UN WATER

World Health Organization

UN-Water GLAAS TrackFin Initiative

Tracking financing to sanitation, hygiene and drinking-water at the national level

GUIDANCE DOCUMENT

glaas

UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water

UN-Water GLAAS TrackFin Initiative: tracking financing to sanitation, hygiene and drinking-water at national level

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TrackFin initiative: A brief overview

Effective financing for drinking-water, sanitation and hygiene (WASH) is essential for the sustainable delivery of services. The UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water (GLAAS) indicates that there are substantial gaps in our understanding and tracking of financing to the WASH sector. Financial reporting is often insufficient to enable sound, evidence-based planning and budgeting decisions.

To help rectify these shortcomings, WHO is leading the TrackFin initiative under the UN-Water GLAAS project. Its objectives are to define and test a globally accepted methodology to track financing to WASH at the national level. This methodology enables countries to track sector financing using standardized classifications, and to develop a set of WASH accounts and indicators presented in a format comparable across regions and countries. Its aim is to answer four basic questions:

- What is the total expenditure in the sector?
- How are funds distributed between the various WASH services and expenditure types, such as capital expenditure, operating and maintenance expenditure, and cost of capital?
- Who pays for WASH services?
- Which entities are the main channels of WASH funding, and what is their respective share of total spending?

Expected benefits from this initiative include strengthening national systems for the collection and analysis of financial information for WASH sector policy-making and programming, and better understanding of how financial resources for WASH are allocated at both national and global levels. TrackFin is being developed in collaboration with leading country sector institutions, national statistical offices, finance departments, and international entities such as the UN Statistics Division, the OECD and the World Bank, and with support of a Technical Advisory Group comprising sector and finance experts.

Building on experience in the health sector, WHO has developed this Guidance Document for use by institutions involved in monitoring and financing the WASH sector at the national level. The approach was successfully applied during pilot testing in Brazil, Ghana and Morocco, and lessons learned have been incorporated into a revised methodology. TrackFin will now be implemented in other countries, and repeated in the initial set of countries in order to gradually build up a set of comparable data.

The TrackFin initiative is managed by a small secretariat hosted by WHO. Its purpose is to provide overall methodological guidance for the work at the international level, as well as training for countries interested in applying the methodology. In response to country requests, WHO can provide support to national stakeholders planning to prepare WASH accounts.

For further information, please contact glaas@who.int.

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Acknowledgements

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Together with national stakeholders in all three countries, they made an invaluable contribution to developing the first set of WASH accounts and providing feedback on the methodology.

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List of acronyms and abbreviations

3Ts	Tariffs, Taxes and Transfers (sources of finance)
AICD	Africa Infrastructure Country Diagnostic
AMCOW	African Ministers' Council on Water
CBO	Community-based organization
CLTS	Community-led Total Sanitation
COFOG	Classification of the Functions of Government
CPC	Central Product Classification
CRS	Creditor Reporting System
CSO	Country Status Overview
DAC	Development Assistance Committee (OECD)
GDP	Gross Domestic Product
GLAAS	UN-Water Global Analysis and Assessment of Sanitation and Drinking-Water
IBNET	International Benchmarking Network for Water and Sanitation Utilities
IBRD	International Bank for Reconstruction and Development
IEA	Institut de l'Eau et de l'Assainissement, Morocco
IRC	International Water and Sanitation Centre
ISIC	International Standard Industrial Classification of All Economic Activities
JMP	WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation
MDGs	Millennium Development Goals
MTEF	Medium-term Expenditure Framework
NEA	National Education Account
NGO	Non-governmental Organization
NHA	National Health Accounts
NSO	National Statistical Office
ODA	Official Development Assistance
OECD	Organization for Economic Cooperation and Development
PER	Public Expenditure Review
Ofwat	Office of Water Services
PPP	Purchasing Power Parity
PRSP	Poverty Reduction Strategy Paper
SWA	Sanitation and Water for All
SDGs	Sustainable Development Goals
SEEA	System of Environmental and Economic Accounting
SEEA-Water	System of Environmental and Economic Accounting for Water
SFP	Strategic Financial Planning
SHA	System of Health Accounts
SNA	System of National Accounts
UIS	UNESCO Institute of Statistics
UN	United Nations
UNSD	United Nations Statistics Division
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UOE	UNESCO/OECD/Eurostat
USAID	United States Agency for International Development
WASH	Water, Sanitation and Hygiene
WASH accounts	Water, Sanitation and Hygiene Accounts
WHO	World Health Organization
WSP	Water and Sanitation Program of the World Bank
WSS	Water Supply and Sanitation

Introduction

This Guidance Document sets out a methodology to identify and track financing to the water, sanitation and hygiene (WASH) sector. Referred to as WASH accounts, its purpose is to help countries track sector financing on a regular and comparable basis. Indicators drawn from the exercise are expected to support evidence-based policy-making. While the principal objective is to compile national level WASH accounts, the methodology can be applied at various levels, including the regional or city level.

Further methodological development will doubtless be needed in future years, as more countries apply the methodology. The long-term aspiration of the TrackFin (tracking financing) initiative is to develop a common approach to obtaining reliable financial data. Achieving this will guide improved decision-making at the national level, and facilitate benchmarking within and between countries.

Why is a methodology needed to track WASH financing?

This methodology is based on the findings of the WHO and UN-Water GLAAS Working Paper "Tracking national financial flows into sanitation, hygiene and drinking-water" (Trémolet & Rama, 2012) published in July 2012. The paper stressed that effective financing for water, sanitation and hygiene is essential if the services necessary to save two million lives each year are to be delivered and sustained. To date, limited availability of financial data, coupled with inadequate monitoring systems, has impeded countries' ability to assess progress and improve performance. The working paper concluded that the current understanding of financial flows to the WASH sector at the national level is limited.

Against this background, there is common agreement that better understanding of financing to the WASH sector at the national level is critical for policy development and implementation. It is also important to encourage better and more equitable utilization of existing funds, and to attract additional financing. There is consensus, given the current deficiencies of financial data in the sector, that this is a difficult and challenging task. Even where data are available, an adequate level of disaggregation may not be possible. A methodology that could be used by a broad range of countries is therefore required.

Demand for sound financial information in the sector has been confirmed at the highest political level, such as at the High Level Meetings organized by Sanitation and Water for All (SWA) in Washington DC in 2012 and 2014. On these occasions, several SWA member countries made commitments to improving financial tracking in the WASH sector.

What is the TrackFin initiative?

These calls for action provided the rationale for launching the WASH TrackFin initiative in August 2012. Its purpose is to develop and apply, over time, a common methodology for tracking financing to the WASH sector. This Guidance Document presents the TrackFin methodology as it currently stands, based on pilot results from Brazil, Ghana and Morocco obtained in 2014.

TrackFin is currently managed by a secretariat hosted by WHO on behalf of UN-Water. It is closely linked to the GLAAS report, which tracks inputs to the sector, including financial contributions. The initiative will be developed jointly with leading sector institutions and experts involved in financial tracking, such as the World Bank, the OECD or UN Statistics Division. Work will proceed iteratively, starting with simple objectives and developing more complex approaches as more countries adopt the methodology and apply it at regular intervals.

Guidance Document objectives

This Guidance Document sets out a methodology to help countries produce WASH accounts. Its purpose is to track all expenditure in the WASH sector by all economic entities, including governments and public institutions, public and private organizations, NGOs, foundations, international and national donors, investors, and households.

The methodology enables countries to answer four key questions:

- What is the total expenditure in the WASH sector?
- How are funds distributed to the different WASH services and expenditure types?
- Who pays for WASH services and how much do they pay?
- Which entities are the main funding channels for the WASH sector?

More specific policy questions may be answered depending on the level of detail generated. Data could, for example, be broken down to evaluate the distribution of WASH expenditure at the regional level, and to examine issues of equity. Early identification of specific questions that policy-makers would like to address is fundamental so that the data produced can be as policy-relevant as possible and capable of informing specific funding decisions.

Why should countries develop WASH accounts?

WASH accounts can help country decision-makers gather valuable information on current sector financing, track its evolution over time, and benchmark spending against other sectors or other countries. These accounts will provide detailed information on the origins of WASH funding and how that funding is used. The many benefits of this approach include the following:

- Increased transparency over funding to the WASH sector: WASH accounts enable the tracking of expenditure across time, and the benchmarking of expenditure against sector targets or targets in other sectors or countries;
- Ability to monitor the allocation of funding to sub-sectors and geographic regions according to need and in an equitable manner;
- Ability to monitor the implementation of a financing strategy for the sector, leverage further investment, and support the institutions responsible for channelling funding to the sector; and
- Ability to track whether commitments made by sector actors have been met.

WASH accounts can also provide the foundation for robust and transparent communication with sector stakeholders, and the public at large, concerning the financial means deployed within the water sector. This facilitates comparison between financial investment in the sector and results achieved.

Target audience

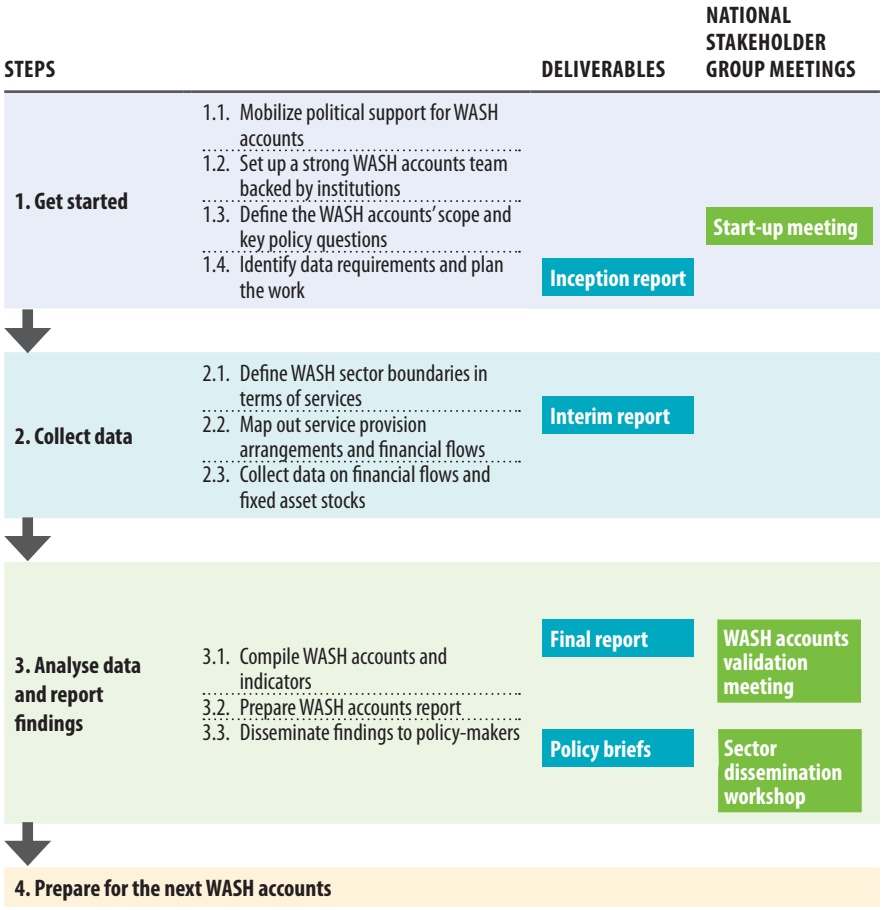
The Guidance Document has been developed for governments and their advisers, especially in middle-and-lower-income countries. Its objective is to guide the preparation of WASH accounts to strengthen national policy-making and facilitate international reporting, such as for the GLAAS report. Country-level WASH accounts are also likely to interest bilateral donors, multilateral institutions, NGOs and philanthropic organizations seeking financial data to support programme planning at the national and international level.

The methodology is intended for countries producing WASH accounts for the first time, in addition to those that have already prepared them. In the latter case, WASH accounts teams are strongly encouraged to build on existing work, especially with respect to sector mapping, identifying data requirements and sources, and improving the methodology for estimating expenditure. The Methodological Notes at the end of this Guidance Document contain detailed information on developing the methodology further over time.

Overview of the methodology

The methodology is applied in a series of steps, as outlined in Fig. 1 below.

Figure 1. Overview of proposed methodology to track WASH financing at the national level



The WASH accounts final report should be approximately 60 pages (additional relevant detail can be annexed) including a set of 11 WASH accounts tables and an Executive Summary. The report should cover three main aspects:

- Results of the analysis;
- Policy recommendations based on the outcomes; and
- Recommendations to the WHO Secretariat and expert group on improvements or modifications to the global methodology, based on challenges encountered and measures taken to overcome them.

