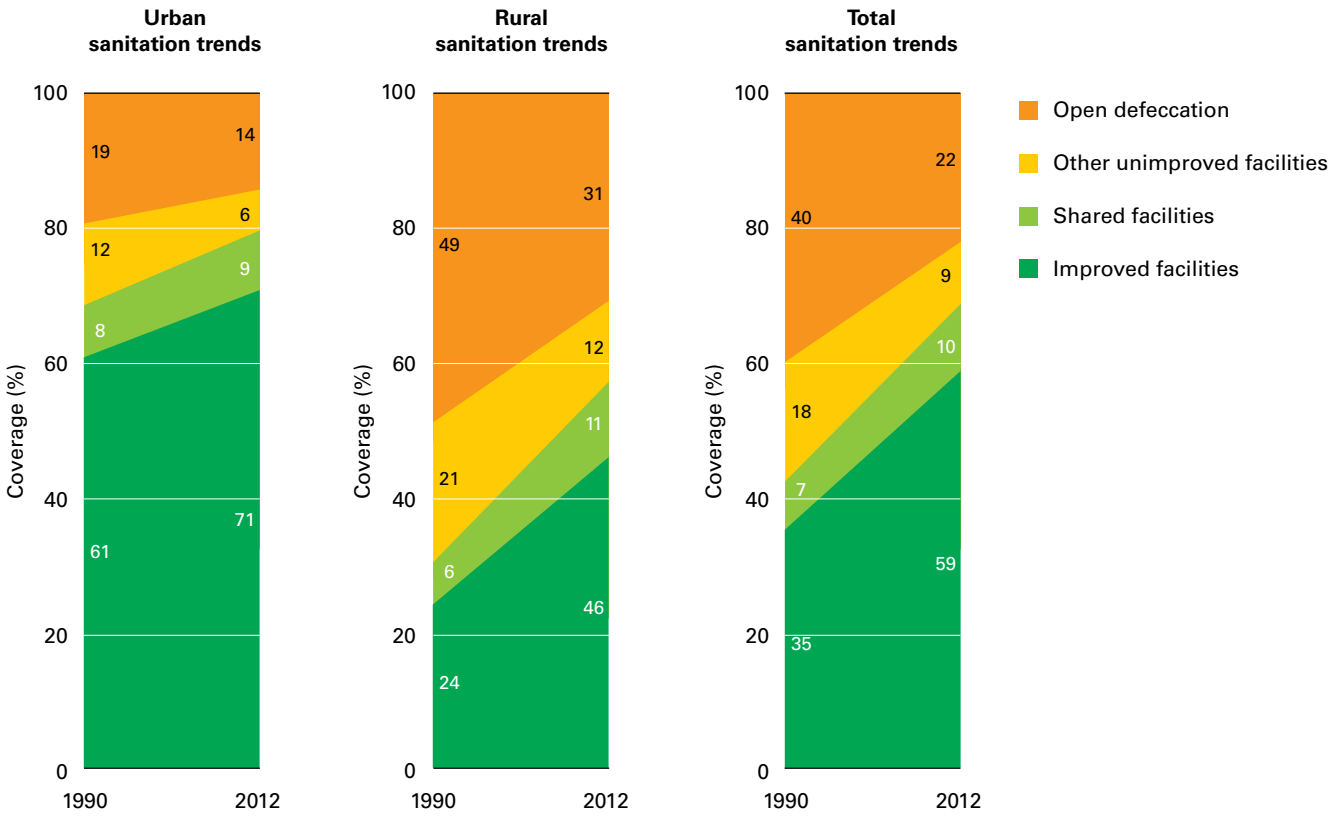
Data from the 2014 WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation[14] (JMP) revealed that Indonesia has made modest gains in terms of increasing access to improved water supply and sanitation over the last two decades with significant improvements in access in recent years.

FIGURE 9: DRINKING WATER TRENDS BY AREA



[14] JMP (2014), *Progress on Drinking Water and Sanitation: 2014 Update*. UNICEF and WHO.

FIGURE 10: SANITATION TRENDS BY AREA



3.1 WATER SUPPLY

Access to an improved water supply increased from 70 per cent in 1990 to 85 per cent in 2012, with only a small proportion of the population (21 per cent) having access to piped water in 2012. Indonesia is expected to have met the 2015 Millennium Development Goal (MDG) target by the end of 2015. Despite the relatively sharp increase in access achieved from 2009-12, greater efforts will be needed to reach the government target of 100 per cent access to improved water supply by 2019.[15] Most of the historic gains have been achieved in rural areas, where access to improved water facilities increased from 61 per cent of the population in 1990 to 76 per cent in 2012. Access to improved water facilities in urban areas changed very little between 1990 and 2012, but the major trend has been away from a piped water supply and towards bottled water. In recent years this has been a growing trend in rural areas.

3.2 SOLID WASTE

It is estimated that a total of 38.5 million tons of solid waste is generated annually by Indonesia's 232 million inhabitants (i.e., 450 grams per person per day). Municipal waste is composed of 62 per cent of organic waste, 14 per cent plastics, 9 per cent paper, 2 per cent glass, 2 per cent rubber and leather, 2 per cent metals, with 13 per cent being other types of waste. Although coverage is relatively low, the operating arrangements for solid waste management go back a long time and are well embedded in village and regional structures. The majority of waste vehicles are owned by the municipalities (97 per cent), with 3 per cent rented from private companies.[16]

[15] Government estimates of access to improved water supply, which are based on the national socio-economic survey (SUSENAS), use more stringent criteria and indicate lower access rates compared to the JMP.

[16] AusAID (2011), Scoping Study for Solid Waste Management in Indonesia.

3.3 SANITATION

Access to improved sanitation increased from 35 per cent in 1990 to 59 per cent in 2012. Despite relatively modest progress over the last two decades, the recent acceleration in access to improved sanitation suggests that Indonesia should have been on track to achieve the sanitation MDG target by 2015. However, there is still a wide disparity in access to improved sanitation facilities between the rural (46 per cent) and urban (71 per cent) population. The amount of wastewater that is treated is extremely low, with only about 1 per cent of the urban population having access to sewerage systems.[17] This suggests a need for increased attention if the Government is going to achieve its target of 100 per cent access to improved sanitation by 2019.

One important definition in the context of Indonesia is that 'sanitation' or *'sanitasi'* is understood to cover solid waste and drainage, as well as wastewater management.

3.4 DRAINAGE

In Indonesian cities, the sub-sectors of sanitation, solid waste and storm water drainage are inseparably linked with most of the uncollected solid waste, faecal sludge and faecal effluent that ends up in the storm-water drains. The majority of latrines in urban areas are connected to the open drains, either directly or via passage through septic tanks. Solid waste management is also grossly inadequate, with huge quantities of uncollected waste finding its way into drains and watercourses, causing blockages and exacerbating local flooding.

3.5 HYGIENE

The boiling of water for drinking is a dominant practice across Indonesia for water drawn from wells, hand pumps or piped water, with the exception of bottled drinking water and rainwater harvesting systems. Although hygiene programmes had been introduced and implemented nationally since the 1970s, together with the provision of latrines and the establishment of official schools for sanitation, the outcomes of the programmes have resulted in limited success. In 2007, the practice of hand washing with soap was still low, with only 23 per cent of the population regularly washing their hands at 'critical times'.[18]

Following the introduction and success of the Community-Led Total Sanitation (CLTS) approach, the Government under the leadership of the Ministry of Health (MoH) developed the Community-based Total Sanitation Strategy (STBM), which takes the CLTS approach and complements it with hand washing with soap, hygiene, safe food and water treatment, safe wastewater management as well as solid waste management at the household level. Since the adoption of the STBM strategy in 2008 the rate of people washing their hands with soap at critical times has risen to around 47 per cent according to the Report on Result of Basic Health Research (RISKESDAS) survey conducted in 2013.

[17] Eales K., R. Siregar, E. Febriani and I. Blackett (2013), *Review of Community Managed Decentralized Wastewater Treatment Systems in Indonesia*, WSP.

[18] The Basic Human Services Study, Indonesia, 2006 indicated that the number of people conducted hand washing with soap, as follows: after defecation (12 per cent), after cleaning baby and toddler's faeces (9 per cent), before eating (14 per cent), before feeding their baby (7 per cent), before serving food/meal (6 per cent).

4 WASH FUNCTIONAL ASSIGNMENT

4.1 ASSIGNMENT OF LEGISLATIVE WASH FUNCTIONS (DE JURE)

Indonesia's decentralization Law 22/1999 (with revisions 32/2004 on regional government, 33/2004 on fiscal balance and 23/2014) has shifted the responsibility for public service provision to regional and local governments. For water supply and sanitation this means that a local government is responsible for issues within its boundaries, the provincial government has a mandate over inter-local government issues, while central government has a mandate over inter-provincial, international and strategic national priority issues. The central government has a responsibility to enable and enforce the role of local government to fulfill its prescribed role of ensuring that a minimum standard of water supply and sanitation are available to all citizens.

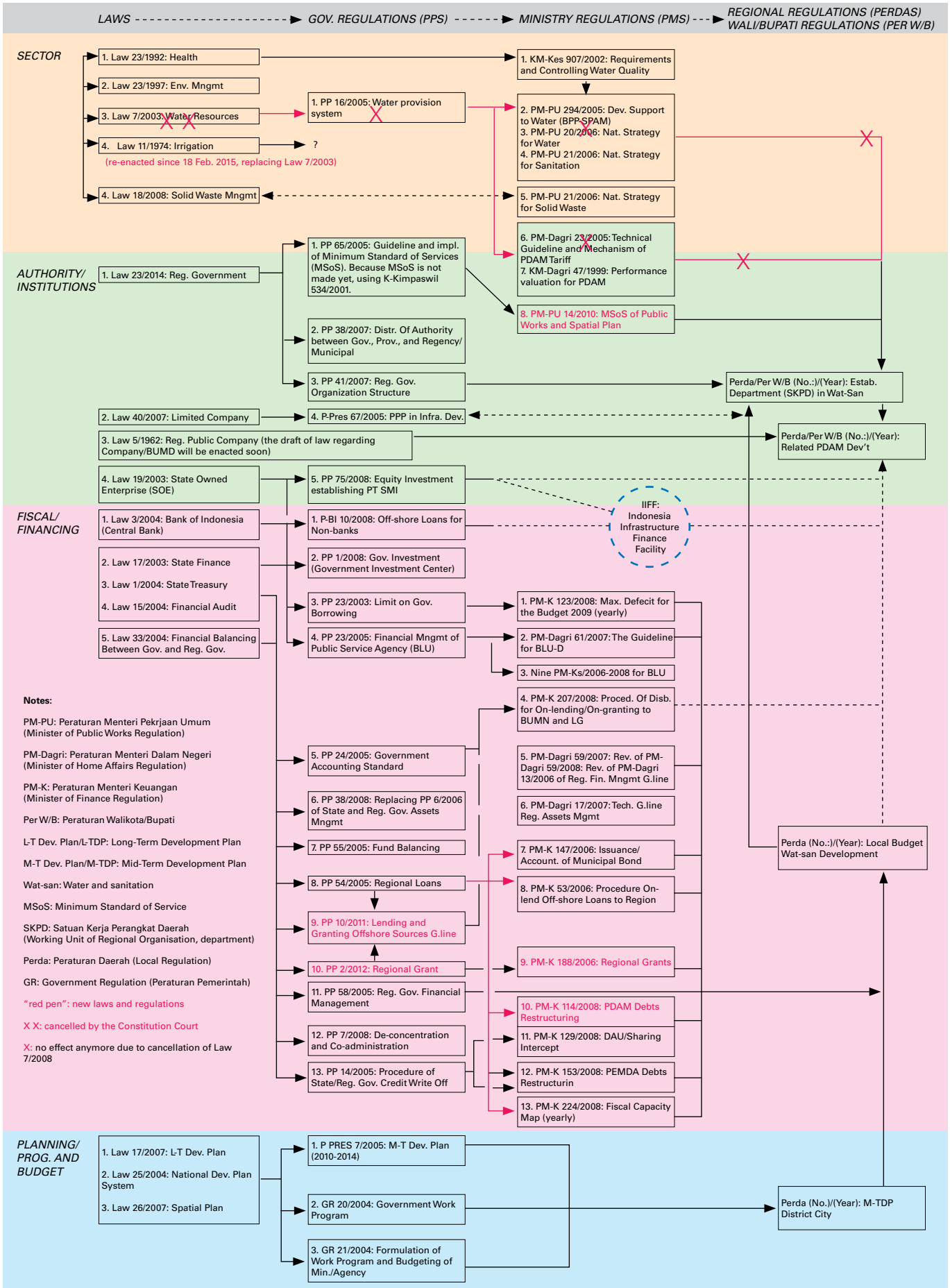
Law No. 7/2004 regarding water resource management was the backbone of the WASH sector. This framework law adopted a comprehensive integrated river-basin approach to water-resources management, decentralizing all administrative and financial responsibilities. However, Law No. 7/2004 was struck down by the Constitutional Court (MK) in February 2015 due to its allowance for private sector companies to own water sources as opposed to water allocations. As the Constitution assigns the ownership of water to the state to be used for the good of the people, it was ruled that Law No.7/2004 was unconstitutional. Although the ruling reinstated Law No. 11/1974 on water, which was highly centralized and more focused on surface water and irrigation, new laws will be required that reflect the reality of the decentralized provision of water supply and sanitation.

Law No. 23/2014 provides the legal framework for the operation of local government-owned enterprises such as PDAMs as a chapter within this law on local government administration. As such, this law does not specifically address the overall role and objectives of local government enterprises providing the public services of water supply and sewerage. This revision to Law No. 5/1962 does allow local PDAMs to retain profits for re-investment into infrastructure (rather than having to share 50 per cent of all profits with local government).