Countries are encouraged to gather existing data where possible, but where these are weak or non-existent, gaps should be filled by accurate estimates based on a combination of actual data and transparent assumptions. These assumptions can be refined in subsequent exercises, so as to gradually improve the level of precision in financial estimates.

The methodology builds on existing international systems for tracking expenditure. These include the System of National Accounts (SNA) (see Box 1 below), and sector-specific systems such as the System of Health Accounts (SHA) for the health sector, or the Water Accounts for the water sector as a whole. It therefore implements the System of Environmental-Economic Accounting for Water framework (SEEA-Water) designed by the United Nations Statistics Division (UNSD). See Step 1.3, Box 5, for more detail on this system.

Box 1. The System of National Accounts (SNA)

The System of National Accounts (SNA) is a broad structure for national economic accounting. This system was first adopted by the United Nations in 1952, and has since been revised and updated. The rules and structure of the SNA are contained in a manual entitled, "System of National Accounts 2008". It is the internationally agreed standard set of recommendations for compiling measures of economic activity.

The SNA comprises a set of coherent, consistent and integrated macroeconomic accounts, based on internationally agreed concepts, definitions, classifications and accounting rules. It provides an overview of economic processes, demonstrating how production is distributed among consumers, businesses, government, and other nations. It shows how income originating in production, modified by taxes and transfers, flows to these groups and how they allocate these flows to consumption, savings, and investment. It provides the definitions that underlie concepts such as gross domestic product (GDP).

Specific areas of learning, and references to additional resources or Methodological Notes, are highlighted throughout the text using the following symbols.

Learning from country experiences: The methodology was initially tested and subsequently revised in Brazil, Ghana and Morocco. Similar approaches may have been used in other countries. Where insights were gained from these experiences, they are highlighted in boxes showing the flag of the country concerned.

Learning from the health sector: The methodology draws substantially on the System of Health Accounts (SHA) developed over the last 20 years in the health sector and currently used on a regular basis by more than 100 countries throughout the world. Learning that can be gained from the SHA is shown in a box bearing this sign.

Coordinating with SEEA-Water: TrackFin is being developed in parallel with the rolling-out of the SEEA-Water system of water accounting, which aims at developing comprehensive Water Accounts over time by tracking both physical (hydrological) and financial flows. WASH accounts can be seen as a subset of these broader Water Accounts. Where SEEA-Water Accounts are developed, coordination between the two methodologies and dialogue between the teams should be encouraged. Boxes with this sign highlight areas where the SEEA-Water methodology should be taken into account to increase harmonization.

Potential challenge: The development of WASH accounts is likely to give rise to a number of specific challenges. These challenges, and potential solutions, are highlighted in boxes with this sign.

Methodological Notes: These provide more in-depth detail on the methodology, proposing alternative approaches to specific issues and giving suggestions for future development. They appear as annexes to the Guidance Document.

Resources: These additional resources can be used by stakeholders seeking to apply the TrackFin methodology in the preparation of WASH accounts. They include practical tools, existing outputs from earlier stages of the TrackFin initiative, and a policy brief on WASH accounts for information purposes. They are available on the TrackFin website.

Guidance Document structure

The Guidance Document takes the reader through each step of the proposed methodology. The steps are as follows:

- **Step 1 – Get started:** Sets out the initial steps needed to initiate the preparation of WASH accounts;
- **Step 2 – Collect data:** Includes guidance on collecting and organizing the necessary data, calling on various methods capable of reflecting different circumstances;
- **Step 3 – Analyse data and report findings:** Sets out how the WASH accounts and associated indicators should be compiled, and provides guidance on how the data can be interpreted and used for policy-making; and

- **Step 4 – Prepare for the next WASH accounts:** Summarizes what needs to be done by the WASH accounts team to extract and document lessons learned, share feedback on the international methodology, and to prepare for the next round.

The sections are set out in the correct order of implementation. The WASH accounts team should familiarize themselves thoroughly with the Guidance Document prior to taking action, to ensure that they understand the overall process.

To complement the guidance given here, a series of Methodological Notes has been developed. These Notes form an integral part of the Guidance Document, providing greater detail and alternative methodologies for specific areas, as shown in the box below. Annex A includes a glossary of key terms employed in this guide, while Annex B contains a list of useful references and websites.

- Methodological Note No 1: WASH services classification systems
- Methodological Note No 2: Classification of WASH uses, actors and financing types
- Methodological Note No 3: Estimating financial flows on a cash flow basis and alternative methodologies
- Methodological Note No 4: Estimating financial flows with the Financing Type Approach
- Methodological Note No 5: Estimating the costs of providing services using the Cost-based Approach
- Methodological Note No 6: Estimating fixed asset stocks
- Methodological Note No 7: WASH accounts tables and indicators

Additional resources are available on the TrackFin website to support the preparation of WASH accounts. These are detailed in the box below.

- Policy Note: How can WASH accounts support policy-making? This is essential reading for any country currently considering whether to develop WASH accounts, and seeking to better understand their uses and benefits. It provides additional background on how WASH accounts can support policy-making;
- Summary overview of the methodology. This rapid overview of the methodology can be used by countries interested in applying the methodology, and by national stakeholders participating in elements of the process. This might include those providing data or receiving results, but who do not require in-depth knowledge of the entire methodology;
- A brief presenting the summary findings of the pilot exercises carried out in Brazil, Ghana, and Morocco. This covers lessons learned and provides an overview of the main results;
- Summary results of the TrackFin Initiative in the three pilot countries, with associated Powerpoint presentations;
- Standard Terms of Reference for the TrackFin champion and Focal Point, the national stakeholder group and the WASH accounts team;
- Outlines for the WASH accounts interim and final reports and executive summary; and
- A questionnaire designed to provide feedback on the methodology and any points for future methodological developments identified during the process.

1 Step 1 – Get started

Step 1 – Tasks to be undertaken

- Mobilize political support for WASH accounts
  - Mobilize support from high level members of government
  - Identify a country champion and a national TrackFin Focal Point
  - Convene a national level stakeholder group to oversee data collection and provide political support to the project
- Set up a strong WASH accounts team backed by national institutions
- Identify the overall scope and key policy questions for WASH accounts
  - Organize a start-up meeting with members of the national level stakeholder group
  - Agree on a list of priority policy questions that the exercise aims to answer
  - Define a time period over which to gather information (2 to 3 years is optimal)
  - Agree on the geographic scope of the exercise and the level of geographic disaggregation
- Identify data requirements and plan the work
  - Identify available data and define a data collection plan
  - Develop a detailed budget and work plan for data collection and analysis

1.1 Mobilize political support for WASH accounts

The production of WASH accounts will most benefit countries if the outputs are ultimately used by policy-makers and sector stakeholders. The preparation of WASH accounts should, therefore, only take place in response to a clearly expressed policy demand.

The first step consists of mobilizing support for the preparation of WASH accounts from high level members of the government, such as the ministries in charge of WASH services or the Ministry of Finance. This is essential to ensure the success of the exercise, and to overcome potential technical difficulties such as limited availability of information, weak information systems, or internal barriers to greater transparency.

To that end, a champion for TrackFin within the ministries in charge of WASH needs to be identified. This person will lead the exercise, and will designate a TrackFin Focal Point responsible for establishing the WASH accounts team and overseeing the WASH accounts process (see Step 1.2 below). The champion is typically someone who has expressed the government's intention to carry out the TrackFin initiative, either directly or in response to an invitation from the WHO TrackFin Secretariat or another agency.

The champion will be responsible for obtaining support for the preparation of WASH accounts at the highest level of government. He/she will have clearly explained the expected benefits of undertaking the exercise to policy-makers in relevant sectors, such as the ministries in charge of WASH services, the Ministry of Finance, and the National Statistics Office.

Policy Note: How can WASH accounts support policy-making? This note sets out the potential benefits of WASH accounts for decision-makers in more detail. It is essential reading for any country currently considering whether to develop WASH accounts, and seeking to better understand their uses and benefits. It is available on the TrackFin website.

The TrackFin champion should then convene a national stakeholder group to oversee the production of the accounts. This group is responsible for appointing the TrackFin Focal Point and the WASH accounts team. The group will identify the policy questions that the WASH accounts aim to answer, define their scope, facilitate data collection, review outputs, and provide feedback to the Focal Point at critical moments of the analysis. Ideally, the TrackFin champion should chair the national stakeholder group.

The national stakeholder group is central to the process. It provides the political support required and can help to ensure the participation of key stakeholders with data required for the compilation of the WASH accounts. It also

serves to strengthen links between the policy process and WASH accounts, institutionalizing their preparation so that the exercise can be repeated on a regular basis.

This national stakeholder group can be established at different levels. It might include a TrackFin Steering Committee established at the decision-making level, as was the case in Morocco (see Box 2 – Piloting TrackFin in Morocco: The role of the Steering Committee below). It could also comprise a broader stakeholder group, including all parties likely to provide data for the exercise and to utilize the results. Final decisions on the national stakeholder group will depend on the number of institutions involved in the exercise and the level of engagement required to secure participation of key institutional actors.

The national stakeholder group should ideally include representatives of the ministries in charge of WASH services, the Ministry of Finance, and the Department of Statistics, as well as of the main utilities, regulators, donors, NGOs and foundations active in the WASH sector. To the extent possible, the group should build on existing country-level WASH sector coordination platforms.

Box 2. Piloting TrackFin in Morocco: The role of the Steering Committee

In Morocco, the International Water and Sanitation Institute (IEA) housed in the National Office for Electricity and Water (ONEE) acted as the TrackFin Focal Point for the production of WASH accounts in 2014. To gain high level engagement with TrackFin's objectives from all sector institutions, IEA set up a Steering Committee at the director level. This proved critical to gaining support and facilitating data collection.

The Steering Committee was composed of directors from all key institutions, including the Ministry of Energy, Mines, Water and Environment, the Ministry of Health, the Ministry of the Interior, the Ministry of Finance, the Ministry of General Affairs and Governance, the High Commission for Planning, ONEE and IEA. In addition, a technical committee was set up with members of the same institutions in order to provide advice to the WASH accounts team on methodological and data collection aspects.

Morocco benefited from having strong stakeholder involvement from the outset. The strong links between IEA and national sector stakeholders was very beneficial in setting up such high level coordination. This meant that the WASH accounts team could collect information rapidly and was able to complete the exercise in five months.

Standard TORs for the TrackFin champion and the TrackFin Focal Point, as well as for the national stakeholder group, can be found on the TrackFin website. In addition, a package of information on TrackFin and WASH accounts (based on resources available on the TrackFin website) should be provided for dissemination to high level government members and key sector stakeholders. This will raise awareness about the benefits of tracking WASH financing and how the outputs can be used for policy.

1.2 Set up a strong WASH accounts team backed by institutions

The Focal Point's role is to organize and coordinate the WASH accounts team. This team will collect and analyse the data, and prepare all the outputs. As the Focal Point reports to the champion, he or she would preferably be a staff member of the ministry principally in charge of WASH services. Alternatively, the Focal Point could be hosted by a well-established public policy or research institution.

The WASH accounts team should ideally comprise a relatively small number of people with a diverse and complementary range of expertise, including technical and policy experts from the WASH sector and representatives of the National Statistics Office. They will require good analytical and communication skills. Some members of the WASH accounts team should preferably be government personnel, to ensure capacity building at the national level and country ownership of the exercise. This team can either carry out the work itself or obtain the support of a national consultant, who would then form an integral part of the WASH accounts team. This was the case in the Brazil pilot exercise (see Box 3 below).

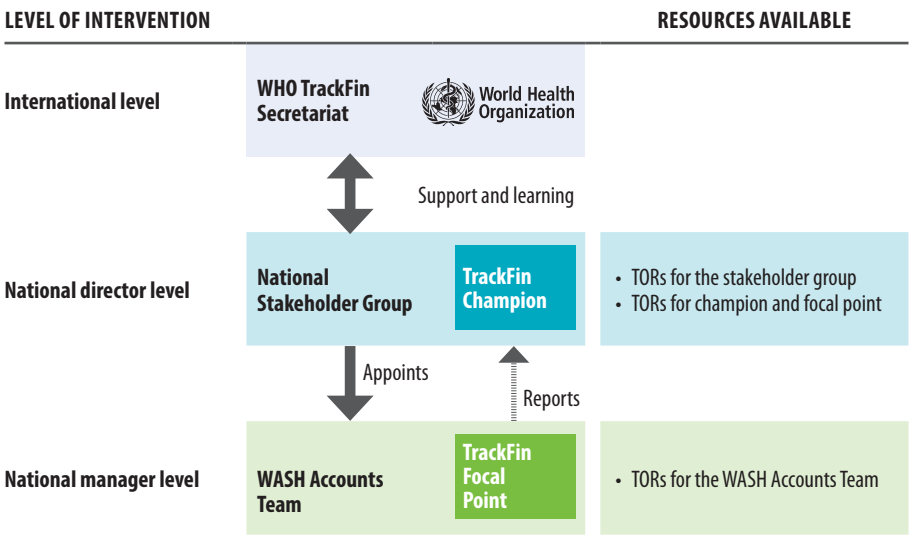
Relying on external consultants may seem to be an effective way of ensuring that public sector employees are not diverted from their day-to-day responsibilities, particularly as data collection should ideally take place within a short timeframe. This approach does, however, require consultants to maintain close contact with the WASH

accounts team in order to minimize any risk that skills and expertise developed in the process accrue only to the consultant and are not institutionalized for national benefit.

The WASH accounts team should be briefed by the Focal Point, and if necessary by the TrackFin Secretariat. The latter can also be contacted for on-going quality control, and for assistance with implementation of the methodology.

Fig. 2 below summarizes the organizational arrangements necessary for the preparation of WASH accounts, and the Terms of Reference required at each level of intervention.

Figure 2. Organizational arrangements for developing WASH accounts under the TrackFin initiative



Box 3. Examples of organizational arrangements from TrackFin pilot exercises

In Brazil, the TrackFin champion was the Director of Institutional Coordination from the Ministry of Cities—the main ministry in charge of water and sanitation services. He appointed the manager of the National Sanitation Information System (SNIS), located in the National Secretariat for Environment in the Ministry of Cities, as the Focal Point. The WASH accounts team was composed of a local consultant and a staff member from the National Secretariat for Environment.

In Ghana, the TrackFin champion was the Director for Water from the Ministry of Water Resources, Works and Housing. He appointed a Ministry of Water officer as the Focal Point. The WASH accounts team was led by the local consultant, and received support from the Focal Point.

In Morocco, the TrackFin champion was the Director of the International Institute for Water and Sanitation (IEA), a research and learning institute housed within ONEE, the main provider of water and sanitation services. He appointed his Head of Research and Development as the Focal Point. The WASH accounts team included a local consultant, and received support from a technical committee composed of managers from the IEA, the Ministry of Health, the Ministry of Interior, the High Planning Commissariat, the Ministry of Finance, the Ministry of General Affairs and Governance, and the utility (ONEE). The technical committee, which was specific to Morocco, was conceived as the executive arm of the Steering Committee (see Box 2 – Piloting TrackFin in Morocco: The role of the Steering Committee above).

Recommended standard TORs for the WASH accounts team can be found on the TrackFin website.

1.3 Define WASH accounts' scope and key policy questions

To ensure that outputs serve as evidence for decision-making, WASH accounts must be able to answer questions defined by policy-makers. The Focal Point for the exercise should start by either seeking views independently, or if possible, by organizing a workshop to obtain feedback on the issues set out below. This will help to define the exercise, and provide the basis for drafting more targeted Terms of Reference for the WASH accounts team (see Step 1.4 for more detail).

As a minimum, WASH accounts should aim to answer four main questions:

- What is the total expenditure in the sector?
- How are funds distributed among the different WASH services and expenditure types?
- Who pays for WASH services and how much?
- Which entities are the main funding channels for the WASH sector, and what is their share in total spending?

Countries should aim to develop all WASH account tables and indicators required to answer these four basic questions. Beyond national level priorities, this will also be useful for international benchmarking purposes. Ways of using the information are summarized in Box 4 below and discussed in more detail, with relevant examples, in the accompanying Policy Note. The indicators required to answer these questions are specified in Step 3.

Box 4. How can WASH accounts data be used for evidence-based policy-making?

WASH accounts can make a significant contribution to evidence-based policy-making. They can help identify funding needs and priorities, and in the design of a WASH strategy, to plan expenditure at the national level based on agreed priorities. Regular tracking of actual spending on WASH services over time can help monitor the efficiency of these policies and ensure evidence-based funding allocation.

- **Total sector expenditure data** enables the monitoring of funding trends over time, and benchmarking of funding to the WASH sector against other countries or sectors. Information on how WASH expenditure varies over time, and how expenditure compares to that in other countries and sectors can be used to raise awareness of the funding levels required to meet agreed targets. In subsequent stages, data on financial inputs in relation to outputs and outcomes can be used to estimate the cost-effectiveness of sector financing.

- **Information on how WASH sector expenditure** is distributed across regions, urban and rural areas, sub-sectors, services, service providers, and types of expenditure can be used as follows:
  - To identify inequities in the distribution of spending across regions and population groups;
  - To change the allocation of funds to sub-sectors, services, providers and programmes;
  - To plan national WASH policies and strategies; and
  - To monitor policy outcomes and effectiveness.

- **Information on how much is paid for WASH services, and by whom,** can be used as follows:
  - To define financing strategies, such as the use of targeted subsidies or the leveraging of private funds, and to monitor the effectiveness of these strategies over time;
  - To coordinate donor aid and international transfers; and
  - To track commitments and targets expressed in financial terms.

  Data on actual spending on WASH can also be used to track government and donor commitment with respect to sector financing. Several governments have made commitments to the WASH sector at international level. For example, the eThekwini declaration in 2008 committed signatory African countries to establish specific public sector budget allocations for sanitation and hygiene programmes. Compiling this kind of indicator on a consistent, comprehensive and comparable basis is fundamental to tracking the implementation of such commitments. In addition, NGOs and foundations often make significant contributions that are not currently tracked; recording those flows in WASH accounts would facilitate comparison with expenditure by households and government.

- **Information on how funding is channelled, and via which actors,** can provide essential information on who holds the "purse strings" and where influence may be needed to achieve reallocation of spending. For example, local governments often play an important role in channelling funds to local levels. Collecting data on local government spending on WASH can help evaluate the performance of decentralized financing policies.

Countries are free to identify any additional policy questions they need answered; this implies the identification of additional specific indicators. Defining the appropriate level of data disaggregation at the outset is essential if the results are to inform decision-making.

If, for example, regional distribution of spending is an area requiring policy attention, WASH accounts can be designed to analyse the share of WASH expenditure by region or by population group. Information of this kind can be used to identify whether inequities across population groups and regions could be reduced by reassigning public transfers to the most vulnerable areas. Data collection and the production of WASH accounts should, therefore, focus on the issues most critical to the country concerned, thereby also ensuring that the exercise is most cost-effective.

Examples of potential policy questions that WASH accounts can address are found in more detail in the Policy Note, "How can WASH accounts support policy-making?"

Methodological Note No 7: WASH accounts tables and indicators. This contains a list of tables and indicators that can be created to address policy questions. The national stakeholder group and the WASH accounts team should familiarize themselves with these tables prior to starting work.

The policy questions defined will drive the scope of the WASH accounts exercise, and the level of detail required for specific elements of analysis. It is therefore critical to agree on these questions before defining a data collection plan. To that end, the national TrackFin Focal Point should call a start-up meeting with the national level stakeholder group. At this meeting, the participants should agree on a list of priority policy questions and the level of detail required for the analysis. For example, would it be sufficient to collect information separately on water, sanitation and hygiene, or would a more detailed breakdown of spending by type of sanitation service be required?

The WASH accounts team should also define the timeframe for the exercise. With respect to financial flow data, it would be preferable to gather data over a period of at least two to three full financial years, rather than only a single year. To ensure the greatest validity for subsequent policy decisions, the most recent data should be used.

Finally, in order to avoid duplication, the national stakeholder group should identify other related initiatives with which collaboration should be encouraged. Some countries, for example, might be in the process of preparing Water Accounts based on the SEEA-Water methodology (see Box 5 below). If this is the case, the two initiatives should seek to harmonize methodologies to the extent possible, and to collaborate on data collection.

The TrackFin initiative currently tracks financing specifically to water supply, sanitation and hygiene services rather than throughout the broader water sector. WASH accounts can therefore be seen as a sub-set of the broader Water Accounts based on SEEA-Water. As the latter may prove somewhat complex for water sector professionals to use, it would be advisable to identify what stage of development the Water Accounts have reached, and whether common terminology can be established. The Water Accounts, for example, use public accountancy terms from the 2008 System of National Accounts (SNA).

In the countries where TrackFin was piloted, however, the development of SEEA-Water accounts was still at a relatively early stage of development. In Brazil, Water Accounts are under preparation, but the focus so far has been on tracking hydrological flows; tracking financial flows is not envisaged for several more years. Coordination between the two initiatives was sought, but opportunities to exchange information were limited due to mismatched timing.

Box 5. The System of Environmental-Economic Accounting for Water (SEEA-Water)

The System of Environmental-Economic Accounting for Water (SEEA-Water) prepared by the UN Statistics Division (United Nations Statistics Division, 2012) provides a conceptual framework for organizing hydrological and economic information in a coherent and consistent manner, thus overcoming the tendency to divide issues along disciplinary lines. SEEA-Water is a potentially important tool for policy-makers, as it provides them with indicators to monitor the interaction between the environment and the economy, a database to guide decision-making on sustainable development paths, and appropriate policy instruments for implementing them.

SEEA-Water is based on the 2003 System of Environmental and Economic Accounting (SEEA) and was further elaborated to reflect the 2008 System of National Accounts (SNA). In 2007, the SEEA-Water framework was adopted as an international standard by the UN Statistical Commission, and countries were encouraged to implement it. In 2010, the International Recommendations for Water Statistics (United Nations Statistics Division, 2012) were adopted to assist countries in the implementation of SEEA-Water.

For ease of application, SEEA-Water has been divided into four areas of policy application, presented in Fig. 3 below. WASH accounts are linked to the first quadrant, "Improving drinking-water and sanitation services".

Figure 3. WASH accounts in relation to SEEA-Water Accounts

The SEEA-Water framework comprises five categories of accounts:

- Category 1: Physical supply and use tables describing the flows of water from the environment within the economy and back to the environment;
- Category 2: Emission accounts describing the quantity of pollutants added to water as a result of production and consumption;
- Category 3: Hybrid and economic accounts linking the physical accounts with monetary information from the national accounts, disaggregated for water and sanitation;
- Category 4: Water asset accounts; and
- Category 5: Quality accounts describing the quality of water and changes in quality; these accounts are still experimental.

Of these, Category 3 (hybrid and economic accounts) is particularly relevant to tracking national financial flows to water and sanitation services as it aligns physical information with monetary information on supply and use. Referred to as "hybrid" because they combine different types of measurement units, these accounts can compare physical quantities with the corresponding economic flows. They include information on the various costs associated with water supply and use, such as water abstraction, purification, distribution and wastewater treatment. They also provide information on financing—for example, the amount users pay for wastewater treatment services, and the extent to which these services are subsidized by government or other entities. Information of this kind can assist official decision-making on cost recovery and water allocation policies, and can be used in economic models to evaluate the potential costs and benefits of creating new infrastructure.

Hybrid and economic accounts can provide data on the following:

- The costs of water supply and use;
- The income generated by the production of services;
- Investment in water-related infrastructure and the relevant maintenance costs; and
- The user fees paid for water-related services, as well as subsidies received.

To date, more than 50 countries have expressed an interest in compiling national environmental-economic accounting for water following the SEEA-Water framework. These are principally developed countries (European Union countries and Australia), but some developing countries are also starting to adopt the framework. These include Algeria, Bolivia (Plurinational State of), Botswana, Brazil, Colombia, Dominican Republic, Ecuador, Egypt, Jordan, Lebanon, Mauritania, Mauritius, Mexico, Morocco, Namibia, Panama, South Africa, Tunisia, West Bank and Gaza Strip, and Zimbabwe. At the national level, SEEA-Water is being implemented on a step-by-step basis. Only a small number of countries have been able to develop a complete set of Water Accounts comprising both physical and monetary data. The UN Statistics Division is encouraging countries to use this system of accounts by organizing regional workshops and capacity-building activities. Other institutions, such as the World Bank are providing financial support, in particular through the WAVES partnership.[1]

[1] WAVES: Wealth Accounting and the Valuation of Ecosystem Services. Link: http://www.wavespartnership.org/en

1.4 Identify data requirements and plan the work

Following the identification of policy needs, the Focal Point should draw up tailored Terms of Reference for the production of WASH accounts. These Terms of Reference should reflect the country context, existing knowledge about data availability, and the policy questions identified. The WASH accounts team should then carry out preliminary work to assemble available information, identifying data gaps and key issues in relation to the specific country context. They will also identify potential data collection strategies and estimation methods to address gaps and weaknesses, and present them at a national-level workshop to be attended by all members of the national stakeholder group, together with a broader range of relevant actors if feasible.