Law No. 18/2008 assigns responsibility to district/city governments for the provision of solid waste management services to themselves or through contracting private service providers. The Ministry of Public Works and Public Housing is responsible for establishing framework regulations for city/district governments who in their turn set out detailed regulations and sanctions for the collection, transportation and disposal of waste. The Ministry of Environment is responsible for regulating, monitoring and management of specific waste types, including toxic, hazardous and intractable wastes.

The recently enacted village Law No. 6/2014 is set to become the new master framework for village development and community empowerment in Indonesia. The law seeks to establish the village as a self-governing community, as well as the lowest level of government. The village law places greater responsibility on communities to control village affairs and address development needs. This includes requirements for participatory village planning, community

FIGURE 11: WATER, SANITATION AND HYGIENE LAWS



implementation of village projects, inter-village collaboration and improved accountability mechanisms. It will be supported by substantially larger direct allocations to village governments from the APBN/APBD. The village law on a *Sistem Informasi Desa* may be motivated by a central surveillance attitude to ensure that higher authorities have access to village level information, it may also ensure that information about village resources, policies and plans are made public.

The assignment of functions to various legislatures is as follows:

- District and city government: have the powers to establish the means (i.e., define the rules, plans and budget allocations) to create WASH capital (financial, physical, social and human) and to operate and maintain WASH assets to ensure the safe, sufficient, reliable, affordable, equitable, sustainable access to water, sanitation and hygiene services for all. District/city governments are permitted to raise capital and have significant control over the procurement and management of the resources necessary to ensure water supply and sanitation services for all.
- National government: has retained the responsibility for the function of defining WASH policy (i.e., laws/regulations/rules), the evaluation of WASH performance and the targeting of water and sanitation poverty.[19]
- Provincial governments: are responsible for coordination across multiple jurisdictions.[20]
- Rural villages and urban wards: are responsible for social norming and developing local development plans.

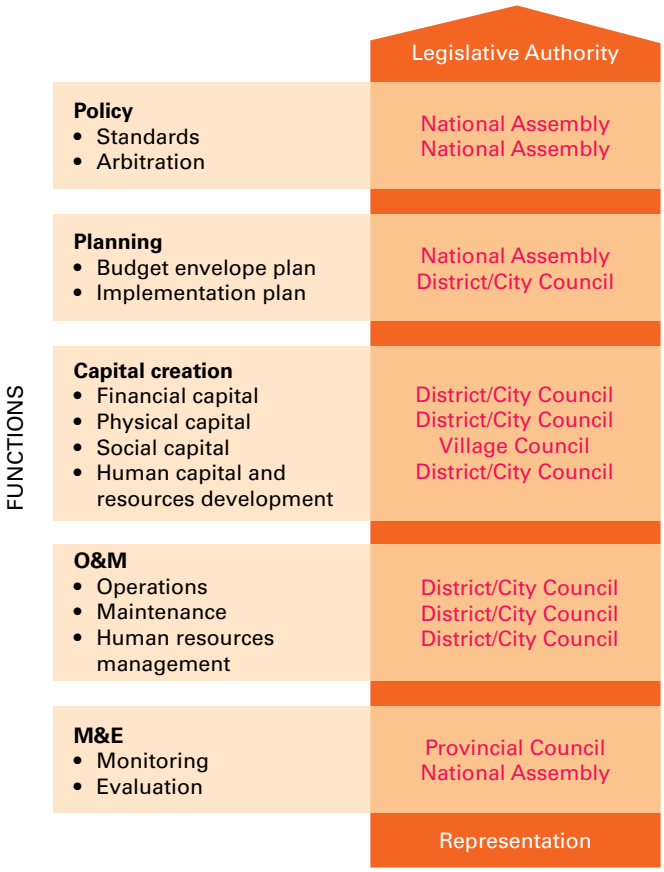
4.2 ASSIGNMENT OF EXECUTIVE WASH FUNCTIONS (DE JURE)

While the legislative powers to define functions have been assigned to different legislatures under law, the execution of these roles may be undertaken by a range of different institutions as defined under rules and practices (that may or may not be in accordance with the legislative assignment of functions).

4.2.1 CENTRAL GOVERNMENT

The executive roles for central government agencies in the development of policy and evaluation of progress in the WASH sector are delegated to the following agencies:

FIGURE 12: FUNCTIONS OF THE LEGISLATIVE AUTHORITIES



- **Ministry of Planning and Development (BAPPENAS):** executes the role of planning and evaluation including preparation of the annual state budget. BAPPENAS also chairs the technical working groups for water and sanitation (*Pokja* AMPL) comprising of representatives of eight line ministries (i.e., the Ministries of Home Affairs, Health, Public Works, Finance, Environment, Education, Statistics Indonesia) and development partners.
- **Ministry of Public Works and Public Housing (Pekerjaan Umum dan Perumahan Rakyat):** executes the policy role of setting standards and evaluating progress for water and sanitation, solid waste and drainage. It also extends support to district/city governments for the development of the drinking water supply and sewerage schemes, primarily in urban areas.
- **Ministry of Health:** sets drinking water quality standards. It also supports district/city governments in hygiene behaviour change through Pusat Promosi Kesahatan and rural sanitation through the STBM Secretariat in the Environmental Health Directorate.

[19] Support of the central government in a finance capacity is detailed under the executive powers of government.

[20] Provinces also perform a delegated executive function of monitoring on behalf of the national government.

- **Ministry of Home Affairs:** executes the role of overseeing economic/political decentralization, administrative oversight and the capacity building of local governments.
- **Ministry of Energy and Mineral Resources:** is responsible for the regulation of ground water.
- **Ministry of Environment and Forestry:** executes the role of the development of policies and regulations in pollution control and coordinating efforts on other environmental issues.
- **Ministry of Education:** is responsible for enabling the provision of safe water and sanitation in schools.
- **Ministry of Finance:** executes the role of allocating budgets to national ministries, manages the formula for the allocation of budgets to local governments, and facilitates the provision of grants and loans to local governments and PDAMs.

4.2.2 PROVINCIAL GOVERNMENT

The executive role of coordination at the provincial level for WASH is undertaken by the Governor through the Department of Public Works and the Department of Health. The provincial government makes no budget allocations and has no designated staff purely for WASH, so any coordination at this level falls to the BAPPEDAS (the Planning Department).

4.2.3 DISTRICT/CITY GOVERNMENT

At the district/city level the units involved in WASH depend on population sizes, geographic and socio-economic characteristics vary widely across cities/districts. Generally the following two departments are present in all cities/districts:

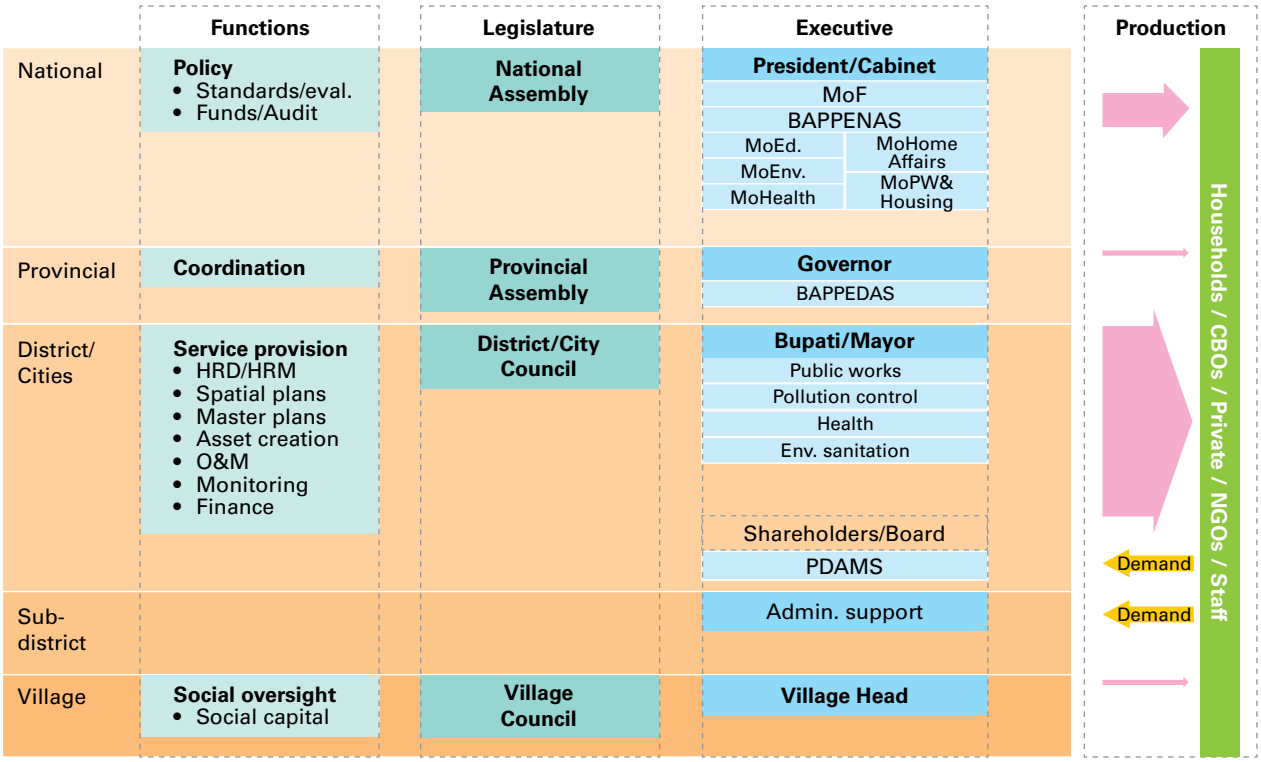
- Public Works: Primarily responsible for the capital works and responsible for spending more than 95 per cent of the local WASH budget.
- Health: Primarily responsible for the rural sanitation with an estimated budget allocation of 3 per cent of the local WASH budget.

The Environment and Pollution Control and/or Licensing Department are responsible for environmental inspection and licensing of abstraction/pollutants consuming up to 2 per cent of the local WASH budget.

4.2.4 VILLAGE GOVERNMENT

Village governments are responsible for (1) native authorities, traditions and social-cultural values; (2) locally-scaled authorities; (3) delegated authorities from the district government; and (4) any other legally defined authority.

FIGURE 13: WASH LEGISLATIVE AND EXECUTIVE FUNCTIONS



4.2.5 SERVICE PROVIDERS

- **PDAMs (District/city water companies):** are owned by the respective local governments with investment decisions undertaken in cooperation with local departments and parliament. The setting of water tariffs is the responsibility of the district heads (*bupati*) or mayors, who are guided by laws and regulations issued by the MoHA (Minister of Home Affairs Regulation 23/2006).
- **Households:** In areas that are not served by a piped water supply, households tend to access groundwater through shallow wells (7-15 metres) and pumps. In areas not served by sewers, households tend to install their own latrines that are connected to pits, septic tanks or open drains.
- **Community-based organizations (CBOs):** managing water supply schemes are recognized by the central government as official water service providers. It is estimated that more than 13,000 CBOs manage community-based water supply and sanitation systems throughout the country.
- **Private sector:** Rapid urbanization has contributed to the proliferation of new housing estates. Property developers have installed networked piped water supply distribution systems and drainage systems which are either operated by the estate managers or local PDAMs. The private sector is extremely active in the provision of bottled water and household sanitation facilities.
- **Schools:** While the Constitution requires 20 per cent of all government budgets be allocated to education and enrollment is high, the poor quality of water and sanitation services in schools affects school attendance due to sickness and a lack of privacy for adolescent girls.
- **Health clinics:** The quality of basic health care remains low due to the low quality of resources (human and infrastructure) and the low levels of focus on preventative care.

4.2.6 CITIZEN/CONSUMERS

From a demand-side perspective, strengthening the short route of accountability requires the client power of users to coincide with market competition in provision. The biases, monopolies and asymmetries in WASH markets require the Government's intervention through the long route of accountability. The strong demand for safe water is evidenced by the practise of boiling, self-investment in wells and payments for the consumption of bottled water. The major challenges lie in underlying hard budget constraints of providers and eliminating open defecation.

4.2.7 ARBITRATION

The vast majority of grievances in Indonesia are resolved out of court through community-based mediation mechanisms by religious leaders and village heads. Thus it is social norms and power that usually determine the outcome of disputes at the local level, with collective harmony potentially prioritizing communal relations at the expense of individual human rights.

4.3 EXECUTION OF WASH FUNCTIONS *(DE FACTO)*

4.3.1 CENTRAL GOVERNMENT *(DE FACTO)*

While the central government is only responsible for WASH sector laws and rules, regulations and standards, it does have the ability to provide financial assistance to district/city governments to extend WASH services to the underserved. The large assignment of revenues to the central government enables ministries to engage in the creation of water and sanitation assets on behalf of local governments.

Government law prohibits the transfer of assets to service provision agencies. This government law seeks to uphold the principle of retaining asset ownership and financing liability together. In order to avoid this restriction, the central government ministries de facto either utilize:

1. Capital Works Funds: to create WASH assets that are then donated to district/city governments to be passed on as equity investment to the city/district-owned services providers.
2. Social Funds: to create WASH assets that are not registered as assets that can then be transferred to communities to own, operate and maintain.

This 'mandate creep' of the central government contributes to a downward spiral where the central government builds WASH assets, the local operators run down assets and the central government rebuilds the assets. This is the very cycle of build-neglect–rebuild that this law sought to prevent.

4.3.2 PROVINCIAL GOVERNMENT *(DE FACTO)*

De facto, the role of the provincial government in the WASH sector is negligible. The provincial government does not pass regulations, budgets or manage staff that are associated with the provision of WASH services. Some provinces develop programmes delegating resources to village level governments to implement rural cooperative saving and lending which may include household sanitation.

4.3.3 DISTRICT/CITY GOVERNMENT *(DE FACTO)*

The district government is responsible for ensuring the provision of WASH services within their jurisdiction. The role of the district/city government in subsidizing the provision of WASH services some weakens their role in ensuring a minimum quality of WASH services for all. In no case does the district hold a 'quality of service' agreement with rural or urban service providers.

- In urban areas, the provision of the water supply and sewerage services, solid waste and drainage services is outsourced by the district/city government to district/city owned entities. While tariffs are low it is the high system losses and high levels of staffing, idle capacity operating with low efficiencies, low billings and lower collections that lead to a low tariff–low cost–low quality service equilibrium. District budgets either subsidize these entities through the transfer of assets or through equity investment budget allocations that undermine a hard budget constraint.
- In rural areas, the provision of the water supply is outsourced by the district/city government to communities. The viability of the operations is undermined by a lack of willingness to pay and charge for the operation. District/city governments undermine a hard budget constraint by subsidizing the assets, but they fail to impose a 'quality of service' standard with appropriate penalties for the failure to operate and maintain those assets.
- In schools and health clinics, the district provides WASH services but fails to include minimum standards within the service contract of delegated asset managers.

The Ministry of Public Works and Public Housing requires all local governments to issue local regulations consistent with ministerial standards to ensure the quality of sanitation and water supply. This includes licensing all private water providers associated with provision from wells, from bottled water vendors and bottled water refillers. It also includes the approval of any wastewater discharge from households and industries against minimum standards. However, neither the regulations nor the licensing is reliably practised or enforced.

4.3.4 RURAL VILLAGE GOVERNMENT (DE FACTO)

The recent strengthening of the legal and financial authority of village governments appears to reinforce the faith of the central government in the lower tiers of government. Even more surprising has been the initiation of programmes by provinces and districts which transfer responsibilities and funds to village governments to manage economic development and public service delivery. This suggests that both provinces and district governments perceive that delegating authority to the village government is more effective in the delivery of certain public service programmes.

4.3.5 SERVICE PROVIDERS (DE FACTO)

- **PDAMs (urban water utilities):** There are 375 PDAMs in Indonesia that primarily provide a piped water supply, however only 214 have been categorized as 'healthy' according to statistical data compiled by the National Water Board (BPPSPAM). Most of these PDAMs do not have sufficient resources to invest in expanding to low-income areas or accessing debt restructuring programmes. This is a result of the poor recovery of tariffs by PDAMs associated with mixed incentives for their management.
- **Households:** Access to groundwater through deep wells and pumps is compromised by deteriorating ground water quality in densely populated areas, due to contamination by the unregulated discharge of domestic and industrial waste. While laws and rules exist to protect the groundwater the monitoring and enforcement are difficult due to limited resources.
- **Community-based organizations:** CBOs manage numerous water and sanitation activities with religious leaders and have been influential in changing hygiene behaviour in communities. CBOs still face many challenges including: (a) a lack of capacity to maintain and expand services; (b) a lack of access to much-needed capital; and (c) an unclear legal framework to expand services.
- **Private sector:** Sanitation has traditionally been a private matter, however the focus on the 'self-provision' of sanitation facilities has neglected the public aspect of sanitation. The failure to enforce strict compliance with building permits in regards to sanitation has resulted in most houses in urban areas delivering partially treated effluent to roadside drains along with bathroom, kitchen, and laundry wastes.
- **Schools:** While local governments spend the bulk of the total government expenditures (20 per cent) in the education sector, these funds are almost entirely devoted to teacher salaries which are still set by the central government. By contrast, the centre is the largest spender on education investments, although the local governments are in charge of running, building and rehabilitating schools.

- **Health clinics:** Local health clinics (*puskesmas*) lack adequate infrastructure, such as clean water and sanitation, as well as regular access to electricity and basic stocks of medicines. Strengthening preventive care, and intensifying programmes and national campaigns that tackle communicable diseases, particularly in remote and less developed areas of Indonesia is needed. A study conducted in 2012 found that 30 per cent of community health centres do not have front-line sanitation personnel.

4.3.6 USERS (DE FACTO)

One of the characteristics of drinking water consumption in Indonesia is the almost universal practise of boiling prior to consumption. This is almost universally practised irrespective of whether the water is sourced from springs, rainwater or is piped water. This also means that the microbial or microbiological safety of drinking water from the piped water supply has never been a major priority for PDAMs. Bottled water and rain water are the only sources that are not boiled or treated by households prior to consumption.

4.4 WASH FUNCTIONAL ASSIGNMENT

Central government: is responsible for setting WASH policies, targeting poverty and evaluating performance.

Provincial governments: are responsible for inter-district coordination and the monitoring of WASH service delivery on behalf of the central government.

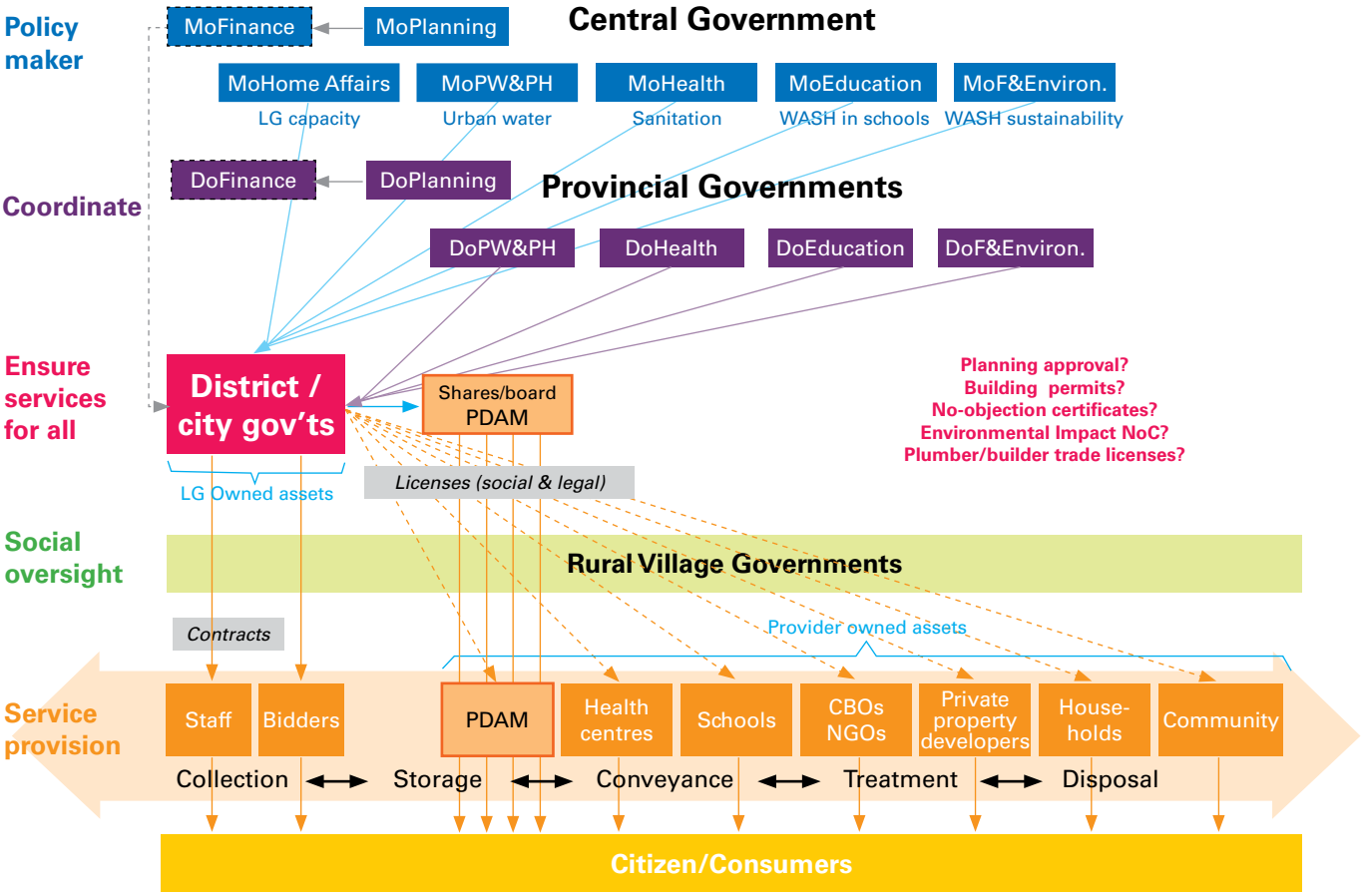
District/city governments: are responsible for all aspects of WASH service delivery from spatial planning, infrastructure plans, capital creation, operation and maintenance, and monitoring and regulation.

Rural village governments: are responsible for the preservation of social/cultural capital and the oversight of local WASH service provision units.

Service providers: PDAMs, CBOs, households, housing estates, and firms are responsible for the provision of WASH services in response to consumer demand.

Citizens/consumers: Are responsible for demanding information and responsive WASH services for all.

FIGURE 14: ASSIGNEMENT OF FUNCTIONS FOR THE WASH SUBJECT



5 WASH FINANCING

According to the 2015 World Bank Public Expenditure Review (PER), expenditure in the water and sanitation sector has grown consistently. Measured as a share of the GDP, water supply and sanitation sector spending remains low at 0.2 per cent of GDP or just less than 1 per cent of the total expenditure.[21] This places WASH expenditures in Indonesia among the lowest in the world.

5.1 WASH CAPITAL REVENUES

With the transfer of public water and sanitation assets to local government-owned PDAMs, it is the utilities that are responsible for generating capital revenues from their existing WASH revenue stream. However, with revenues well below full cost recovery, PDAMs are unable to finance new investments from their revenue stream. In addition, the large accumulated losses mean that most PDAMs are not sufficiently credit-worthy to borrow the funds necessary to create new water and sanitation assets. This means that the districts are required to provide the capital revenues to the PDAMs. Such transfers are generally provided as equity investment (recurrent revenue) in these unviable businesses or as assets transferred to the PDAMs. As this fails to generate any return on investment for the district/city, there is a low willingness to make these investments. As a result, the central government increasingly intervenes to make capital revenues available (in the form of WASH assets) in support of the districts in support of the PDAMs.

District/city governments can take out loans to finance water and sanitation capital expenditures through on-granting mechanisms that enable funds from overseas grants to be channeled to subnational governments through the Ministry of Finance. Financial support from many development partners' in the WASH sector is channeled through this mechanism. Local governments need to meet certain conditions including the ratio of outstanding debt-to-revenue being below 75 per cent; the debt-service coverage ratio is greater than 2.5; and no arrears. These conditions also apply to locally-owned state enterprises such as PDAMs.

Special allocation funds (DAK), transferred directly to districts and bypassing the provinces are the main sources of transfers allocated to water and sanitation from the central government. While WASH infrastructure investments are not expected to be part of national government plans, the central government can make DAK annual allocations to sectors/localities for specific purposes that are of interest to the central government. DAK has been used to fund water infrastructure development since 2005 and sanitation since 2010. DAK spending is equally distributed between both water and sanitation. As a share of the total local government spending in the WASH sector the DAK contribution is

[21] World Bank (2015), *More and Better Spending: Connecting People to Improved Water Supply and Sanitation in Indonesia – Public Expenditure Review.*

shrinking. At the same time DAK is the only source of WASH spending that can be traced from the budgets of districts. DAK funds are primarily for infrastructure creation with a proviso that recipients local governments should match at least 10 per cent of DAK funds from their own budget. World Bank estimates show that over the period from 2005 to 2013 around 60 per cent of total WASH spending by local government was directed at sanitation spending.

District/city governments also receive capital revenues for community-based water supply and sanitation schemes through the Third Water Supply and Sanitation Project (PAMSIMAS) programme administered by the Ministry of Public Works and Public Housing. Community-based water supply and sanitation capital works are implemented by district/city governments utilizing 70 per cent funds transferred by the central government, 20 per cent from local communities and 10 per cent from local governments. The majority of the budget allocation is used for the construction of water supply facilities, however this also supports community managed sanitation.

5.2 WASH CAPITAL EXPENDITURES

Across all levels of government, WASH expenditure is weighed towards capital expenditure with limited budget allocations for operational expenditure, while capital expenditure maintains an average of 82 per cent of the total WASH expenditure between 2008/10. According to the WSP Service Delivery Assessment published in 2014, public capital expenditure from domestic sources was estimated at US$1.6 billion per year for water supply and US$496 million per year for sanitation.[22] This constitutes a small fraction of the overall infrastructure spending where the major expenditures are focused on roads and transportation, and is insignificant in comparison with public expenditure on education and subsidy programmes.

According to the World Bank PER, water supply and sanitation expenditures reached its highest levels in 2010, with water and sanitation making up 9 per cent of the total infrastructure expenditure. However, as the fiscal space is reducing, the World Bank PER anticipates that the allocations for WASH will likely decrease in the future. Although an increase in fund allocation to WASH services are needed, such increases must be accompanied by a greater commitment to allocative and operational efficiency.

TABLE 1: CENTRAL GOVERNMENT EXPENDITURE, BY YEAR

Year	2009	2010	2011	2012	2013
Total central government expenditure					
Water supply as % of central government expenditure	0.50	0.43	0.34	0.37	0.62
Sanitation as % of central government expenditure	0.08	0.11	0.25	0.21	0.22
Total infrastructure expenditure					
Water supply as % of infrastructure expenditure	6.10	6.60	4.80	4.90	9.30
Sanitation as % of infrastructure expenditure	1.00	1.70	3.60	2.80	3.40

5.2.1 CENTRAL GOVERNMENT WASH CAPITAL EXPENDITURES

Despite Indonesia's status as a highly decentralized country, capital expenditure is increasingly being incurred at central government level with a declining role by local government. This is in stark contrast with the mandates of the central government where policy formulation, monitoring and evaluation (the main WASH mandate of central government) form only a small part of the total budget. On average, just over half of WASH capital expenditure is currently incurred by the local government, and a third by the central government, notably the Ministry of Public Works. This 'mandate creep' by central government has been accompanied by reduced capital expenditure on WASH infrastructure by local governments (with administrative facilities consuming greater shares of local WASH capital budgets).