1.4.1 Identify available data and define a data collection plan

Before launching the inception phase, the team needs to familiarize itself with the methodology. Step 2 in particular, and the associated methodological notes, present the type of data required and potential data sources.

To keep the costs of the exercise down, countries should start by identifying relevant data already available through existing reports and information systems. Examples of potential documentation appear in Box 6 below. If data are not available, the team should identify a strategy for collecting or estimating the missing data.

Data availability is likely to be a key constraint. The WASH accounts team should therefore initially aim for optimum accuracy within this constraint. In some cases, it might be necessary to collect primary data, particularly for the costs of certain services such as informal providers, or certain financial flows such as household investment in on-site sanitation. These are unlikely to be routinely collected. When new surveys are not possible, or are too expensive, formulating assumptions to derive initial estimates will be necessary, even if these assumptions are approximate.

Step 2 of this Guidance Document proposes ways forward on specific data issues. As collecting new data has budgetary implications, these should be taken into account from the start. It is also important to consider trade-offs between different methods of data collection.

Box 6. Examples of existing information

- Household surveys, for example UNICEF's Multi Indicator Cluster Surveys (MICS)
- Access data from the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP)
- GLAAS reports and survey responses
- Information on the water sector from National Statistics Offices
- The World Bank Water Sanitation Programme's Country Status Overviews (sub-Saharan Africa only)
- Poverty Reduction Strategy Paper (PRSP) documents and planned poverty reduction expenditure
- Medium Term Expenditure Frameworks
- National sector plans and policies
- National budgets
- Local government budgets (for decentralized WASH sectors, for a sample of localities)
- Utilities' financial accounts
- Sector financing reports produced by the sector regulator (where these exist)
- OECD Creditor Reporting System and data from the Development Assistance Committee (DAC) database
- SWA Aid Effectiveness Working Group and Country Processes Working Group documentation
- Data from the IBNET database on water and sewerage utilities performance
- UN-Water Country Briefs
- World Bank Public Expenditure Reviews (PERs)
- Relevant studies of the United Nations Economic Commissions
- Africa Infrastructure Country Diagnostic studies
- WASH sector reports
- Project-specific documentation
- Reports on decentralization processes
- Benchmarking reports from utility associations, governments (for example Brazil or India) or regulators (for example Kenya or Mozambique)

Where there has already been some analysis of the WASH financing system, country profiles and reports on different segments of the system may indicate other data sources. The WASH accounts team should interview key informants in stakeholder institutions to identify the extent of data availability within those organizations. With respect to private operators and non-profit organizations, it will be important to seek out umbrella organizations such as NGOs and industrial associations, as these may have some consolidated information on their activities. International organizations should be contacted as they may have databases complementing or extending national sources, particularly on international aid issues.

Potential challenge: Alignment with National Statistics Office (NSO) systems

When identifying data sources, the WASH accounts team should assess the extent to which NSOs already collect financial data from the WASH sector at a level of detail permitting conclusions to be drawn for policy definition. It would be preferable to align with the NSO's classification system to facilitate integration further down the line, but this may not always be possible.

- If NSOs collect data on WASH, it is important to work with them to identify how this data can be extracted and used by sector actors. This will ensure that the data collection exercise is embedded in national systems and can be repeated at minimal cost. A key area of coordination will be to identify how NSOs and sector stakeholders can work together on WASH policy needs to produce data at the most appropriate level of disaggregation. WASH sector stakeholders can also learn from NSOs on data collection methods.
- If WASH statistical data are insufficiently detailed, either because NSOs are performing poorly, or they do not collect data from a comprehensive set of WASH service providers, it will be necessary to initiate a sector-level data collection process.

1.4.2 Develop a detailed budget and work plan

Once all available information has been mapped, the WASH accounts team should prepare an inception report. This will contain a work plan and detailed budget for producing WASH accounts. Recommended content for this report is presented in Box 7 below.

Box 7. Key points to cover in the inception report

The inception report should contain the following information:

- Overview of the institutional arrangements established to manage TrackFin in the country
- Summary of key results from the review of documentation available on WASH sector financing
- Summary of discussions held at the inception meetings and the national stakeholder group start-up meeting, including:
  - Definition of the scope of the exercise in terms of duration (number of years of data collection) and geographic area
  - Identification of the key policy questions drawn up by the national stakeholder group
- A detailed workplan and associated budget

Annexes should include the minutes of the start-up meeting, a list of members of the national stakeholder group and the WASH accounts team with their Terms of Reference, and the list of wider sector stakeholders with their contact information.

The inception report should be approved by the national level stakeholder group or by the TrackFin champion. The work should start with reasonable expectations in terms of the detail and complexity of the information produced, and the intention to improve it over time. The WASH accounts team and the national stakeholder group should agree on a realistic budget, taking into account the potential challenges indicated below.

Potential challenge: Defining a budget and workplan for WASH accounts

- WASH accounts should ideally cover the whole country, but could include detailed information for specific regions only, with data for other regions based on extrapolation. If there are substantial discrepancies between geographic areas, regions should be classified into types and data should be obtained from at least one region from each type, to provide an adequate basis for representative extrapolation.
- If answering a key policy question requires disaggregation of data by region, the team should check the geographic boundaries of different data sources. Some organizations might aggregate data based on water basins, while others may use municipal boundaries. It would require significant work to reconcile differing geographic boundaries—probably requiring estimations and triangulation.
- Depending on how the WASH sector is organized, data collection may need to be conducted separately in each sub-sector. In a developing country, the service provision and financing arrangements for urban water, urban sanitation, rural water and rural sanitation tend to differ. Hence each of the four sub-sectors should be considered separately, and the analysis may therefore need to be repeated in each, even though the methodological tools and approaches remain the same.

Potential challenge: Contracting consultancy support for the WASH accounts team

The timing of consultancy support can be difficult to handle and may vary between countries. The detailed scope and budget for the TrackFin exercise—and thus the budget for consultant assistance—will only be known when the inception phase has been completed (after Step 1.4). Ideally, the consultant should be involved from the outset. One potential solution is to prepare a flexible contract, agreeing on a fee rate and a number of workdays. The contract can then be amended and refined at the end of the inception stage to reflect any variation in scope.

2 Step 2 – Collect data

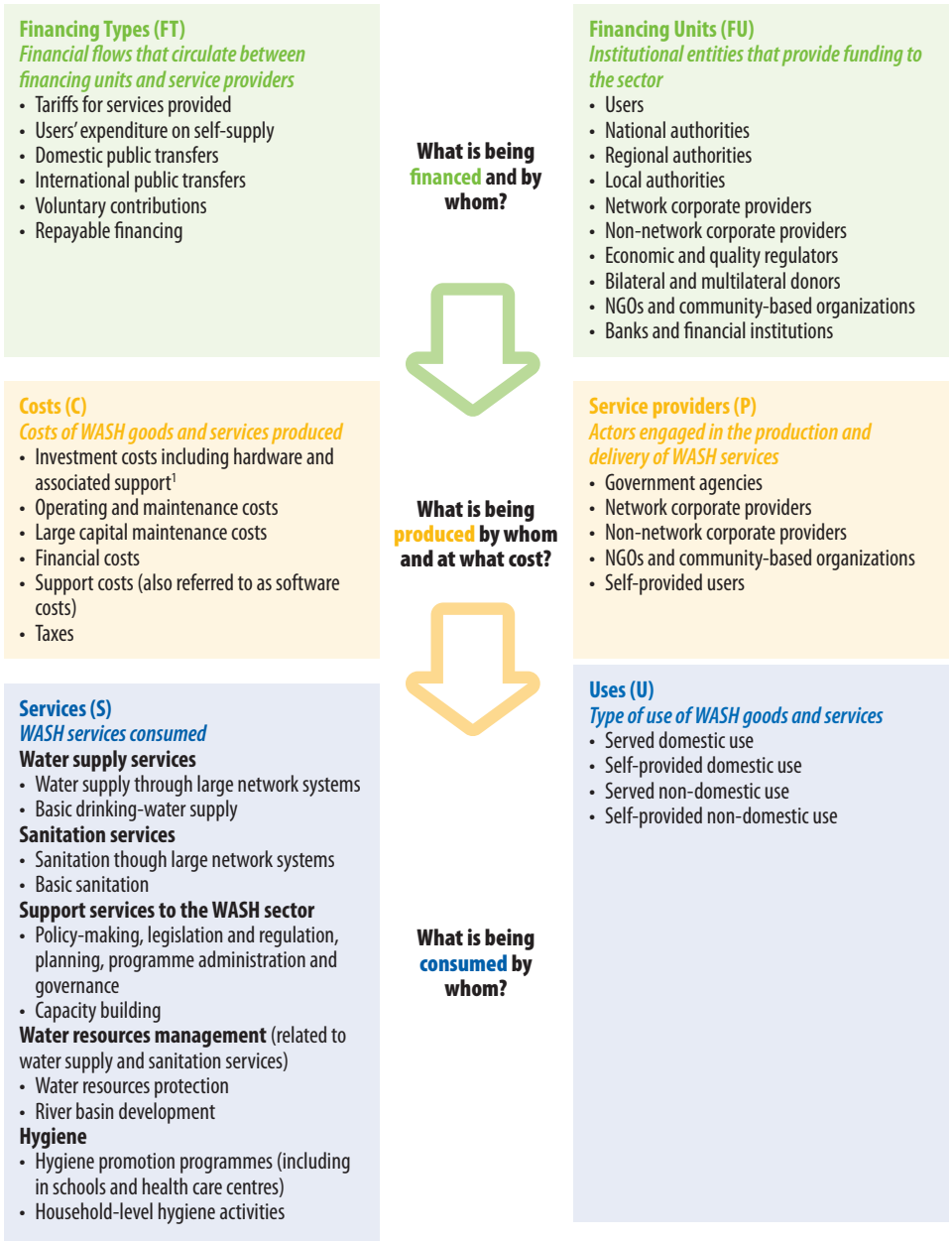
This section sets out in more detail the framework for preparing WASH accounts. Its purpose is to serve as a practical guide for identifying, collecting and classifying financial data.

To define the data collection plan, the WASH accounts team must be in a position to answer three main questions:

- What WASH services are consumed and by whom?
- How are these services provided and by whom?
- How much do these services cost and how are they financed?

Fig. 4 below draws on a figure developed for the SHA. It presents the main "dimensions" to examine in tracking financing to the WASH sector at the national level. These dimensions are the main classifications used to create WASH accounts.

Figure 4. Mapping financial flows based on consumption, production and financing types



[1] Initial capital costs of putting new services in place, including 'hardware' such as pipes, toilets and pumps, and one-off support or 'software' costs, such as for detailed design/engineering studies or associated training and consultation.

Using this framework, the following sections provide more detail on data collection for WASH accounts. They provide guidance on issues such as:

- Step 2.1: Defining the boundaries of the WASH sector, i.e. defining which services are included
- Step 2.2: Mapping service provision arrangements and financial flows
- Step 2.3: Collecting data on financial flows and fixed asset stocks

2.1 Define WASH sector boundaries in terms of services

The WASH accounts team should start by defining the boundaries of the WASH sector based on a list of potential services to be included in WASH accounts. This will be done through the tasks outlined below.

Step 2.1 – Tasks to be undertaken

- Become familiar with the classification of WASH services proposed in the Guidance Document and understand the rationale behind this classification;
- Identify the classifications and categories of WASH services used in the country's information systems, and the type of activities they include;
- Analyse similarities and differences with the classification proposed in the Guidance Document (see Table 1 and Table 6 – Similarities between CPC, ISIC and COFOG classifications along the water and sanitation value chain below) to establish whether the same categories can be used, and whether data are collected on this basis;
- Identify the WASH services for which expenditure will be reported in WASH accounts;
- State very clearly which activities are included or excluded under each category of WASH services; and
- Collect data according to these categories where possible, or based on aggregated categories (for example, water supply services, sanitation services, construction services, support services).

2.1.1 Rationale

Adopting and using a common classification of products, services and activities relevant to the WASH sector is essential. The definition of the WASH sector often varies from one country to another, so it is critical to clarify what is included or excluded in the country concerned.[1]

Defining WASH sector boundaries is essential for a number of reasons:

- To identify the list of products and services for which costs and financing types will be tracked through WASH accounts: These products and services may be produced jointly with other water services. For example, some water supply companies may also be involved in managing water resources up-stream, or managing irrigation schemes for agricultural purposes. Other services may be seen as going hand-in-hand with the provision of WASH services, such as solid waste management, whereas other countries typically do not include solid waste management in the definition of sanitation services. Many countries also have difficulties in defining hygiene, and most do not comprehensively track WASH-related hygiene services.