Central government investment in water supply has remained relatively stable as a percentage of total central government expenditure over the five-year period of 2009-2013, whilst sanitation expenditure has shown a slight increase over the same time period. In terms of water supply expenditure the focus has primarily been on the expansion of networked water supply and wastewater systems. However, despite a seven-fold increase in central government spending on the urban water supply since 2005, the usage of piped water for drinking purposes has fallen by almost one third over the same period.[23]

[22] WSP–World Bank (2014), *Water Supply and Sanitation in Indonesia, Service Delivery Assessment, Turning Finance into Services.*

[23] World Bank (2015), *More and Better Spending: Connecting People to Improved Water Supply and Sanitation in Indonesia – Public Expenditure Review.*

The majority of the central government spending is a result of direct spending by central ministries (predominantly by the Ministry of Public Works) and not by allocations through deconcentration funds or co-administration tasks. The water supply development budget had an execution rate that averages around 95 per cent, whilst sanitation projects had an average execution rate of 81 per cent in the period between 2010 and 2013. The relatively high degree of alignment between planned and executed expenditure would appear to indicate that the budget is realistic and well executed. Investments in sanitation have focused on solid waste and drainage infrastructure. In the case of both water supply and sanitation, the central government is actively implementing infrastructure projects in local government jurisdictions. Such work has a mainly urban focus, except for the central government involvement in the 'Sanitation for Low Income Communities' project, which is co-funded by the World Bank. (NB: while this project has both a water supply and sanitation focus, it is only captured as a water supply project within the budget)

Increased engagement by the central government in capital creation has contributed to the generation of idle capacity (i.e., treatment plants and network systems that are grossly under-utilized) by the district/city government owned service providers. Delays in the transfer of the ownership of these assets to PDAMs (via local governments) contribute to the rapid deterioration of these water and sanitation assets.

5.2.2 DISTRICT/CITY GOVERNMENTS WASH CAPITAL EXPENDITURES

Historically the Ministry of Public Works was the main source of capital investment, but since decentralization it is the local governments that are responsible for capital expenditures in WASH. With the transfer of WASH assets to ring-fenced providers, these predominantly district-owned water and sanitation utilities are expected to undertake capital expenditures based on the viability of those investments and the ability to recover costs through tariffs.

At both provincial and district government levels the expenditure on water and sanitation amounted to over IDR 9 billion by 2013. The majority of this expenditure is contributed by districts (almost 80 per cent). As a percentage of the total expenditure, water and sanitation is not seen as a priority, with it only forming 1.4 per cent of the total subnational spending.[24]

TABLE 2: SUBNATIONAL WATER AND EXPENDITURE, BY YEAR

Sub-national water and sanitation expenditure as a percentage of subnational expenditure and GDP					
Year	**2001**	**2005**	**2010**	**2012**	**Average 2001-12**
% total subnational expenditure	1.91	1.42	1.59	1.32	1.38
% total subnational infrastructure	14.68	9.93	9.4	8.35	8.74
% GDP	0.11	0.09	0.1	0.09	0.09

Source: Water Supply & Sanitation Public Expenditure Review, World Bank (2015).

According to the public expenditure review of WASH in 2006 in water and sanitation policy formulation and action planning (WASPOLA) districts, approximately 96 per cent of all allocations for water supply and sanitation at the district level are channeled through the Public Works Department, 3 per cent of the allocations through the health office with other offices typically receiving less 1 per cent of the allocations. Storm water and grey water drainage are almost exclusively financed by local government budgets (being over 80 per cent of city budgets in WASH and half of district budgets for WASH).[25] This probably reflects the utility of storm water drainage in transferring downstream the numerous problems posed by waterlogging, faecal sludge and effluent discharges and scattered solid waste.

Water and sanitation infrastructure accounts for less than half of the total spending in WASH, with 51 per cent of all development spending at the local government level being allocated towards the refurbishment of administration and office facilities. The involvement of the central government in public investment at the local government level, coupled with an apparent lack of commitment, appear to have disincentivized WASH infrastructure development by local governments.[26]

[24] World Bank (2015), *More and Better Spending: Connecting People to Improved Water Supply and Sanitation in Indonesia – Public Expenditure Review.*

[25] WSP– World Bank (2006), *Review of Public Financing for Water Supply & Sanitation in Indonesia.*

[26] World Bank (2015), *More and Better Spending: Connecting People to Improved Water Supply and Sanitation in Indonesia – Public Expenditure Review.*

[27] AusAID (2011), Scoping Study for Solid Waste Management in Indonesia.

Total budgeted expenditure for waste management in Indonesia in 2006 amounted to IDR 2,342 per person per year, which is extremely low from an international perspective.[27] Cumulative budget data for 2003-2005 shows that only 2 per cent of the cumulative budget of cities and 1.1 per cent of districts were allocated to solid waste investments over the same period.

5.2.3 VILLAGE GOVERNMENT WASH CAPITAL EXPENDITURES

Although no consolidated data is available, small studies suggest that village governments execute between IDR 250-500 million development funds, although only a small proportion of this is allocated through the village government APB. The majority of the funds in village expenditures are central ministry projects that are managed by central ministerial structures. Data from Statistics Indonesia on the "Actual Receipt of Expenditure of Village Government throughout Indonesia, 2005-2009" shows that villages in 2009 had an average budget of Rp. 160 million per year, with a doubling in funds since 2005. A mapping in 2010 by the Forum for Village Renewal (FPPD) of 136 villages in 15 districts in seven provinces found that villages had an average of 72 million in Village Association Funds, 15 million in own-source revenues, 78 million in assistance from the district, 35 million from the province, and an average of 440 million in various national budget projects, with some villages receiving more than 2 billion in national project funds.[28]

5.2.4 SERVICE PROVIDERS

More than 52 per cent of all PDAMs were unable to make a profit in 2012. High levels of accumulated losses, combined with low tariff levels have meant that PDAMS are unable to use own revenue to invest in new infrastructure or the refurbishment of the existing infrastructure. Long-term lending from international finance institutions have also been blocked by the Ministry of Finance since 2000, stifling investment in PDMAs.

5.3 WASH RECURRENT REVENUES

MoHA Decree No. 23/2006 sets out a policy of full cost recovery through tariff revenues for water utilities. The decree prescribes an increasing block water tariff with a first subsidized tariff block for a consumption of up to 10 cubic metres per household, and a break-even tariff for higher consumption. Commercial and industrial users can be charged higher tariffs with higher blocks at the full-cost tariff.

All recurrent sector revenues in the WASH sector are supposed to be raised through user fees by ring-fenced providers (predominantly PDAMs). However, while *de jure* the tariff structure is sufficient to enable full cost recovery, de facto the recurrent revenues are generally inadequate to finance recurrent WASH expenditures (let alone capital WASH expenditures). This is a result of numerous failures on the revenue side that include the failure of district/city governments to approve proposed tariff revisions and the failure of PDAMs to reliably issue bills, collect revenues and enforce disconnection for failure to pay. While less than half of all PDAMs generated a revenue surplus in 2012, the profit making PDAMs often carry large accumulated losses. Several PDAMs even have negative shareholder equity where their accumulated losses exceed the value of remaining shareholder equity.[29]

Decrees by the MoH and the Ministry of Industry and Trade regulate the quality of bottled water and water kiosks that refill large bottles with the collection of revenues through licensing fees assigned to the district/city. Similarly the recently cancelled water law also empowered district/city governments to generate revenues from the licensing of private wells.

Central government transfers are the single biggest source of revenue for subnational governments. Transfers from the centre accounted for 90 per cent of the subnational government revenue in 2010 (this translates to 54 per cent of provincial government, 86 per cent of city government and 93 per cent of district government budgeted expenditures in 2010).[30]

Households play an extremely important role by contributing one third of the total national spending on the WASH sector.[31] Households not only pay a water tariff if they are connected to a piped system, but they also buy water from informal providers. This contribution is primarily associated with the purchase of bottled water for drinking. However, the significant proportion of self-provision through the

[28] Hans Antlov and Sutoro Eko, *Village and Sub-District Functions in Decentralized Indonesia*.

[29] World Bank (2015), *More and Better Spending: Connecting People to Improved Water Supply and Sanitation in Indonesia – Public Expenditure Review*.

[30] Shah, Anwar (2012), The World Bank, Policy Research Working Paper 6004.

[31] Households' out-of-pocket spending accounts for 31 per cent of the total national spending, which is the same proportion as central and subnational governments, individually, to the sector.

installation of pumps, tanks and wells, and the costs of the electricity for pumping and energy for boiling are not captured in this data.[32]

5.4 WASH RECURRENT EXPENDITURES

5.4.1 CENTRAL GOVERNMENT RECURRENT EXPENDITURE

While the mandate of the central government in the WASH sector is limited to recurrent expenditures (policies and guidelines, setting standards and monitoring performance, capacity building and technical support) they actually received meagre budget allocations from the central government. According to the World Bank PER, the allocation for policy development and monitoring averaged only 6.5 per cent of central water spending in the period of 2010-13. Similarly, the capacity building and facilitation programme accounted for only 5.3 per cent of the central water sector budget allocations over the same period.

Recurrent expenditure support by the central government is extended primarily by the MoH for the promotion of sanitation and hygiene. In 2014, the total allocation for sanitation and hygiene by the MoH was Rp. 119.9 billion. This accounts for 0.26 per cent of the total Ministry budget or 0.01 per cent of the total APBN. This is primarily directed towards rural sanitation development through the CLTS programme (*Sanitasi Total Berbasis Masyarakat*, or STBM).[33] STBM focuses on stopping open defecation by raising collective awareness among villagers of the environmental and health problems caused by open defecation. Facilitators are typically sent to communities to initiate the discussion on the sanitation situation, then the villagers are expected to forge their own plan to become an open defecation free (ODF) community. The MoH has developed a national strategy for STBM and supports the activities in selected areas in coordination with local governments and communities.

5.4.2 DISTRICT/CITY GOVERNMENT RECURRENT EXPENDITURES

Since the introduction of the decentralization policy, the responsibility for recurrent public expenditures of water and sanitation service delivery (operation and maintenance, licensing and inspection) have been assigned to the district/city government (and the associated revenues transformed into fiscal transfers to those governments). District/city governments have been encouraged to establish ring-fenced service providers (water utilities, wastewater utilities, solid waste management companies, CBOs) to manage both the recurrent expenditures (and recover the associated revenues from user fees).

This effectively means that in most cases the district budget does not finance any 'front line' drinking water supply and sanitation service provision recurrent costs because these recurrent expenditures have been transferred to ring-fenced service provision units. However, there are still recurrent expenditures borne by the district/city governments in the form of licensing and environmental inspection departments (irrespective of whether they license water or not), public works and public housing department staff (even though they spend most of their time on DAK/the National Rural Water Supply and Sanitation Project (PAMSIMAS) capital expenditure projects rather than the technical oversight of the ring-fenced service provider), and health staff (irrespective of whether they perform drinking water quality tests or not). While the STBM supports recurrent costs for sanitation and hygiene promotion (training, information education and communication materials, workshops) it generally doesn't support any front-line costs for health or sanitation promotion staff.

Recurrent expenditures are therefore financed primarily by district/city owned utilities (i.e., PDAMs) and community owned entities (i.e., CBOs). These recurrent expenditures exceed the recurrent revenues necessary to sustainably operate and maintain the high quality water supply and sanitation services. Significant recurrent expenditure failures include the high water losses and excessive staffing. The presence of idle capacity within systems transferred by the central government is wasteful from a 'capital expenditure' perspective but also from a recurrent expenditure perspective. This is because large electric motors and centrifugal pumps not only require greater capital investments, but they are also more expensive to run per m^3 (as they are inefficient at low flows).

[32] World Bank (2015), *More and Better Spending: Connecting People to Improved Water Supply and Sanitation in Indonesia – Public Expenditure Review.*

[33] UNICEF (2015), Analysis of 2014 Fiscal Data on Children and Social Sectors.

6 ANALYSIS

6.1 LOCAL GOVERNMENT PROBLÉMATIQUE

The increased efforts by the central government to leverage the significant local government functions (legal resources), funds (financial resources), functionaries (human resources) and electorates (social resources) to increase their accountability to citizens and consumers does not appear to be producing the desired results in terms of improved public service delivery outcomes. On the contrary, growing central government engagement appears to be increasing the focus of local governments attempts to solicit more benefits from incentive programmes.

While decentralization appears to have served Indonesia well, it has not yet delivered the public outcomes that the proponents of decentralization would have expected.

1. From a financing perspective; while the local government revenue assignment is low there does appear to be significant, rule-based, and timely central transfers from the Ministry of Finance to local governments. While there are numerous rules pertaining to the use of these funds, local governments appear to know how to access these funds to perform their desired functions.

2. From a capacity perspective; with the majority of the local government budget committed to recurrent staffing costs, the expansion of services does not appear to be burdened by a lack of capacity. While the central government controls the number of posts, it appears as though local governments have sufficient flexibility over staffing to improve public service delivery.

3. From a freedom perspective; it could be argued that local governments are too constrained by central government laws to deliver responsive public services. However, it is also true that the public administration appears to have sufficient freedom to avoid certain public administration laws on service delivery in order to comply with lesser rules.

4. From an incentive perspective; a lack of central government incentives and weak citizen demand seem to allow lack-lustre public service delivery performance. While there are some government sanctioned incentives for revenue generation by *bupati*/mayors, a perverse culture of compliance to exploit the public administration system undermines accountable public service delivery.

Greater downward accountability of local governments to citizen voice and client power, coupled with greater upward accountability for public services appear to be the key to deliver better public outcomes.

6.2 WASH PROBLÉMATIQUE

6.2.1 DOWNWARD SPIRAL OF O&M BY PDAMS

Du jure, government law prevents the provision of O&M subsidies for assets that are owned by other entities, but subsidies for the creation of WASH assets are undermining a hard budget constraint. The creation of WASH assets by the central government on behalf of PDAMs leads to a cycle of build–neglect–rebuild.

While the central government is the major financier and creator of WASH assets for PDAMs it is overreaching its assigned function of policy making and support for district/city governments. In fact, the law explicitly prevents one tier of government from performing functions on behalf of another tier of government, which means that the central government is not permitted to transfer WASH assets to PDAMs. The process of creating WASH assets primarily by the Ministry of Public Works and Public Housing on behalf of the district/city governments requires 'overreach' in several areas, namely:

- Establishing Ministry of Public Works and Public Housing construction offices at the provincial level with central government staff to design, procure and build WASH assets.
- Procuring major capital works through minor annual contracts as the government procurement rules do not permit multi-year contracts without the approval of parliament.
- While the O&M of WASH assets will eventually be transferred to the PDAMs, the central government holds onto asset ownership. Through the retention of asset ownership, the central government is permitted to fund O&M because these WASH assets are officially registered as central government assets.
- This retention of WASH assets by the central government but O&M by the PDAMs will eventually result in the central government transferring these assets to the PDAMs, via the district/city governments, as some form of equity investment, often once they are already 'run down'.

The central government creation of assets on behalf of the PDAMs undermines their hard budget constraint and creates perverse incentives for sub-standard O&M.

- While in some cases the tariffs are too low to cover PDAM operational costs, it appears that the tariff law is sufficient for PDAMs to cover their costs and generate an operating surplus. A greater challenge affecting the viability of PDAMs appears to be the idle capacity, high water losses, low billing and collection and a reticence to disconnect for a failure to pay bills.
- While the rising block tariffs appear to be well designed so as to enforce higher fees per unit consumption on larger consumers, the failure collection of receivable billings ends up discriminating against the smaller consumers who are more likely to pay and less likely to dispute their bills.
- Central government subsidies through the 'free' transfer of WASH assets undermine PDAM incentives to invest in asset creation or rehabilitation. As PDAMs are unwilling to return an operating surplus (which will attract income tax and was required to be shared 50/50 with the district/city government) they tend to settle for a low quality/low cost equilibrium and wait for the central government to build and rebuild WASH assets.
- Given the poor viability of PDAMs, most of the district/city governments are not interested in 'equity investments' in PDAMs. Equity investment through the shareholding agreement just amounts to an investment in a 'failing enterprise'. Not only does this fail to provide any return on investment but it also undermines a hard budget constraint on the PDAMs.

With growing central government investments and increasing idle capacity within PDAMs, this probably explains why district/city governments have ended up investing 'non-productive' WASH assets, (i.e., buildings for PDAMs) which are perceived to have greater value for district/city governments when compared to investments in unproductive assets on behalf of unproductive PDAMs.

6.2.2 UNASSIGNED LIABILITIES FOR COMMUNITY O&M

Government law precludes the transfer of public assets to non-public entities, however, the central and local governments dodge this law by utilizing 'social funds' to finance the creation of WASH assets rather than 'capital funds'. The use of social funds to create WASH assets means that they are not registered as public assets and therefore they are not constrained by the normal rules that pertain to public assets.

For programmes such as community-based sanitation (SANIMAS) and PAMISIMAS, the land on which the assets are located is often donated to the community. In most cases this is not a legal transaction either because the community itself is not a legal entity or because the ownership of the land was unclear in the first place. As a result the terms and conditions of the ownership/transfer/lease of the land are unclear. Once the WASH assets are created by/with/through the community organization the ownership of the assets is borne by the community. However, as the community is not a legal entity, the liabilities for a failure in WASH service delivery remain unassigned.

The existing system of transferring WASH assets to unregistered community organizations means that it is not possible to enforce any 'quality of service' standards from these publically financed WASH assets. This absence of any enforceable 'quality of service' agreement means that there is no point of recourse for either citizens or local governments in the event of a failure of the community to:

- operate and maintain these WASH assets
- allow all community members access to these WASH services
- deliver safe, reliable, affordable and sustainable WASH services to consumers

7 RECOMMENDATIONS

7.1 STRENGTHEN DISTRICT/CITY INCENTIVES FOR WASH SERVICE DELIVERY

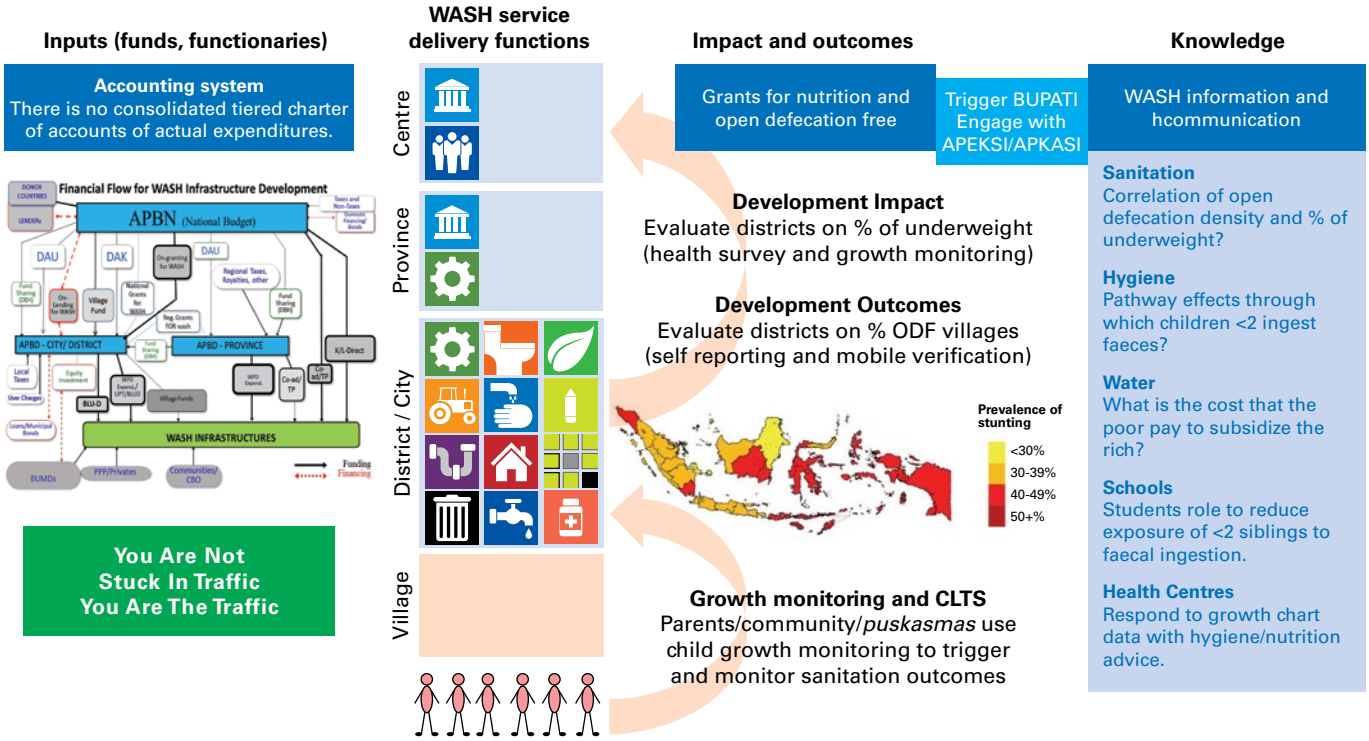
The strong rule-based fiscal decentralization system has empowered the district/city government with the functions, finances and functionaries necessary to deliver high quality public services (including WASH). While the decentralization system also appears to have sufficient freedom for district/city governments to improve public service delivery, there is a lack of incentive to improve service performance.

Downward accountability is undermined by weak citizen voice (i.e., low expectations leading to general satisfaction with low quality public services) and insufficient client power (i.e., the failure to enforce a hard budget constraint on public service providers). Upward accountability is dominated by instruments that control inputs (i.e., laws and their rules, staffing and their conditions, assets and their transfer, finances and their conditions) with an absence of the measurement or evaluation of outputs, outcomes or impact.

Introducing systems to evaluate WASH service delivery results that are linked to performance grants could potentially strengthen the incentives for public service delivery. It is suggested that high profile reward-based systems are the most likely to improve delivery incentives because this kind of upward accountability instrument can engage citizens to strengthen downward accountability. Strategically, the most important point for evaluating public service delivery outcomes and impact lies in the confluence of sanitation promotion through STBM with nutrition growth monitoring in the MoH. This is the point at which it may be possible to leverage low cost WASH interventions (hygiene) to leverage development impact (nutritional gains). This could entail the introduction performance-based grants by the MoH that are associated with:

1. Development Impact (First Past the Post): Leaderboard identifying the top three districts with the greatest reduction in underweight prevalence (per cent of children >2 standard deviations below normal weight-for-age).
2. Development Outcomes (All Past the Post): Lump sum allocation to districts that is equal to the number of villages that have been declared ODF.

FIGURE 15: WASH INPUTS, IMPACTS, OUTCOMES AND KNOWLEDGE



Can UNICEF engage on knowledge and advocacy associated with the use of individual growth monitoring as a proxy for evaluating the public service delivery performance of districts/cities (i.e., development impact) (in concert with its other engagement tools) in many areas of public service delivery beyond WASH?

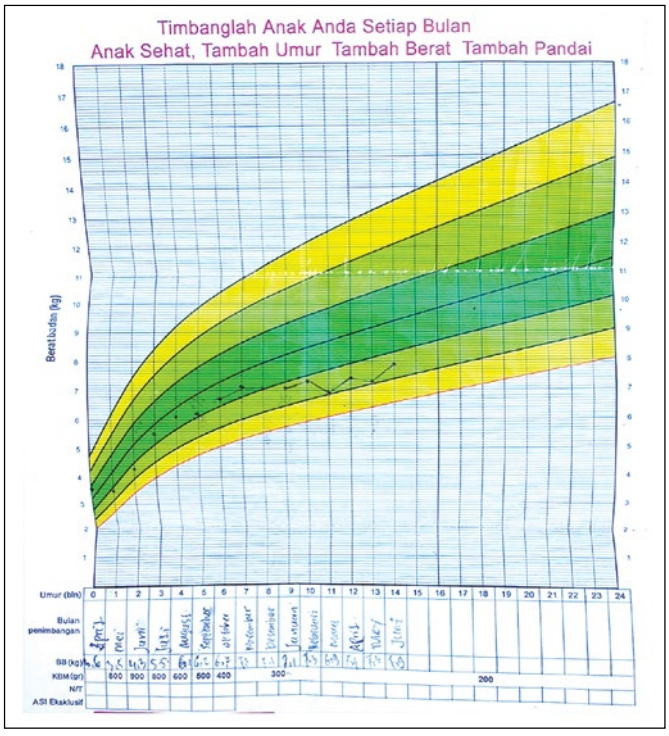
7.1.1 CHILD GROWTH MONITORING AS A TRIGGER FOR STBM

The exiting STBM approach has adopted a no-subsidy line, seeking to use heightened awareness and self-respect to trigger rural communities to address their own sanitation needs. This appears to be the only significant area where greater public sector engagement is aligned with improved development results. The leadership of STBM by the Ministry/Departments of Health offers an opportunity for financial engineering that increases the resourcing of preventative rather than curative health.

At the local level, it is proposed to work with district officials using the percentage of underweight children (i.e., low weight for age) from the existing child growth curve monitoring (by the *Puskasmas*) as a trigger for addressing sanitation, hygiene, nutrition interventions at the village level. This could involve:

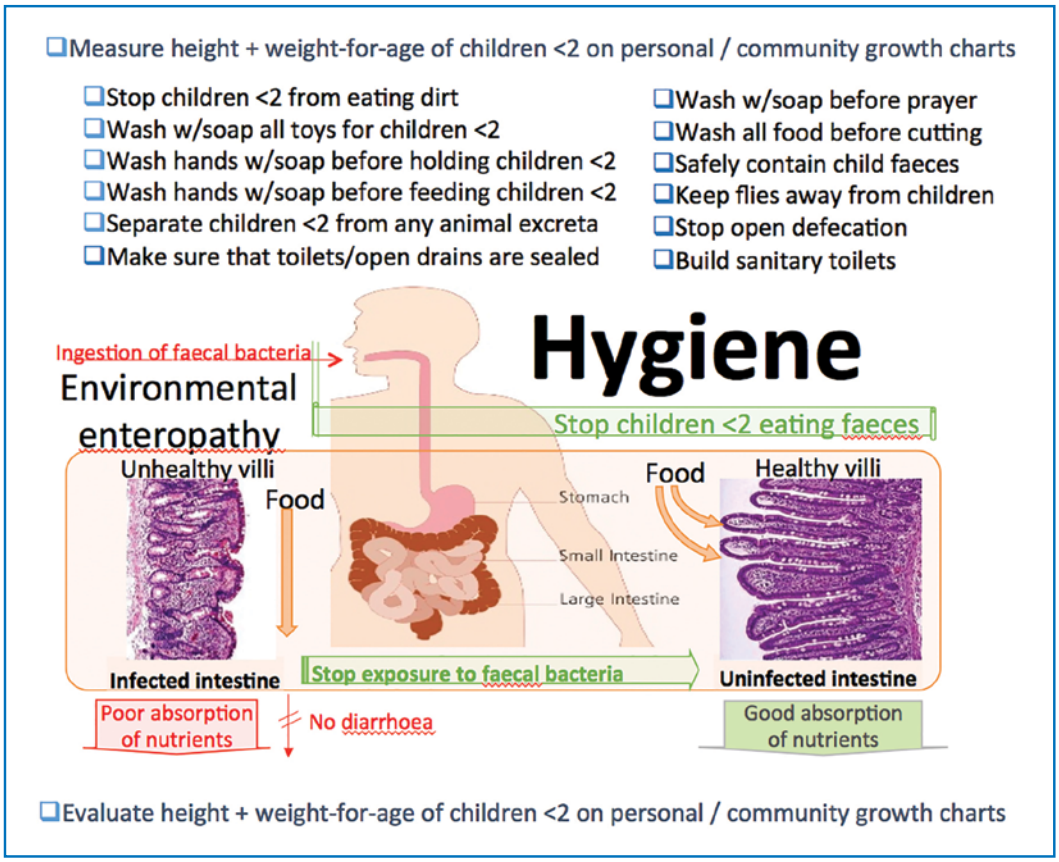
1. **Trigger:** Shock the community into realization by graphing <2 child weight-for-age status on a collective wall chart.