- To help ensure data consistency across different countries: The standard list proposed in this document can help countries identify the services that should be included, for example downstream sludge management, and others that should be excluded – such as building dams mainly for hydropower generation. If services they need to include are not part of this standard list, because data is tracked jointly with other WASH services in their national systems, these should be clearly identified so that the reason for differences across countries can be understood.

- To define service categories within the WASH sector for which financing should be tracked separately: This is required to evaluate whether financing is currently being allocated to the most appropriate services or products. For the first round of WASH accounts, it may only be feasible to disaggregate financial flows for a limited number or type of services. At the very least, however, disaggregation between water and sanitation services should be shown. A long-term methodological objective is to show financial allocation to a variety of service categories, including hygiene, to create a more detailed and in-depth analysis.

[1] The TrackFin initiative currently focuses on tracking financing to water supply, sanitation and hygiene services rather than the broader water sector. The standard list of services provided here therefore concentrates on these services. The list could potentially be expanded at a later stage, should the initiative take on a broader scope.

Learning from the health sector

The System of Health Accounts (OECD, 2011) defines the boundaries of health care activities from an international perspective, based on the functions of health care. Health expenditure is included in Health Accounts based on the following four elements:

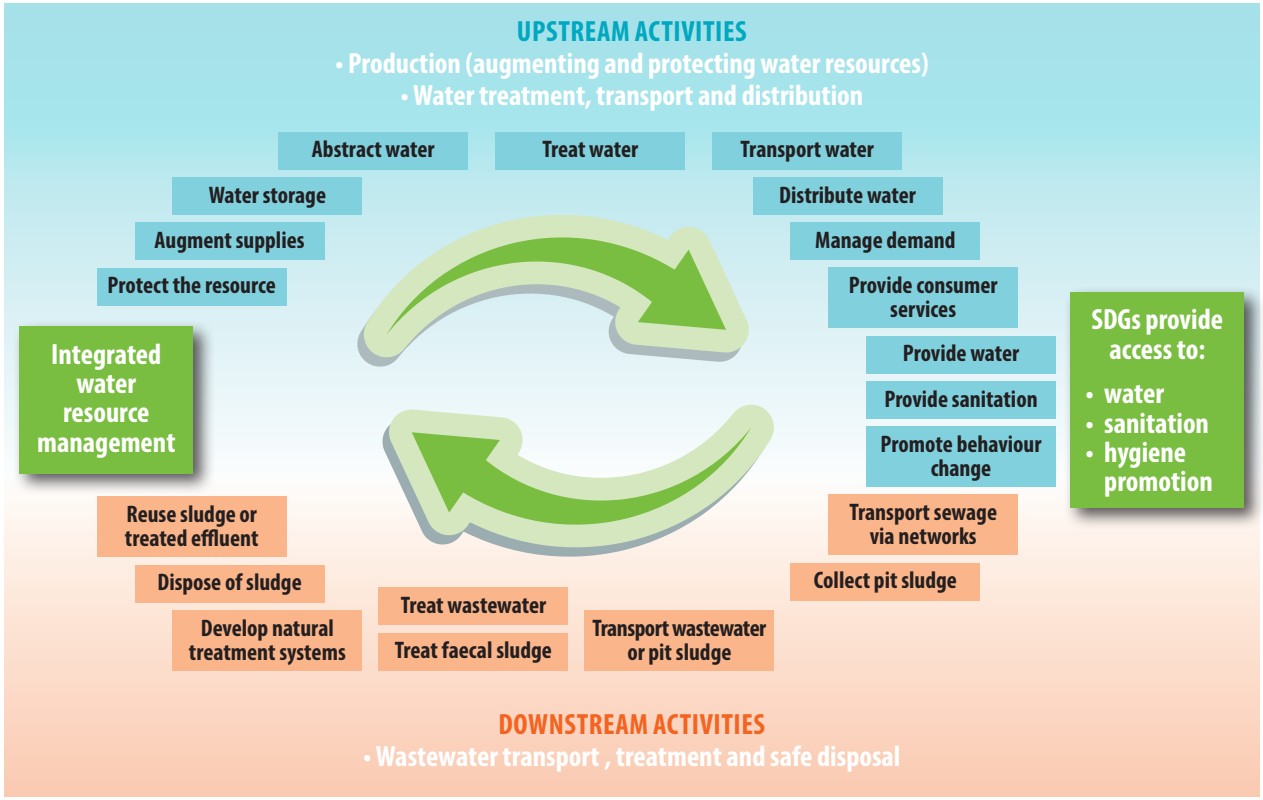
a) A transaction
b) Which is linked to an individual's consumption
c) Whose primary purpose is health. The purpose of the spending determines the health care functions. This is defined as "the type of need that the transaction aims to satisfy or the kind of objective pursued"
d) Which involves the application of qualified health knowledge, directly or through supervision.

Activities included in the boundaries of the Health Accounts are those that aim to *"improve, maintain and prevent the deterioration of the health status of persons and mitigating the consequences of ill-health through the application of qualified health knowledge".* Based on these criteria, health activities are classified into seven main categories of health care functions, which are themselves sub-divided into a total of 36 categories. These seven are: health promotion and prevention; diagnosis, treatment, cure and rehabilitation of illness; caring for persons affected by chronic illness; caring for persons with health-related impairment and disability; palliative care; providing community health programmes; and governance and administration of the health system. Countries choose what they can classify based on the nature of their national health statistical systems, the data available, and their ability to link an accounting framework to their classification.

2.1.2 TrackFin classification of WASH services

Broadly defined, the WASH sector refers to the provision of water, sanitation and hygiene services. However, providing access to water and sanitation is only a subset of the services needed to manage the water and sanitation cycle sustainably while meeting the needs of all users. Fig. 5 below shows the WASH services required, beyond access, in order to ensure sustainability. This approach is reflected in the Sustainable Development Goals (SDGs), which require a broader set of WASH services to be monitored, both upstream and downstream. Whether or not these services are available depends on the level of development of the water sector in a given country. In most developing countries, it is unlikely. Where providing access is a priority, for example, wastewater collection and treatment services are often very limited, but should become more prevalent through implementation of the SDGs.

Figure 5. The value chain of WASH services under the Sustainable Development Goals (SDGs)



Source: Adapted from "Benefits of investing in water and sanitation: An OECD Perspective" (OECD, 2011), p.31.

To support this broader approach and ensure that the overall WASH sector is operating adequately, additional functions such as planning, management and coordination functions will need to be carried out at ministerial level (or at regional level, in the case of federal systems).

The TrackFin classification of WASH goods and service presented in Table 1 below covers the services required for sustainable provision of water and sanitation. The table lists the broad categories of services, activities included under those services, and for easy reference, the ISIC reference from the System of National Accounts. Its value is in clarifying the boundaries of the WASH sector at the national level and identifying the activities to be included or excluded when preparing WASH accounts.

Table 1. TrackFin classification of WASH goods and services

Code	Category	Activities included		Included in
S1	Water supply services	Water supply through large network systems	• Collection of rain water and water from various sources such as rivers, lakes, wells • Purification of water for water supply purposes, desalination of sea/groundwater by treatment plants • Storage of water • Large scale transport/conveyance of water via pipelines • Distribution of water through mains (includes water pumping and transport via local water networks) • Management of water connections and consumer support activities	ISIC 36
		Basic drinking-water supply	• Collection of rain water and water from various sources (rivers, lakes, wells) using hand-pumps, spring catchments, gravity-fed systems, rainwater collection and fog harvesting • Storage of water in tanks • Distribution of water through small distribution systems (pipes, wells or trucks) or local neighbourhood networks typically with shared connections/points of use • Management of water access points and consumer support activities	
S2	Sanitation services[1]	Sanitation though large network systems	• Construction of sanitation facilities in households and communities and connection to large sewage systems • Collection of sewage by large scale sewer systems including trunk sewers, sewage pumping stations, and drains • Sewage treatment and disposal, including residual sludge disposal	ISIC 37
		Basic sanitation	• Promotion of sanitation, including demand promotion and sanitation marketing (excluding hygiene promotion if that can be disaggregated) • Construction of basic sanitation facilities in households and communities (latrines, septic systems) • Collection and transport of sludge from onsite facilities (pit emptying and cleaning services) • Treatment and disposal of sludge by faecal sludge treatment facilities	
S3	Support services to the WASH sector		• Water and sanitation sector policy-making and governance, including: – Development of sector policies – Legislation: Definition and enforcement of drinking-water and discharge standards for municipal wastewater – Regulation of water and sanitation supply activities and service providers – Sector planning, including estimating future sector financial needs – Administration of water and sanitation programmes • Capacity building in water supply and sanitation	ISIC 8412
S4	Water resources management (which relate to water and sanitation services)	Water resources protection	• Collection and use of quantitative and qualitative data on water resources • Creation and sharing of water knowledge • Conservation and rehabilitation of inland surface waters (rivers, lakes), ground water and coastal waters • Prevention of water contamination	No existing category
		River basin development	• Integrated river basin projects and related institutional activities; river flow control; dams and reservoirs	
S5	Hygiene services	Hygiene promotion	• Hygiene promotion programmes by government or service providers, including handwashing campaigns, menstrual hygiene management and chlorine distribution	No existing category
		Household-level hygiene activities	• Handwashing, bathing, washing clothes and washing material/equipment (soap, tippy taps, bathrooms) • Point-of-use water treatment.	

[1] Although solid waste is not a standard category in WASH accounts, a country might decide to include solid waste as part of TrackFin for a specific purpose. In this case, solid waste should NOT be included under S2. A new category should be created for solid waste.

There are a number of potential challenges in seeking to apply this classification.

Potential challenge: Defining WASH sector boundaries

- **Water resource management activities do not typically fall under the existing definition of WASH services.** Some of these activities are, however, implemented by water service providers and are essential for the sustainable provision of such services. Where possible, water resource management activities directly relevant to water and sanitation service provision should be included in the scope of the WASH accounts. Broader water resource management activities, such as the construction of dams for irrigation purposes, should be excluded.
- **Defining hygiene services.** There is no internationally agreed definition for hygiene, and none of the existing international classifications identifies water and sanitation-related hygiene services as a specific product or service category. As a result, hygiene can mean very different things in different countries, which reduces comparability. Given the importance of hygiene in the SDGs, however, and the need to prioritize these activities, it is critical to define and track them as a separate category.

Methodological Note No 1: WASH services classification systems provides additional detail on existing international classifications (with a particular focus on Central Product Classification (CPC), International Standard Industrial Classification of All Economic Activities (ISIC) and Classification of the Functions of Government (COFOG) that were used as a basis for developing the WASH service categories presented in Table 1 above. This note explains how they work and where gaps need to be filled. It makes recommendations for the development of a more comprehensive classification of WASH services, particularly with respect to hygiene services.

2.1.3 Tasks to be undertaken

The WASH accounts team should identify those services and activities that fall into the WASH sector definition.

To the extent possible, data should be collected based on the TrackFin classification in order to facilitate comparison. The team should identify classifications of WASH services already in use in the country, and identify the extent to which these correspond to the TrackFin classification. It should then clearly set out how the classification for the WASH accounts was derived, and the extent to which it aligns with the TrackFin classification.

Countries may also need to introduce further disaggregation for certain categories to reflect their own policy needs. For example, a country with a significant investment backlog in the area of rural sanitation may choose to adopt a higher level of disaggregation for these services; a country wishing to track funding to different types of sanitation services could define sub-categories for that purpose.

In the first instance, it is unlikely that countries will be able to report financial information on sub-categories for all these services separately. Countries should attempt to report at least on financing to the high level categories of services such as water, sanitation and hygiene. Initially, however, even that level of detail may be challenging, particularly for hygiene, as described in the box below.

Potential challenge: Tracking expenditure to hygiene activities

- Funding for hygiene activities is difficult to separate from funding to broader water and sanitation services, as these services are commonly provided jointly. This is particularly problematic when dealing with large WASH programme expenditure, for which detailed data on activity spending is difficult to obtain. In this case, the WASH accounts team should conduct interviews with programme managers in order to estimate the percentage of total spending that goes to hygiene activities. They should also identify specific hygiene programmes, in particular those conducted by the Ministry of Health.

2.2 Map service provision arrangements and financial flows

The team should then identify the main WASH sector actors and the financial flows between them.

Step 2.2 – Tasks to be undertaken

- Gain familiarity with the TrackFin classifications of WASH uses, actors and financing types, and understand the rationale behind them;
- At country level, identify and classify WASH uses, actors and financing types
  - On the basis of data gathered in Step 1.4, identify the classifications of WASH uses, actors and financing types used in the country
  - Analyse similarities to and differences from the TrackFin classifications, and chart areas where the terminology corresponds
  - Define the classifications that will be used to create WASH accounts; and
- Map WASH sector financing based on these classifications
  - Represent the WASH sector actors and financing types separately for each of the four sub-sectors as appropriate to the country context.