FIGURE 16: EXAMPLE OF CHILD-GROWTH MONITORING CHART



2. **Ignite:** Share the environmental enteropathy hypothesis to create a desire to stop faecal ingestion by children <2.
3. **Action:** List possible hygiene, sanitation, water and nutrition action ideas to prevent faecal ingestion by children <2.

FIGURE 17: ENVIRONMENTAL ENTEROPATHY PREVENTION CHECKLIST



4. **Monitor:** Track individual and community improvements in child weight-for-age against interventions being undertaken.
5. **Evaluate:** Collectively learn from the parents, community and *Puskasmas* staff about the effectiveness of different WASH and nutrition interventions on child weight-for-age status.

In accordance with the principle of retaining asset ownership and financing liability together (see 5.3.1 and Appendix 8.2), the absence of infrastructure subsidies for sanitation (and the poor experience with sanitation infrastructure subsidies in the past) bodes well for this 'hygiene/health/nutrition'-based approach to sanitation. Working with the district to offer rewards (i.e., infrastructure projects) to communities and *desa* that deliver improved development impacts (i.e., child weight-for-age) and eradicate open defecation may prove to be effective. Most importantly the expansion of the capacity of the Health Department needs to help collate impact indicators (i.e., child weight for age) against outcome indicators (i.e., open defecation density, washing of hands) to understand what is working, where and why.

Can UNICEF engage at the interface between the district and community levels bringing together child growth monitoring as both a trigger and impact indicator for STBM?

7.1.2 KNOWLEDGE MANAGEMENT SYSTEMS

The linking of downward accountability instruments (i.e., citizen voice and client power) to upward accountability instruments (i.e., laws and their rules, staffing and their conditions, assets and their transfer, financing and their conditions) will require triggers for reform to be leveraged. Some potential areas which could be explored are:

Strengthen monitoring and learning systems

Cities Caring for Sanitation Alliance (AKOPSI) is a voluntary forum for *Bupati* to share and learn from the experiences of their counterparts in the water supply and sanitation sector. While the existing forum provides opportunities for horizontal learning amongst *Bupati*, this could potentially follow a more structured process of identifying, sharing and replicating the best development practice (see http://www.horizontallearning.net/). This forum could potentially engage outside of the WASH sector (i.e., with the Association of Indonesian Municipalities (APEKSI) and the Association of Indonesian Regency Governments (APAKSI)) to leverage changes within the WASH sector.

Identifying ways and means to channel resources towards preventative health can save curative health expenditures. This is probably most effective if it is led by information and practical experience.

At the local level, this could include the *Puskasmas* in testing different sanitation and hygiene interventions that are most effective in improving child weight-for-age. At the district level, this could involve the Health Department in collating and monitoring trends in child weight-for-age against progress in STBM. At the national level, this could involve the MoH in following up progress in child weight-for-age through analysis and call back to parents based on Bahasa mobile phone applications collecting child weight-for-data.

Can UNICEF engage on support for systems to collate, interrogate and learn from the data that is already routinely generated?

Strengthening institutional accountability of the village government

Given the challenges of deploying resources from the district level of government there is some impetus within the central, provincial and even the district government to delegate resources to the village level of government. While this appears to be productive and useful this should be complemented by increased accountability for the outcomes from the deployment of greater resources at the village government level. This could include:

- Village governments entering into license (quality of service) agreements with the communities that are managing water and sanitation assets that have been created by SANIMAS, PAMSIMAS, etc.
- Village governments entering into ownership agreements with the communities that formalize into village government-owned enterprises (like PDAMs but at the village rather than district level).
- District governments piloting the introduction of impact/outcome performance grant systems as a means of leveraging the increasing resources of the village government.
- Engaging with village governments as a means of either amplifying citizen voice around the quality of public service delivery or as an arbitration mechanism.

Can UNICEF test options for the undertaking of an exclusive public services function by village governments (i.e., citizen voice, arbitration, licensing, ownership, delivery of public services)?

7.2 STRENGTHEN DISTRICT/CITY LICENSING OF WASH SERVICES

The existing prevalence of WASH service provision from assets not owned by the district government (i.e., provision by PDAMs, CBOs, bottle vendors and private wells) currently means that the government is unable to ensure the quality of WASH services from those assets. In this context, there is a need to strengthen district/city licensing of water and sanitation services from assets that are not owned by the district/city. This would entail regimes for the licensing of PDAMs/CBOs/bottled water vendors/ private wells against a minimum quality of service criteria. Separating the licensing of compliance (by local governments) from the regulation of failure (by the central government) and introducing local/ central arbitration entities will reduce the potential risk that this will encourage rent-seeking behaviour.

Can UNICEF advocate for local government by-laws (i.e., planning approvals, no objection certificates, trade licenses) for WASH asset owners specifying a minimum quality of services?

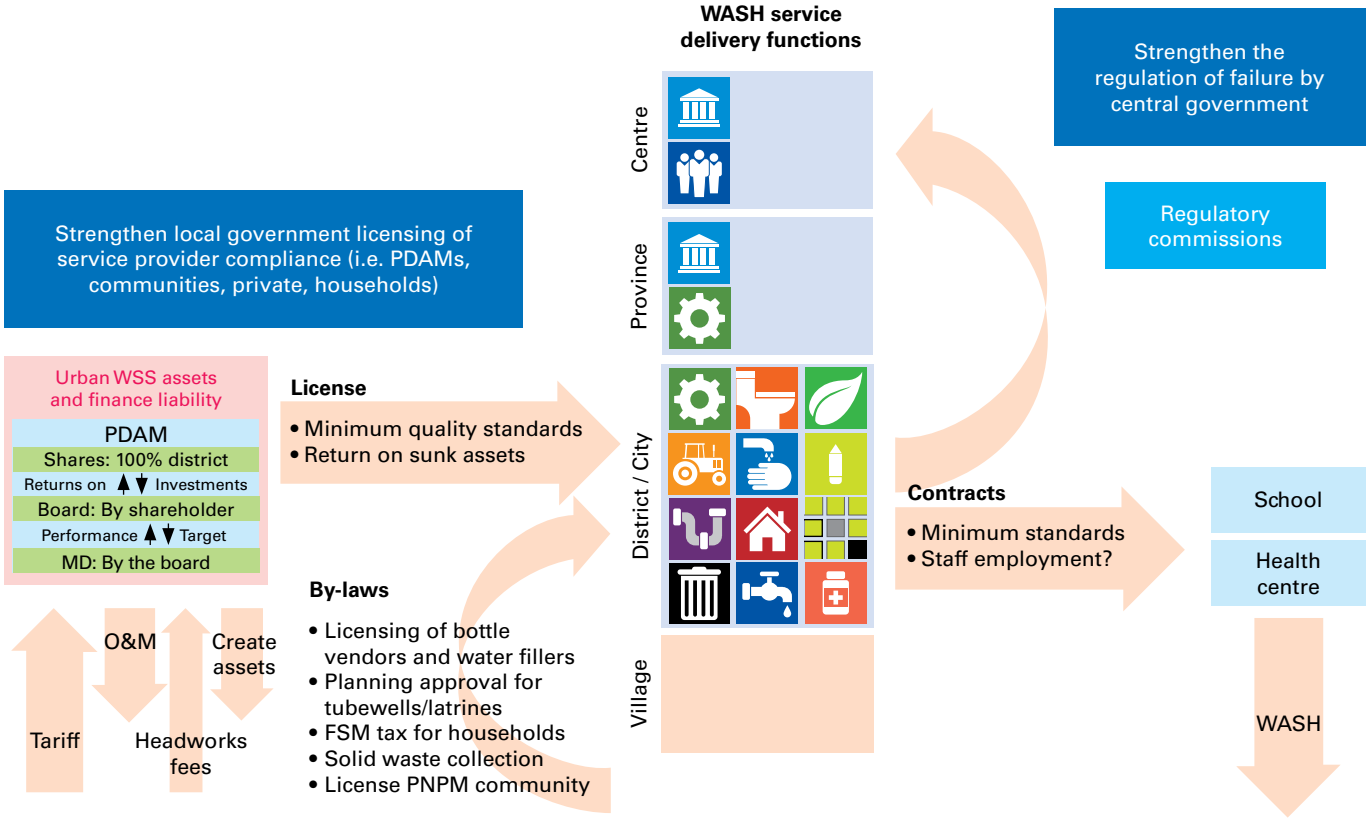
7.2.1 NO ONE VALUES WASH ASSETS IF YOU GIVE THEM AWAY

The current system of transferring centrally created WASH assets to PDAMs (from the Ministry of Public Works and Housing) and locally created WASH assets to communities (via SANIMAS/BAPPENAS) leaves the liability for WASH failures unassigned. There are no enforceable consequences for a catastrophic WASH failure that endangers lives or a creeping O&M failure that 'runs down' WASH assets. Even where the local government retains the ownership of WASH assets (i.e., schools and health clinics) there are no enforceable agreements which ensure that the managers of these publically owned assets are accountable to maintain these assets to meet a minimum quality of service.

In order to ensure that the liabilities are retained with assets, and that the local government retains some form of 'quality of service' control over the standard of service delivery the following options should be considered:

- Transfer WASH asset ownership to a district/ *desa*-owned enterprise (i.e., PDAM) under an operating license that includes a return on the value of the asset to the asset owner (district/ *desa*).

FIGURE 18: STRENGTHENING WASH SYSTEMS



OR

- Retain asset ownership with the district/*desa* but delegate the operations (and revenues) from these assets to non-government operators (i.e., communities, PDAMs) under a lease agreement with a return to the district based on the viability/ market for the services provided.

OR

- Communities that have already received public assets or households/bottle vendors that already own water and sanitation assets must obtain an operating 'quality of service' license from the district or city.

OR

- Introduce minimum performance standards where WASH assets are owned and managed by employees of the district/city government (i.e., schools, health clinics, public buildings).

Tighten the hard budget constraint on PDAMs

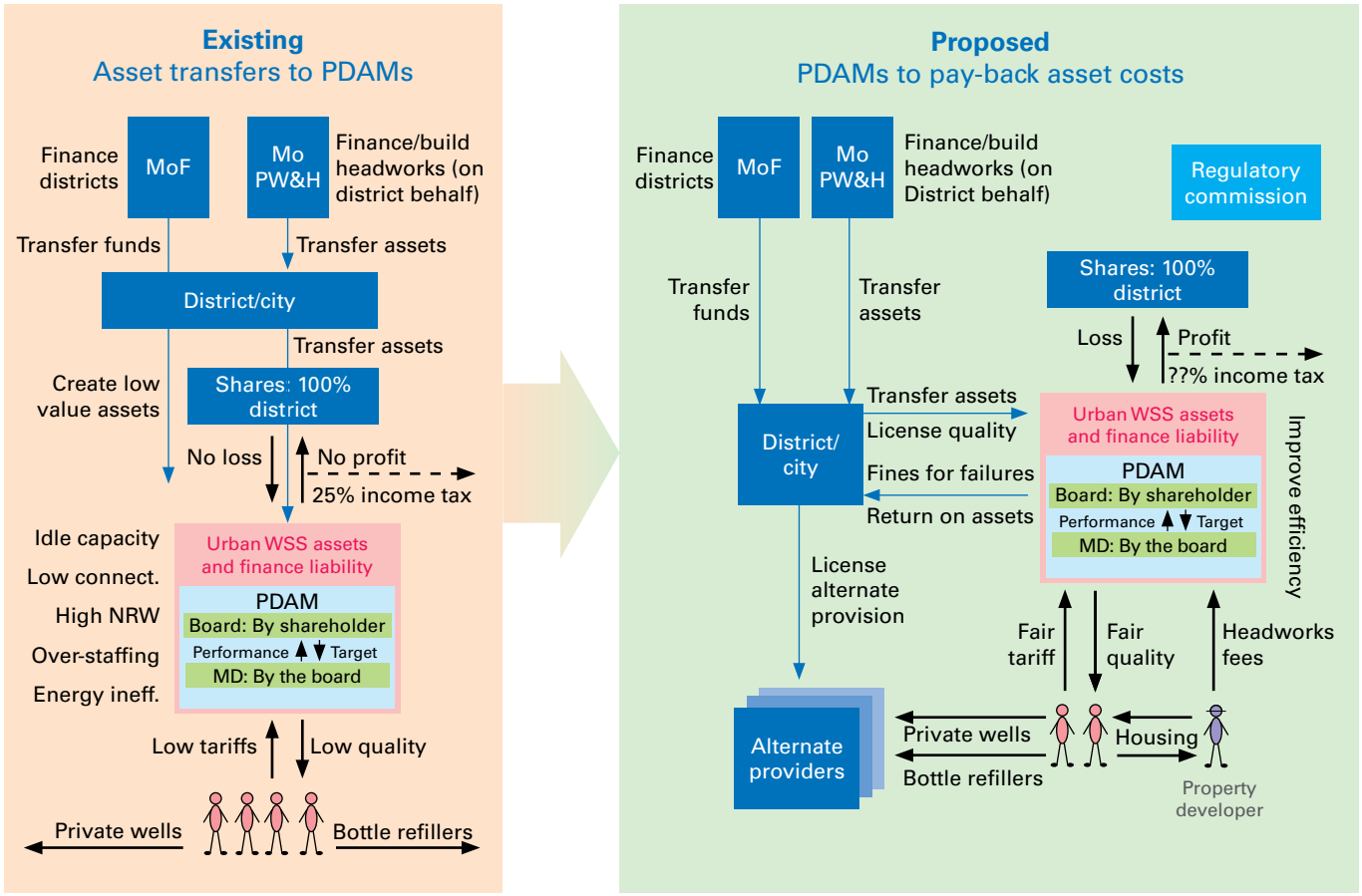
The existing system of transferring assets to PDAMs undermines a hard budget constraint and creates perverse incentives for PDAMs to run down assets. The presence of idle capacity and system losses within PDAMs represents an extremely high cost to both consumers and tax-payers. This disproportionately affects the poor who consume less of the subsidies and pay more of their bills. To address these perverse incentives it is necessary to separate the different relationships of the district as:

1. the owner of the PDAM = profits/losses to be borne through the shareholder agreement
2. the licensee of the PDAM = targets/fines to be imposed via a quality of service agreement
3. the *de jure* financier of PDAM assets = asset costs to be paid back from PDAM revenues

In addition to the district entering into a license agreement with the PDAM to meet the minimum quality of service standards (including fines for failure) it is essential that the PDAMs pay back the subsidies they receive in the form of water and sewerage assets. For this to be effective, it is proposed to:

- Strengthen the requirement by law for the district to support the PDAM to disconnect anyone for failure to pay their water/sewerage bills.
- Require districts to license PDAMs, CBOs, bottled water vendors, households against 'quality of service' criteria and impose fines for failures to meet those standards.