2.2.1 Rationale

Identifying the main WASH sector actors and the financial flows circulating between them is essential to understanding what data needs to be obtained and from where. Making a graphic representation of financial flows, as shown in Fig. 6 below, can facilitate this process, ensuring that all actors and flows are recorded. It also assists in communicating the results.

All countries should preferably use an identical or similar classification system for WASH sector actors and financial flows. This will facilitate international comparison and ensure that the information produced is consistent. At present, there is no standard classification of WASH sector actors. Country-level statistical offices and WASH sector officials use their own classifications, which vary depending on the structure of the WASH sector.

The proposed TrackFin classification of WASH sector actors and financial flows is sufficiently broad to capture all or most sector organizations. It can be used as a guide to classify WASH uses, actors and financial flows at country level, thus facilitating the production of comparable data. The TrackFin classification is aligned with existing classifications used at the international level, but includes improvements aimed at overcoming certain identified weaknesses.

Methodological Note No 2: Classification of WASH uses, actors and financing types. This note presents the existing internationally accepted systems of classification of WASH uses, actors and financing types that were used as reference points in developing the TrackFin classifications. Classification of WASH service uses, service providers and financing units was adapted from SEEA-Water, while the classification of financing types elaborates on the OECD 3Ts terminology—Tariffs, Taxes and Transfers.

2.2.2 Trackfin classification of WASH uses, actors and financial flows

The proposed classification distinguishes between:

- Use of WASH services, i.e. who is consuming the services and how;
- WASH sector actors, differentiating between WASH service providers and financing units; and
- Financing types, characterized by the origin and the nature of the financial flows.

The TrackFin classification focuses on tracking financial flows by type of use rather than user categories. This is principally because for policy purposes, financial flows should be tracked independently of how users obtain their services.

Table 2 below presents the synthesized TrackFin classification. It encompasses all definitions for WASH sector actors, financing sources, and WASH service uses required by the proposed methodology. Further explanation is given in the text following the table.

Table 2. TrackFin classifications for WASH service use, WASH sector actors, and financing types

Code	Category	Definition
U: Uses of WASH services		**Types of use of WASH goods and services**
U1	Served domestic use	Household consumption through service providers, paid via a tariff. Includes water supply to households connected to the water and/or sewerage network, but also water taken from a public standpipe or obtained through other providers such as water tankers.
U2	Self-provided domestic use	Household consumption of self-provided water and sanitation services. Users pay an up-front initial investment (in a well or private latrine) for access to the service, and then cover operating and maintenance costs themselves.
U3	Served non-domestic use	Consumption by non-domestic users through purchase of water and sanitation from a service provider. This includes institutional users (government agencies such as ministries, hospitals, schools), voluntary organizations such as NGOs or community-based organizations (CBOs), foundations, and industrial and commercial users. The service providers are paid via a tariff. This category can be further disaggregated into two sub-categories: U3.1 Served institutional use, and U3.2 Served industrial and commercial use.
U4	Self-provided non-domestic use	Consumption of self-provided water and sanitation services by non-domestic users. This includes institutional users such as government agencies, ministries, hospitals, schools, voluntary organizations such as NGOs and CBOs, foundations, and industrial and commercial users. Users make an up-front initial investment for access to the service and then cover operating and maintenance costs themselves. This category can be further disaggregated into two sub-categories: U4.1 Self-supplied institutional use, and U4.2 Self-supplied industrial and commercial use.
P: WASH service providers		**Actors engaged in the production and delivery of WASH services, including government institutions that provide support**
P1	Government agencies	Government providers including public agencies such as ministries, hospitals, or schools, as well as self-providing municipalities (i.e. those operating the service directly rather than through a corporate entity). This would include government institutions providing support services to the sector in domains such as policy-making, planning, or regulation. This category can be further disaggregated into sub-categories such as P1.1 National authorities, P1.2 Regional authorities, and P1.3 Local authorities.
P2	Network corporate providers	Utilities that own and/or operate facilities for production and distribution of water and sanitation services through network systems for the public, as well as for bulk services. They may be either privately or publicly owned, mandated or independent, large, medium or small in size, providing either a public service or self-providing the service for their own use.
P3	Non-network corporate providers	Corporations that provide any small-scale WASH goods (e.g. bottled or sachet water) or services along the value chain through non-network systems. They usually involve low-skilled labour and a low level of initial investment. Taking various organizational forms from cooperatives to private ventures, they may be formal or informal. This category would include estate developers involved in infrastructure construction.
P4	NGOs and community-based organizations (CBOs)	Non-profit organizations seeking to complement WASH public services. They usually have a formal structure and offer services beyond their own membership. In most cases, they are registered with national authorities. CBOs habitually operate within a local area.
P5	Self-provided users	Users providing services themselves. These may be domestic (household) or non-domestic (institutional, industrial or commercial) users. They pay an initial investment up-front for access to a well, private latrine, or a private system, and then cover operating and maintenance costs themselves. This category can be further disaggregated into two sub-categories: P5.1 Domestic self-provided users, and P5.2 Non-domestic self-provided users. Non-domestic self-provided users would include, for example, a mining company or other industry producing water for its own consumption.
FU: Financing units		**Institutional entities that provide funding to the sector. They mobilize funding to pay WASH service providers. They may allocate funds directly to service providers or channel them through other financing units.**
FU1	Users	Households that self-provide services such as on-site sanitation. They either pay up-front through initial investments (in a well or private latrine, for example) or purchase services from a variety of providers including water tankers. This category can be further disaggregated into sub-categories: FU1.1 Served users, FU1.2 Self-supplied users; FU1.1.1 Served domestic users, FU1.1.2 Served non-domestic users, FU1.2.1 Self-supplied domestic users, FU1.2.2 Self-supplied non-domestic users.
FU2	National authorities	Public authorities at central government level, including relevant ministries such as the Ministry of Finance or Ministry of Water, or national institutions.
FU3	Regional authorities	Public authorities operating at the regional level.
FU4	Local authorities	Public bodies operating in a smaller geographic area, such as a city, town, or district.
FU5	Network corporate providers	Utilities that own and/or operate facilities for production and distribution of water and sanitation services through network systems for the public, as well as for bulk services. They may be either privately or publicly owned, mandated or independent, large, medium or small in size, provide a public service or self-provide the service for their own use.
FU6	Non-network corporate providers	Corporations that provide any small-scale WASH goods (e.g. bottled or sachet water) or services along the value chain through non-network systems. They usually involve low-skilled labour and a low level of initial investment. They take various organizational forms from cooperatives to private ventures, and may be formal or informal.
FU7	Economic and quality regulators	Public authority responsible for overall supervision of the WASH sector in areas such as control of tariffs, water quality, and competition throughout the sector.
FU8	Bilateral and multilateral donors	Governments providing official development assistance directly to a country or through multilateral international institutions (UN, World Bank or regional development banks).

Code	Category	Definition
FU9	NGOs and community-based organizations (CBOs)	Non-profit organizations that seek to complement WASH public services. They usually have a formal structure and offer services beyond their own membership. In most cases they are registered with national authorities. CBOs habitually operate within a local area.
FU10	Banks and financial institutions	A financial institution that provides banking services, such as taking deposits and providing credit facilities and loans to individuals and/or small businesses and corporations.
FT: Financing types		**Financial flows between financing units and service providers, characterized by their origin and nature**
FT1	Tariffs for services provided	Payments made by users to service providers for obtaining and using the service. This category can be further disaggregated into two sub-categories: FT1.1 Domestic tariffs for services provided, FT1.2 Non-domestic tariffs for services provided.
FT2	User expenditure on self-supply	Funding provided by users to invest in or provide the service themselves. Self-provided users pay an initial investment up-front to gain access to the service (for example a well, a private water production system, or a private latrine). They then cover all operating and maintenance costs themselves. This can be in form of cash, material or time, but only cash payments are included in WASH accounts. This category can be further disaggregated into two sub-categories: FT2.1 Domestic user expenditure on self-supply, FT2.2 Non-domestic user expenditure on self-supply.
FT3	Domestic public transfers	Public transfers to WASH actors from central or local government agencies. These are often subsidies derived from taxes or other government sources of revenue. Includes grants, but excludes concessionary loans that are included in FT6 Repayable financing.
FT4	International public transfers	Voluntary donations or grants from external public donors and multilateral agencies. Concessionary loans are excluded and covered entirely in FT6 Repayable financing.
FT5	Voluntary contributions	Voluntary donations or grants from international and national non-governmental donors including from charitable foundations, non-governmental organizations (NGOs), civil society organizations and individuals (remittances). Concessionary loans are excluded and covered entirely in FT6 Repayable financing.
FT6	Repayable financing	Sources of finance derived from private or public sources and requiring repayment. Examples are loans (including concessionary loans and guarantees), equity investments, or other financial instruments such as bonds. This category can be divided into 2 sub-categories: FT6.1 Concessionary repayable financing, and FT6.2 Non-concessionary repayable financing.

2.2.2.1 Classification of WASH uses

WASH uses refers to how services are obtained and used.

When differentiating between served and self-provided WASH use, an initial distinction concerns how services are obtained. They may either be self-provided – meaning that users organize their own services – or obtained from a service provider. The TrackFin classification refers to the latter as “served uses”. Many households or industrial users self-provide water and sanitation services, particularly when network services are too expensive or inaccessible, or when network service quality is unsatisfactory for reasons such as unreliable service hours or inadequate quality. In such circumstances industrial users may develop their own water supply. At the level of WASH accounts, it is important to track financial flows for these types of use separately, as “self-provided use” typically indicates users with different socioeconomic characteristics from those in the “served” categories.

TrackFin recommends tracking financial flows by type of use rather than users (i.e. the consumers of WASH goods and services). This is because financial flows have to be tracked independently of how different users obtain or receive services. Indeed, users cannot always be attributed to a single category. Domestic users, for example, may obtain water from multiple sources, including through self-provided sources or different providers. Users may invest in a well, for example, through self-provision but may also pay a tariff for piped water supply. It is therefore difficult to define “user categories” capable of capturing such multiple modes of access to services, although it is essential for WASH accounts to distinguish between financial flows to different types of use.

Types of use also differ according to purpose – principally domestic or non-domestic. Non-domestic purposes include institutional, industrial, agricultural or commercial purposes. As TrackFin is closely linked to the GLAAS report, which tracks overall resource inputs into the sector, it places special emphasis on identifying funding to WASH services for domestic use, schools, and health care facilities, in line with the objectives of the SDGs. The methodology recommends the inclusion of financial flows for all types of use likely to be jointly served, but requires that they be tracked separately. This means that domestic, institutional, commercial and industrial uses would be tracked, but agricultural, hydropower or environmental uses, which tend to be served through separate systems, would not.

2.2.2.2 Classification of WASH actors

WASH sector actors are characterized according to the role they play in the provision and financing of WASH services. Actors are identified as follows:

- Service providers that produce and deliver WASH services; and
- Financing units that collect funds from various sources and transfer them to service providers, potentially via other financing units that pool and distribute the funding, These include households, domestic and foreign governments, private corporations, and non-profit organizations.

Potential challenge: Classifying service providers

- Service providers can be classified in many different ways, depending on their size, type of ownership (private or public, mandated or independent), or status (formal or informal). Because ownership is not necessarily relevant to public policy and is difficult to assign, splitting public and private operators is not recommended. It is also difficult to separate providers according to size. The TrackFin classification therefore focuses on the institutional sector that owns them (government, corporation or household). Corporate providers are simply divided between category P2 Network corporate providers, and P3 Non-network corporate providers, as they are financed differently.
- Depending on policy needs, countries could further disaggregate the TrackFin classification and characterize service providers according to criteria such as public or private, formal or informal, utility size, mandated or independent, and so on. Where corporate providers are self-providing, this could be noted specifically in a sub-category.

Potential challenge: Allocating actors to a single WASH category

- Actors can play different but simultaneous roles in the WASH sector, so allocating them to a single category may be difficult. Households may simultaneously be categorized as both financing units (paying tariffs to a utility) and as self-providers. They may be investing their own resources while also receiving government subsidies. All financial flow information must be recorded and coded appropriately, with a single flow potentially recorded in different ways to reflect this multiplicity of roles.
- Distinguishing between roles as service providers and as financing units: Service providers such as a utility (classified as P2 Network corporate providers) are seen as financing units only if they provide equity to the sector as private investors. They are not considered to be financing units generating funds through tariffs and reallocating these to the sector since they only collect tariffs from users. In this case, therefore, the financing unit is defined as FU1 Users. This issue was discussed during the pilot exercise, where Ghana and Brazil followed the proposed approach, but Morocco preferred to present service providers as a source of tariffs. Examples of how to interpret tables and graphs from WASH accounts using these classifications can be found in the reports by Brazil and Ghana on the pilot phase.

2.2.2.3 Classification of WASH financing types

Financial flows can be characterized according to the nature and origin of the funding. Financing types are differentiated according to their origin. Sector funding may come from either private or public sources. Private sources include households through tariffs or their own investment, charitable donations, or private investment. Public sources are derived from taxes managed by national or foreign governments, in the form of public transfers through official development assistance. As financing types are not sector actors per se, it is important to identify separately the financing units that channel funding (see the challenge box below).

Potential challenges: Aligning with existing classification systems

- Different classification systems refer to financing types in slightly different ways. In the OECD 3T terminology, financing sources refers to the origin of the funding and the type of funds that can be mobilized. The SEEA-Water terminology refers to financing units (actors grouped by financing sectors) that provide sector funding. To add to the confusion, the SHA terminology refers to these financing units as financing sources. Methodological Note No 2: Classification of WASH uses, actors and financing types provides more detail on the OECD 3T and SEEA-Water classifications, and identifies where the different classification systems use similar or identical terms.
- In the TrackFin classification, financing type refers to financial flows, whereas financing units designates the actors from which funds are mobilized. Households (FU1.1) are financing units that potentially provide two types of financing to the sector: tariffs (FT1) and user expenditure on self-supply (FT2). National Authorities (FU2) can provide domestic public transfers (FT3) and concessionary loans, categorized under repayable financing (FT6). The broad financing types can be further disaggregated, for example to differentiate between various types of repayable financing (concessional or non-concessional) or between tariffs paid by households and those paid by non-domestic users.

2.2.3 Tasks to be undertaken

The WASH accounts team will then identify and classify WASH uses, actors and financial flows, with the aim of mapping sector organization and financing.[1]

This mapping exercise may have to be undertaken for each of the four main subsectors, i.e. urban water, urban sanitation, rural water and rural sanitation, as the organization of each may vary substantially. For example, sanitation services may be provided jointly with or separately from water services. In many cases, there is no formal sanitation service provider and households have to invest in on-site sanitation and maintain the installations themselves. This is referred to as "self-supply".

The team should identify what existing classifications of WASH actors and financing types are in use by the NSO or the WASH sector itself. Where these exist and are in use, similarities to and differences from the TrackFin classifications should be identified. With this understanding, each country should then decide which classification(s) should be used to maximize the amount of data that can reasonably be collected in the given timeframe. The classifications selected should be clearly explained.

To the extent possible, data should be collected according to the TrackFin classifications presented in Table 2. Depending on the structure of the WASH sector in the country, it may not be necessary to use all categories. Categories can also be adapted to facilitate further disaggregation if policy needs so require. A country with a significant investment backlog in the area of rural sanitation, for example, may need a greater degree of disaggregation for these services.

2.2.3.1 Identify and classify all WASH sector uses and actors

This entails listing all actors in the WASH sector and gathering basic information on them. Guidance on this process is provided below.

Identify WASH service uses

The WASH accounts team should identify the different types of WASH service uses and identify data collection methods for each type, focusing particularly on domestic and institutional use. Separating WASH services by type of use according to purpose can raise some methodological challenges, as discussed below.

Potential challenge: Separating WASH services by type of use according to purpose

- WASH service providers encompass a wide range of user types, including industrial, commercial and institutional users. This is a key difference with the health sector, for example, where it is principally individuals who use services.
- Disaggregating financial data by use (for example, to distinguish between domestic and institutional use) is likely to be time-consuming and in some cases impossible to achieve, as most municipal providers serve not only households and institutions but also other customers.
- For self-provided use, distinctions are easier to establish as long as information is available on this type of user. Financial flows concerning self-providing households would be obtained from different sources, for example, than information on industrial users who self-provide water for production.
- For served users, financing for providers primarily serving domestic and institutional users should be tracked as a priority, noting if possible the proportion of revenue and costs involved in relation to other users (such as commercial or industrial). To be more specific, financial flow data for different uses should be collected based on the tariff paid by the service consumers. It can be assumed, for example, that water sold at an industrial tariff has been provided for industrial uses.

Tracking financial flows to other types of use, such as industrial use, is also important because industrial users may be providing cross-subsidies to households if the same service provider is involved. In this context, growth in self-provided industrial use might be a source of concern for the wider sector, as it could translate into reduced cross-subsidies to the domestic WASH sector. If, however, limited data are available on self-provided use, tracking domestic use is the priority.

[1] Mapping financial flows must be distinguished (and kept separate) from mapping institutional arrangements. The latter show lines of responsibility and allocation of powers and functions, including policy-making, regulation, asset ownership, and service provision, whereas financial mapping mainly focuses on the actors and on tracking the origins of funding, how it flows, and where it goes.

Countries may also use additional criteria to classify uses depending on the policy questions they wish to answer and the availability of data. Domestic uses can be further classified in the following ways:

- Geographic region (R) – Regions, districts or central as defined by country, using central when relates to activities that cover all regions;
- Service area (A) – Urban, rural or central, according to the country definition; using central when neither urban nor rural apply because both benefit, e.g. support activities of the state or an NGO, performed by a central or a decentralized actor;
- Socioeconomic strata – Level of income, tariff scale.

Identify service providers

The WASH accounts team should identify service providers for all four main subsectors (urban water services, urban sanitation services, rural water services and rural sanitation services) and the services they provide. Data should be collected on main providers or main types of provider, focusing on:

- Their characteristics and legal status (public or private ownership, enterprise or non-enterprise, formal or informal);
- The WASH services they produce;
- The types of use and users they cover (including numbers);
- Geographic coverage and human resources;
- The number of entities falling under this category.

Potential challenge: Ensuring that all service providers are taken into account

- Households' role as self-providers must be fully recognized. In many sub-Saharan African countries there is no formal sanitation service provision. Households, and sometimes commercial users, invest in on-site water and sanitation solutions and maintain the installations themselves. This expenditure can represent a substantial share of total sector spending and should be included under category P5 Self-provided users.
- Informal service providers should, where possible, be included in the mapping. Although the economic activities of informal actors may not be counted by statistical offices, they often represent a large proportion of WASH service provision in developing countries. Using the TrackFin classification, these would be classified as category P3 Non-network corporate providers. Financial flows to informal actors will probably need to be estimated as they are rarely officially recorded. The National Statistics Office can provide guidance on how informal activities in the WASH sector are valued.
- Some companies that are not WASH service providers per se, but are involved in the cycle of WASH activities at some point, may be more difficult to classify. In Morocco, for example, a significant proportion of hardware investment in water and sewerage networks does not come from service providers, but from housing and real estate developers. These developers invest in networks and then pass on the management and operations of these networks to the main water utility. In the TrackFin classification, these housing developers are categorized under P3 Non-network corporate providers.

Identify financing units

The WASH accounts team should identify relevant financing units providing and/or allocating funds to the sector. Some financing units, such as central government institutions, do this from their own resources, while others channel funds provided to them by other institutions, drawing from different financing types. Category FU4 Local authorities, for example, may channel funds from category FU2 National authorities, or from category FU8 Bilateral and multilateral donors. These may also have their own sources of finance such as internally generated funds from local resources, property taxes, business rates, or sanitation taxes.

Data on the characteristics and status of these entities, and on the organizations and programmes they finance, is therefore required to ensure complete understanding of whether they act as primary or secondary funding sources. If secondary, it indicates that they are only channelling funds. The challenge box below provides greater detail.

Potential challenge: Avoiding double counting between financing units

- To establish overall expenditure in the WASH sector, financial flows should be computed at the level of the financing unit through which they enter the sector. A key principle is that one flow should only be recorded as one financing type. Donor funding channelled to local government through the national government, for example, should always be recorded as FT4 International public transfers. This is also why FT1 Tariffs for services provided, is judged as originating from FU1 Users (i.e. the financing unit that has injected the revenue into the sector) rather than from FU5 Network service providers. Applying this rule consistently should eliminate the risk of double counting in overall expenditure. Accordingly, the only financing injected by FU5 Network service providers would be reinvested profits or equity investments, recorded as FT6 Repayable financing.
- However, financial flows also need to be recorded in other ways to enable investigation of a range of key policy questions, such as what funds are used for and how they are channelled. Each financial flow should therefore be "coded" in more detail, to track its distribution in various ways such as:

  – Direct disbursement to service providers
  – Channelled through another financing unit
  – Received from another financing unit and disbursed to service providers.

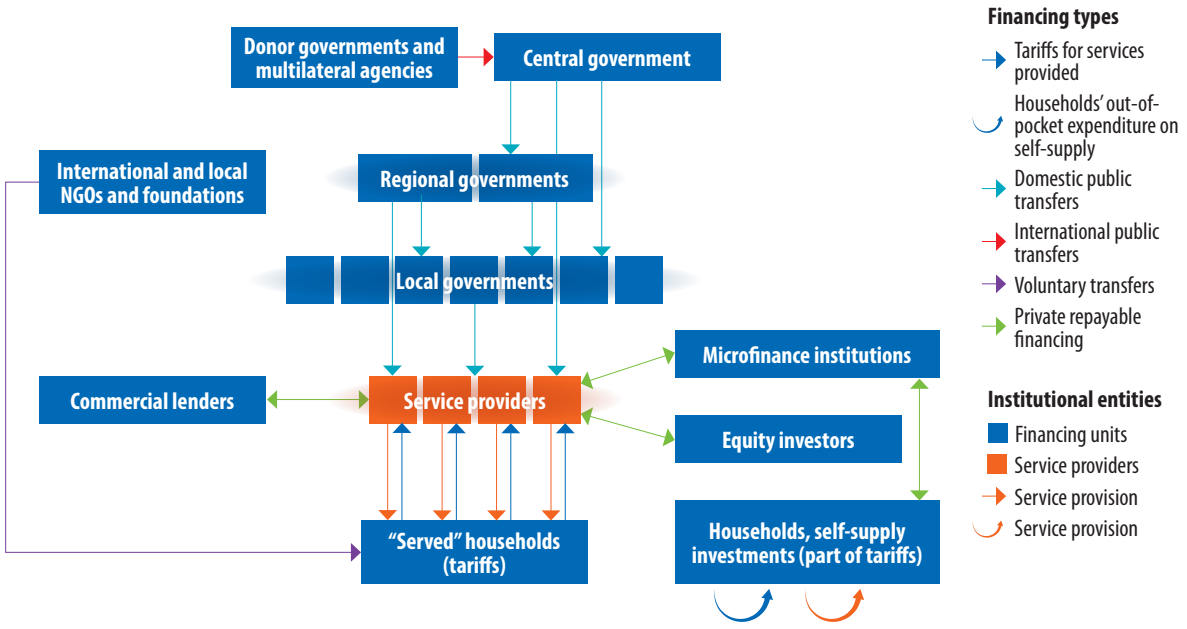
Additional guidance is provided in Methodological Note No 4: Estimating financial flows with the Financing Type Approach.

2.2.3.2 Map WASH actors and financial flows

Once the bulk of this information has been collected, the second task consists of mapping the organization and financing of the sector, showing how money flows between the different actors. Mapping financial flows visually is the best way of doing this, as presented schematically in Fig. 6 below for a hypothetical WASH sector. This figure is illustrative, and does not cover all possibilities.

The figure can also be used to capture information on data availability. The WASH accounts team can visually demonstrate the differences between financial flows for which TrackFin is likely to have good and reliable data, and those where difficulties are anticipated. Bold lines could be used to indicate potentially reliable data, and dotted lines for flows where only broad estimates can be expected. Each type can also be assigned a number to facilitate identification of data sources and estimation methodologies at later stages.

Figure 6. Mapping financial flows for WASH service provision: Illustrative example



Box 8 below illustrates the concepts presented above, taking Brazil as an example. It shows how actors and flows were identified and classified in order to map sector funding.

Box 8. Identifying and classifying WASH sector actors and financial flows: Example from Brazil

WASH service provision in Brazil has to be seen in the context of the overall political structure. The Brazilian Federation consists of a national (federal) government as well as subnational governments comprising 26 states, 5,570 municipalities, and a Federal District. The three levels of government are politically and administratively independent of each other. The municipalities are responsible for the organization, management and direct or indirect provision of local WASH public services in urban and rural areas. The federal government and state governments, in cooperation with the municipalities, implement water, housing and basic sanitation programmes. The federal government is also responsible for establishing general guidelines and regulations for the management of services by all levels of government, in coordination with the Ministry of Cities, which is responsible for water and sanitation. The Ministry of Cities also coordinates the National Sanitation Information System (SNIS). This system has been rolled out at the federal level and captures a wealth of sector data on service providers throughout the country (91% of municipalities for water and 65.5% for sewage disposal). The Ministry of Health is also responsible for direct provision of WASH services to indigenous people in rural areas. There is no central national regulator for water and sewage disposal services, but water resources are centrally regulated. Service providers and financing units provide water and sewerage services in both urban and rural areas, so creating four sub-sector actor maps was not necessary.