FIGURE 19: HOW TO INTERNALIZE THE COST OF WASH ASSETS IN PDAM OPERATIONS



- Enable PDAMs to reduce their income tax by paying back the costs of assets (i.e., asset loans) to the district and lock funds into infrastructure investments before determining profit shares. This will encourage PDAMs (and districts) to invest in viable water and sewerage asset expansion plans and should result in a dwindling demand for centrally financed water and sanitation infrastructure.
- Enable PDAMs to increase their capital revenues by empowering PDAMs to levy 'headworks fees' on property developers for the future cost of the expansion of the water and sewerage headworks to serve the future consumers that will populate these properties.
- Increase the pressure on the PDAMs to improve the efficiency of their service delivery within the existing tariff regime. This will require PDAMs to report annually to the district/province/centre on core performance indicators such as non-revenue water (per cent), staffing ratio (# staff/000' connections), working ratio (revenue expenditure/revenue income), collection ratio (collection/billing). In this respect, an analytical Water Regulatory Commission with a consumer satisfaction liaison cell could potentially increase the pressure on PDAMs to improve core efficiency indicators.

Enter into 'quality of service' agreements with community organizations

The existing system of transferring WASH assets to communities under programmes such as SANIMAS and PAMSIMAS leaves liabilities unassigned in the event that the community:

- fails to operate and maintain these publically funded WASH assets;
- excludes access of community members to these publically funded WASH assets; and
- exposes consumers to unacceptably high risks from these publically funded WASH assets.

To address these unassigned risks it is proposed that local government (district/city/village) enter into some form of 'quality of service' agreement with community organizations including some form of third party arbitration system as a point of recourse in the event of any dispute.

In the event that WASH assets are transferred to community organizations, it is proposed that:

- the community organization must be a legal entity;
- the land must be legally transferred to the community organization (or leased for a period that exceeds the life of the asset i.e., 20+ years);
- the community organization shall sign an annual license agreement with the village government (or district/city) committing the community organization to WASH asset upgrades, O&M, inclusive access, public safety and a return on assets. In the event of failure to meet these license conditions:
    - citizens may register complaints with the village government (as the licensee)
    - the village government may impose fines or orders as stipulated in the license agreement;
- a local third party arbitration mechanism is established to resolve disputes/limit coercion/ prevent rent seeking between the village government and the community organization.

If WASH assets are retained with the village government (or district/city), it is proposed that:

- the land must be legally transferred to the village government (or leased for a period that exceeds the life of the asset i.e., 20+ years);
- the village government shall sign a long term contract agreement (lease/concession) committing the community organization to WASH asset rehabilitation, O&M, inclusive access and public safety. In the event of a failure to meet these contract conditions, the village government may either:
    - apply the penalties as stipulated in the lease/ concession agreement
    - issue a new lease/concession agreement to another entity;
- a local third party arbitration mechanism is established to resolve disputes/limit coercion/ prevent rent seeking between the village government and the concessionaire/lessee.

8 APPENDIX: NORMATIVE ANALYTICAL FRAMEWORK

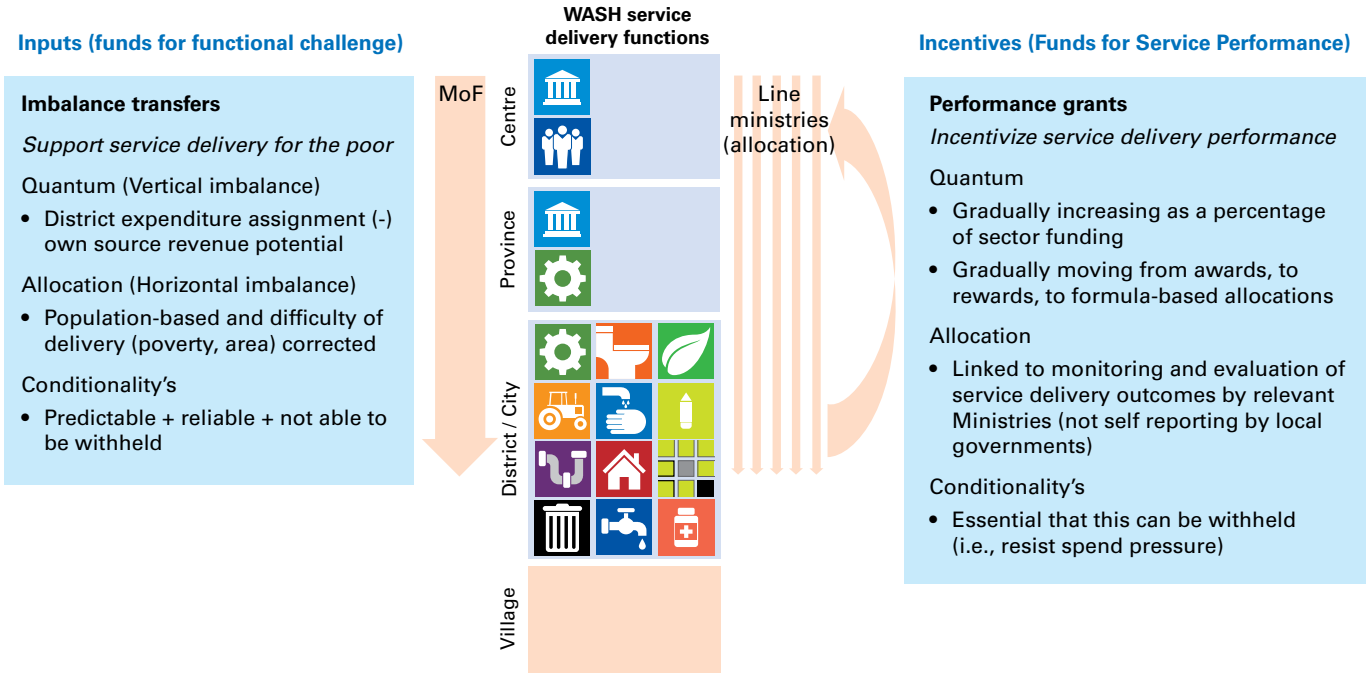
8.1 INTERGOVERNMENTAL FINANCING

The contrasting imperatives to 'support the poor' and 'incentivize performance' of district/city governments demands a dual system of imbalance and performance grants. Where imbalance grants strengthen local government autonomy the performance grants strengthen local government accountability for service delivery results.

IMBALANCE GRANTS

In correcting for vertical imbalance, the quantum of funds should be based on the shortfall between the functions assigned to that tier of government (i.e., the expenditure assignment) and the revenue potential from own sources (i.e., the tax base). Given the large expenditure assignment of city/district governments and the limited revenue assignment the quantum of these transfers are significant. In correcting for horizontal imbalance, the allocations should be adjusted according to "the difficulty of delivering services within each local government jurisdiction". Ideally this should be grounded in objective third party data that reflects difficulty of delivery (i.e., population, poverty, difficult terrain) and should not be based on data that can be controlled (or manipulated) by the beneficiary local governments. These grants should be reliable, predictable and ideally managed by the Ministry of Finance. In providing autonomy to the district/city government these imbalance grants should ideally have minimal conditionalities.

FIGURE 20: DUAL LOCAL GOVERNMENT FISCAL INSTRUMENTS



NB - The competing imperatives to support the poor and incentivize performance require these to be separate fiscal instruments.

	Formula (position past the post)	Reward (all past the post)	Award (first past the post)
Rationale	Everyone gets something, but the amount is driven by performance	Everyone that meets a certain benchmark standard gets the reward	Only the very best performers get an award
Philosophy	Creates incentives to strive for certain performance parameters	Rewards all who meet a certain benchmark but does not go beyond	Inspires excellence but generally rewards the most progressive
Frequency	Consistent allocations dependent on the formula and quantum of funds	Service quality benchmarks can really only be awarded a 'single time'	Can continue to drive up higher performance over multiple years
Profile	**Low:** Recognition of poor/good performance is not significant	**Medium:** The recognition of benchmark achievement is a moderate motivator	**High:** The recognition of 'best' performer inspires excellence
Allocation of Funds	**Variable:** Driven by the formula and quantum of funds available	**Medium:** Small enough for all to qualify and big enough to inspire performance	**Large:** A large allocation for the award helps to raise the profile
Quantum of Funds req'd	**Capped:** The allocation of available funds is all dispersed by formula	**Large and variable:** All that reach the benchmark receive the reward	**Minimal:** As only the very 'best' performer receives the award
Criteria	Indicators for formula generation must be simple and verifiable	Indicators should be outcome-oriented, quantifiable and attainable	Criteria can be flexible and deepen over time as performance improves

PERFORMANCE GRANTS

Performance grants enable the central government to leverage autonomous local governments towards improved service quality outcomes. These grants must be separated from imbalance transfers as they are very different in two basic ways. Firstly, the ability to withhold funds and release them only on the basis of improved performance is absolutely critical to their effectiveness. Secondly, these grants must be built on reliable systems for evaluating performance (i.e., ideally linked to non-excludable targets specified in ministries policies). This suggests that the setting and evaluating of sectoral standards should be determined by the relevant Line Ministries as either formula driven allocations, rewards for benchmark performance, or awards for exemplary performance.

PRIORITY PERFORMANCE GRANT INDICATORS

'Private goods' are both excludable and rival. A good or service is excludable when it is possible (even if politically problematic) to exclude an agent from access to these services. Rival goods or services occur when consumption by one agent reduces the availability for others. By this definition, networked water supply and sewage systems, solid waste sites and sewage treatment plants, rubbish and vacuum trucks, as well as 'self-provision' through household investments in latrines and hand pumps are private goods. Private goods are most efficiently delivered by commercial providers within a competitive market.

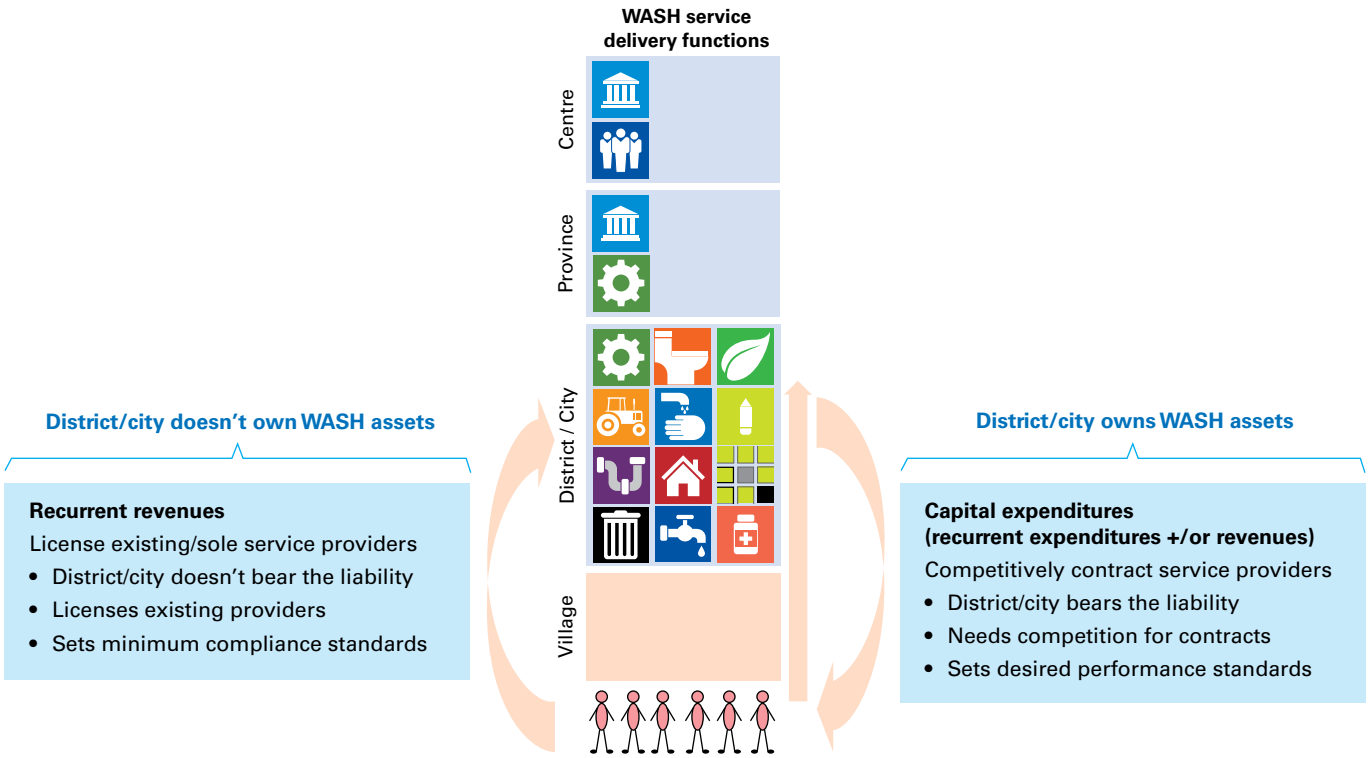
Pure 'public goods' are both non-excludable and non-rival. A good or service is non-excludable when it is impossible to exclude others from the consumption of that service. Non-rival consumption occurs when all citizens enjoy the benefits of a service without reducing the benefits to others. A clean environment and swept streets, fire protection and public information, a polio free or ODF jurisdiction are all pure 'public goods' that cannot be efficiently allocated through free market principles. As the raison d'être for government intervention, pure public goods are ideal indicators for performance grants. Potential 'public good' indicators of district/city government performance in WASH include:

- ODF jurisdictions (as a proxy for sanitation)
- Litter free jurisdictions (as a proxy for environmental sanitation)
- Underweight free jurisdictions (as a proxy for WASH++)

Sununtar Setboonsarng has proposed child malnutrition as a proxy indicator of poverty eradication. She finds child nutrition to be a more robust indicator of poverty reflecting desirable development outcomes i.e., improvement in gender equality, intra-household distribution, and health environment quality.[34]

[34] Setboonsarng, Sununtar. Child Malnutrition as a Poverty Indicator: An Evaluation in the Context of Different Development Interventions in Indonesia (2005). © Asian Development Bank. http://hdl.handle.net/11540/3609. quality of services proposed and the quality of assets returned at the end of the contract term.

FIGURE 21: TWIN LOCAL GOVERNMENT FINANCING INSTRUMENTS



8.2 SERVICE DELIVERY INSTRUMENTS

The primary responsibility of district/city governments is to ensure WASH rights for all (demand side). This takes preference over the secondary role of district/city governments of providing WASH services to the underserved (supply side). District/city governments can fulfill their primary responsibility by entering into a 'quality of service' agreements with all of the various providers of WASH services (irrespective of their form or their ownership). By retaining asset ownership and financing liability together, such 'quality of service' agreements can be simplified into two basic types depending on whether the district/city government owns the WASH assets or doesn't own WASH assets.

DISTRICT/CITY GOVERNMENT OWNS WASH ASSETS

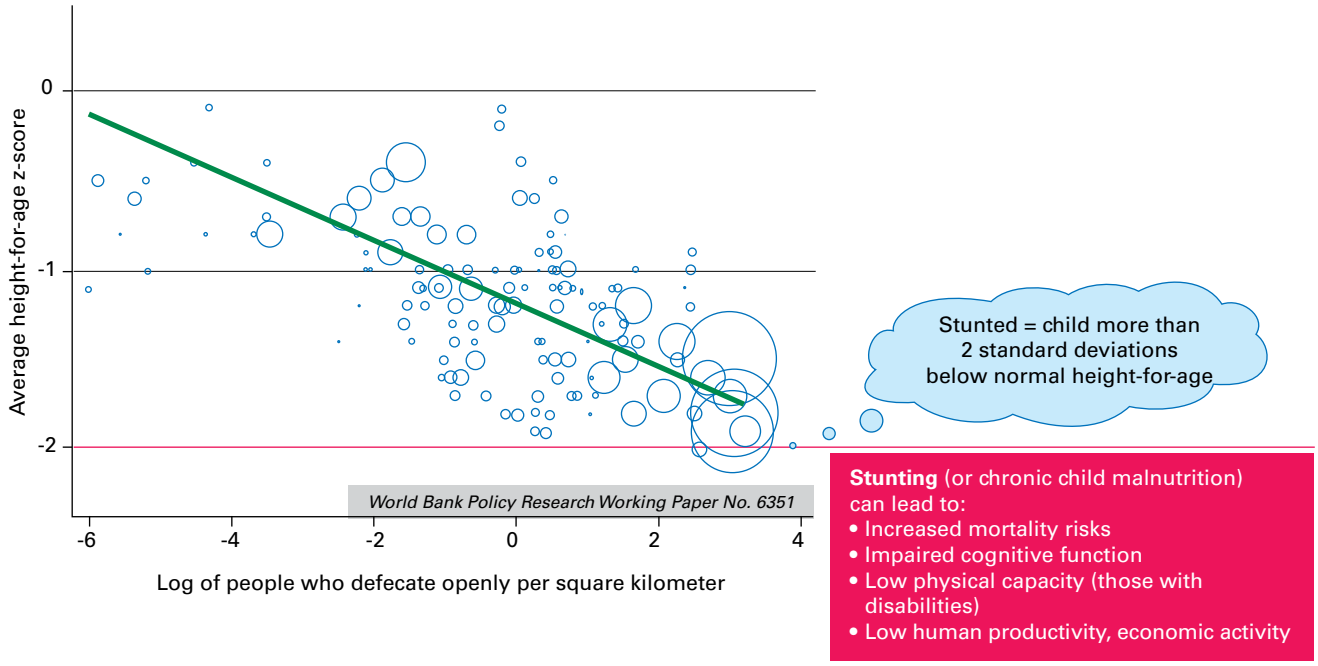
In situations where the district/city government owns the WASH assets (and bears the financing liability), the district/city government can offer some form of performance-based contract for providers to undertake any (or all) of the feasibility, design, finance, build, operate and maintain (with the remuneration of the provider ideally linked to the quality of services delivered). Greater risk transfer is possible in long contracts (Build-Own-Operate-Transfer scheme (BOOTs), concessions[35] and staff agreements) but this requires stronger arbitration mechanisms as compared to short contracts (contract labour, service, management and lease contracts). The efficiency targets (contract fees/tariffs) for providers are primarily driven by market competition for the contracts. Regulation is through the contract, however regulatory compliance is dependent on clear arbitration provisions (i.e., quality of service, inclusion).

DISTRICT/CITY GOVERNMENT DOES NOT OWN WASH ASSETS

In situations where the district/city government doesn't own the WASH assets (or bear the financing liability), the district/city government can license WASH service providers to deliver a minimum quality of services from those assets. This includes a range of social instruments (rewards and rebates; public education and advocacy for the establishment of social norms) and legal instruments (BOO and divesture agreements; planning approvals, certification and licensing;

[35] Under a concession (or BOOT) asset ownership and financing liability are retained together with the responsible public agency, while the public agency competitively lets 'asset ownership and asset financing rights' under contract to a concessionaire against the quality of services proposed and the quality of assets returned at the end of the contract term.

FIGURE 22: OPEN DEFECATION DENSITY VERSUS STUNTING



rights of access and bulk tariffs; tax breaks and soft loans) to ensure a minimum quality of service and inclusion standards.[36] In a free market, the provider efficiency (i.e., consumer tariffs) is driven by competition for consumers. Regulation is through the license agreement, however regulatory compliance is dependent on clear arbitration provisions (i.e., quality of service, inclusion).

8.3 NUTRITION AND SANITATION

Recent evidence from 140 DHS data sets from 60 countries reveals a stronger than expected correlation between open defecation density and child height-for-age.[37] This suggests that the impact of reducing children's exposure to faecal contamination may be greater than that which is associated with diarrhoea.

The cause of stunting in children does not seem to be adequately explained by the current knowledge of the association of mother and child nutrition and hygiene mediated by diarrhoea.

- Meta-analysis of 38 studies and models of all known interventions – including vitamin A and zinc supplementation, balanced energy protein supplements, complementary feeding, breastfeeding promotion, and micronutrient supplements in pregnancy – concluded that such interventions in 99 per cent of children would decrease the average height deficit of Asian and African children by 33 per cent.[38]

- The Lancet Maternal and Child Undernutrition series estimated that sanitation and hygiene interventions implemented with 99 per cent coverage would reduce diarrhoea incidence by 30 per cent which would in turn decrease the prevalence of stunting by only 2.4 per cent.[39]

One potential explanation for these surprising findings is a phenomena known as Environmental Enteropathy, where the frequent ingestion of faecal contamination can infect the intestine, reducing the absorption of nutrients without any symptoms of diarrhoea This is a condition caused by regular faecal-oral contamination leading to the blunting of intestinal villi resulting in the malabsorption of nutrients.[40] Research by Lun et al. showed that gut permeability (the hallmark of enteropathy) explained >40 per cent of stunting in Gambian children.[41]

[36] This framework enables delegation from the district/city government to an Asset Holding Company (AHC) via a licensing agreement with the possibility of further delegation to an Asset Management Company (AMC) via a contract agreement.

[37] "How much international variation in child height can sanitation explain?" Dean Spears, Policy Research Working Paper 6351, World Bank (2013).

[38] Child under-nutrition, tropical enteropathy, toilets, and handwashing, Humphrey J H, *Lancet* (2009).

[39] Interventions for maternal and child undernutrition and survival. Bhutta ZA, Ahmed T, Black RE, *Lancet* (2008).

[40] Environmental Enteropathy. Korpe & Petri, *Trends in Molecular Medicine (2012)*.

[41] Intestinal permeability, mucosal injury, and growth faltering in Gambian infants, Lunnet. al, *Lancet (1991)*.

FIGURE 23: SANITATION AND STUNTING

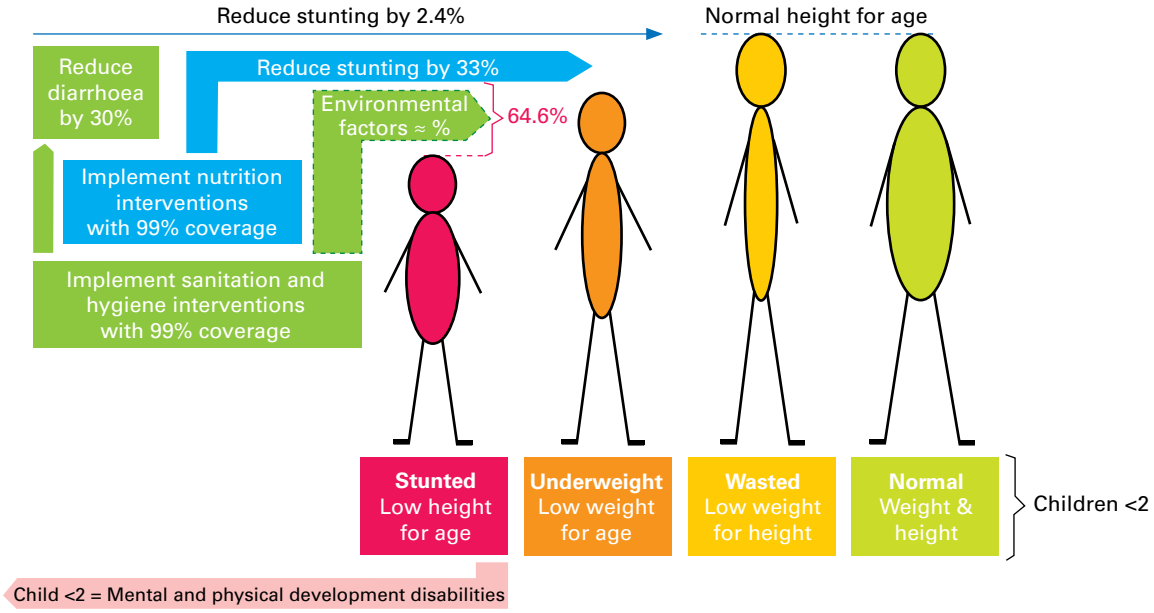
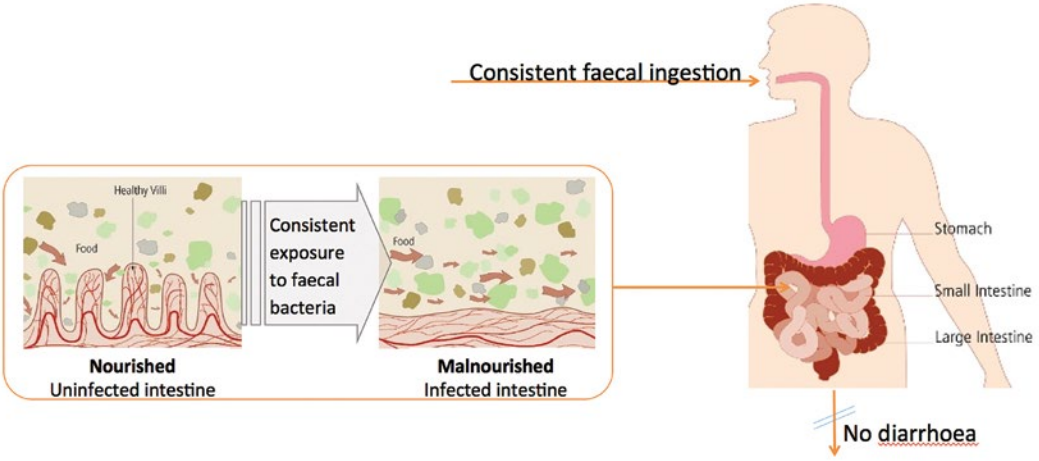


FIGURE 24: ENVIRONMENT ENTEROPATHY



Studies from the Sanitation, Hygiene Education and Water Supply in rural Bangladesh (SHEWA-B) revealed that children living in environmentally clean households had lower levels of parasitic infection, improved measures of gut function and improved growth compared with similar children living in contaminated environments.[42] More recent studies in rural Bangladesh reveal that the eating of soil (geophagy) by children may be an important and unrecognized risk factor for environmental enteropathy and stunting.[43] Further research on children in the Mirpur slum in Dhaka has revealed abnormally high levels of gut enteropathogens, which might help to explain the impaired effectiveness of oral vaccines in developing countries.[44]

[42] Lin, A et al. (2013), *Household Environmental Conditions Are Associated with Enteropathy and Impaired Growth in Rural Bangladesh.*

[43] George, CM et al. (2015), *Geophagy is Associated with Environmental Enteropathy and Stunting in Children in Rural Bangladesh.*

[44] Gilmartin, A & Petri, W (2015), Exploring the role of environmental enteropathy in malnutrition, infant development and oral vaccine response.

ANNEX

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