Service Providers

In Brazil, 26% of municipalities provide water directly through local service providers, and 78% directly provide sewerage services. In addition, 26 regional providers supply water services at the state level to 64% of municipalities, and sewerage services to 22%. Six micro-regional providers serve a small number of municipalities. While most of these delegated service providers are public, some are private. These providers offer WASH services through a variety of supply arrangements including direct, indirect (delegated), jointly managed, centralized, decentralized, by consortia, and through concession contracts. NGOs and CBOs are involved in providing hygiene promotion. Households in rural areas that build their own sanitation facilities also act as service providers.

Financing units (shown in bold) and financing types (shown in italics):

- The main types of financial flow are *tariffs* paid by **served users** such as households, industries, and institutions. Users also provide *expenditure for self-supply*.
- The main spending by the **federal government** is on *public transfers (grants)* from the federal budget and *repayable financing* managed through 1) the Fundo de Garantia por Tempo de Serviço (FGTS) funding scheme managed by the Caixa Economica Federal (**CAIXA**) – a state-owned bank, and 2) the Banco Nacional de Desenvolvimento Econômico e Social (**BNDES**), with funding from the Fundo de Assistência ao Trabalhador (**FAT**) which is a public fund under the Ministry of Labour and Employment, and other smaller funds providing equity finance.
- Some **states** also have specific programmes for the sector funded through *public transfers* from their own state funds, usually from royalties for oil exploration or from environmental fines and compensation (for example the states of Rio de Janeiro, Espirito Santo and Bahia) or from water resources revenues (Fehidro of São Paulo). Some state programmes are also financed with *repayable financing* from their own state development finance institutions such as the Development Bank of Minas Gerais (BDMG). These are important from a local perspective, but not very significant at national level.
- Some remaining funding is received from **multilateral and bilateral donors** for the execution of works and institutional development. These include the International Bank for Reconstruction and Development (IBRD), the International Development Bank (IDB), KFW of Germany and the Japanese JICA /JBIC. The federal government has also received substantial funding from IBRD to implement the Water Sector Development Programme (INTERÁGUAS), focused on institutional capacity building and integrated planning for the water sector. These are mostly grants (*international public transfers*).
- Since 2004, public private partnerships have been authorized by law and have increased in number, but even so *private capital contributions* from **corporate providers** (a form of repayable financing) to the sector remains low.
- **NGOs and CBOs** also provide a small share of *voluntary contributions* to the sector.

2.3 Estimate financial flows and fixed asset stocks

Collecting financial data is the core objective of the TrackFin methodology. Two main types of financial data should be collected:

- *Financial flow data:* this estimates how much funding flows into the sector each year from tariffs, household expenditure for self-supply, domestic public transfers, international public transfers, voluntary transfers and repayable financing, and how much is "spent" on providing services; and

- *Fixed asset stock data:* this estimates how much has been invested by economic actors in building up WASH assets over the years. It provides the basis for asset management planning, which is critical for future financial planning.

Step 2.3 – Tasks to be undertaken

- Understand the approaches to estimating financial flows and fixed asset stocks and become familiar with the cost classification.
- Identify the data required to answer the policy questions set out in Step 1.3.
  - Identify whether the National Statistics Office already collects data on WASH financing and if so, understand their methodology;
  - Identify whether any national database for the sector already collects financial information;
  - Create an overview of data sources available and propose data collection methods for missing data; and
  - Decide if financial flows and/or fixed asset stocks will be included in the scope of WASH accounts, depending on data availability.
- Gather data on financial flows at the source, starting with the approach that allows the most comprehensive dataset to be created (either the Financing Type Approach or the Cost-based Approach).
  - Note that both approaches need to be applied in parallel as they provide complementary information essential to the allocation of costs to types of service.
- Gather data on fixed asset stocks using the Fixed Asset Stock Approach (if this approach is also selected).
- Enter the financial data into the WASH accounts database:
  - Create a data collection tool or define the structure of the database and data records in a way that facilitates regular, ongoing maintenance; and
  - Code all data entries using WASH accounts classification codes.
- Reconcile the data, identify information gaps, and recommend/conduct any supplementary surveys.

2.3.1 Rationale

To date, most financial tracking initiatives have focused on financial flows. This often originates from an emphasis on tracking public financial flows, as public budgets typically distinguish between "recurrent" expenditure and "development" expenditure (i.e. capital investment). As a result, data on development budgets from public agencies' accounts are often used to provide an estimate of government capital investment.

This Guidance Document argues that collecting data on fixed asset stocks, alongside data on financial flows, is important to gain better understanding of the overall value of assets. However, this is often difficult to achieve due to data deficiencies. It is therefore proposed that collecting data on fixed asset stocks should be attempted only if WASH accounts based on financial flows have already been computed at least once, and data sources have been well mapped in advance.

Methodological Note No 6: Estimating fixed asset stocks. This note provides the rationale for using the Fixed Asset Stock Approach as a complement to the Financial Flows Approach, and gives additional guidance on how this approach can be applied. It also refers to Brazil's experience in doing so.

2.3.2 Methodologies for collecting data on financial flows and fixed asset stocks

Collecting information on financial flows can be done through two approaches:

- The Financing Type Approach consists of tracking flows from each financing unit to estimate the amount of money allocated to the sector and aggregate the estimates by financing type; and
- The Cost-based Approach consists of tracking expenditures on different services to estimate what is being spent, and deriving total expenditure figures by aggregating the expenses by type of cost.

The Financing Type Approach answers questions such as, "What are the main financing units for the sector," and "What has been spent?" In most cases, this is likely to be the most straightforward approach to tracking public financial flows, as many public entities acting as financing units have a budget allocation for the sector and should be able to report on it. The WASH accounts team should seek to collect data on financing units' actual expenditure from their financial reports and the data sources indicated above. They should also collect revenue data from service providers' cash flow statements. This approach alone is often not sufficient, however,

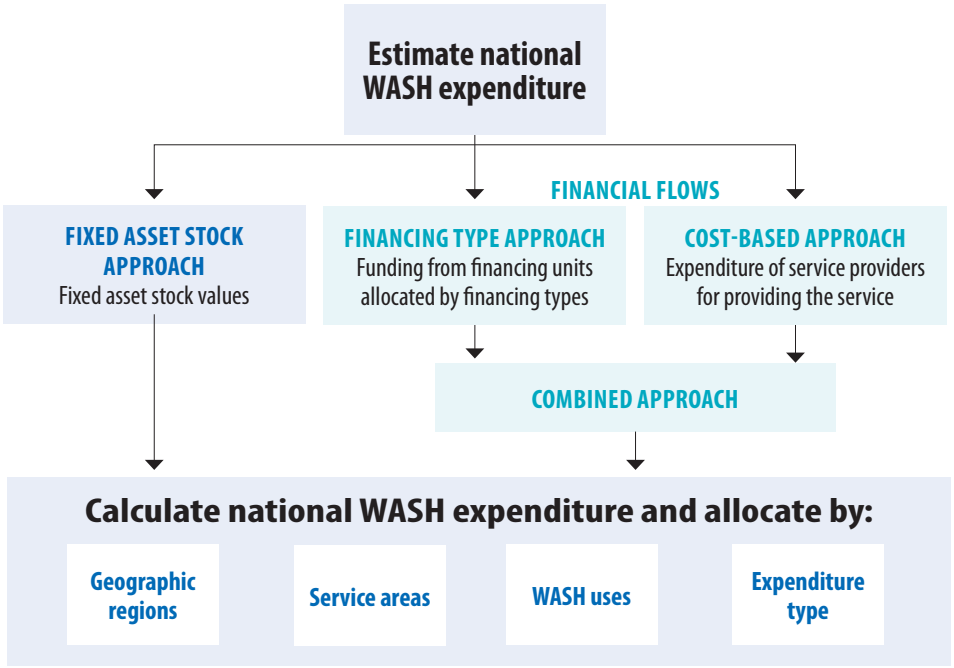
when seeking to track how funds are spent—their distribution between water and sanitation, for example—or to gather information on certain sources of finance such as household spending.

For the reasons stated above, it is often necessary to combine the Financing Type Approach with a Cost-based Approach to evaluate the costs of providing services. This should be done based on the proposed TrackFin typology of costs, distinguishing at a minimum between capital expenditure (including large maintenance costs, which should be accounted for as a separate item), operating costs, and minor maintenance expenditure. Combining the two approaches improves the quality of information and facilitates the level of detail required to create WASH accounts capable of responding to key policy questions.

An alternative approach, consisting of collecting data on fixed asset stocks, is referred to as the Fixed Asset Stocks Approach. This method estimates the value of existing asset stocks in the sector and is in line with the System of National Accounts, although potentially more difficult to apply. Data for this approach also need to be obtained at the level of service providers, focusing on their assets (and potentially liabilities) rather than on their revenue and expenditure.

These approaches and the way they may be combined are presented schematically in Fig. 7 below.

Figure 7. Methodologies for estimating expenditure in the WASH sector



When estimating financial flows, it is important to use the same accounting approach and common terminology for the financing types and costs. This will ensure data comparability not only across activities, years and countries, but also against other economic aggregates such as gross domestic product.[1] The Guidance Document recommends that data should be collected on actual financial flows, using a cash flow accounting method for both costs and revenue. The rationale for doing so is discussed in more detail in Methodological Note No 3: Estimating financial flows on a cash flow basis and alternative methodologies.

When using the Financing Type Approach, it is also essential to clarify whether budgeted flows or actual flows are to be collected. The Guidance Document recommends that, where possible, actual flows should be collected; this will build up the most accurate picture of what is actually spent, and allow comparison with costs incurred. Some methodological challenges can potentially be encountered, as outlined below. Whichever methodology is used, the types of financial flows being tracked must be clearly recorded if comparisons are to be made.

[1] Gross Domestic Product (GDP) is a financial flow indicator: GDP estimates the total value of goods and services produced in a country based on production and consumption expenditure. It indicates the total monetary value of all the finished goods and services produced within a country's borders in a specific time period (usually a year). It includes all private and public consumption, government outlays, investments and exports less imports that occur within a defined territory. It is derived from expenditure figures reported in the National Accounts.

Potential challenge: Tracking actual vs. budgeted expenditure

- When using the Financing Type Approach, different financial flows can be recorded, ranging from committed or budgeted expenditure to actual expenditure on the ground. Although budgetary information may be easier to collect (particularly for transfers from public institutions), it is preferable to obtain actual expenditure amounts for all types of financial flows tracked using the Financing Type Approach. This allows comparison between different funding sources (including with funding provided by households, for which only actual figures are likely to be available) and provides a more accurate representation of expenditure in the sector. It also facilitates the reconciliation of total financial flow information, using both the Financing Type Approach and the Cost-based Approach.
- If obtaining actual expenditure information is proving challenging, it may be possible to estimate it based on budgeted amounts and estimated percentages for actual budget spending based on past experience. This could be complemented with qualitative and quantitative assessment of specific programmes or investments to evaluate the difference between budgeted amounts and actual spending.

In the longer term, tracking multiple types of financial flows in parallel may be useful to measure efficacy in spending. This is not an immediate objective of the TrackFin exercise, however, and the need to maintain multiple data sets could lead to complexities. Financing allocated to the sector may not always translate into actual services consumed, due to losses along the way. Ideally, these losses need to be quantified. The TrackFin initiative could potentially help quantify amounts that are budgeted or allocated but that do not result in service delivery.

The following methodological notes provide additional guidance on applying these approaches and the associated data needs:

- Methodological Note No 3: Estimating financial flows on a cash flow basis and alternative methodologies
- Methodological Note No 4: Estimating financial flows with the Financing Type Approach
- Methodological Note No 5: Estimating the costs of providing services using the Cost-based Approach
- Methodological Note No 6: Estimating fixed asset stocks

2.3.3 Tasks to be undertaken

2.3.3.1 Identify data sources and define data collection methods

The first task is to identify what data should be collected, and in what detail, to achieve the allocation of expenditure to specific categories. Before starting, it is important to understand Methodological Notes 3 to 6, which provide detailed guidance on methods and data sources to estimate different financing types, costs and fixed asset stocks. When collecting data, the WASH accounts team should adopt a combined approach, looking for aggregated and comprehensive sources but combining this with collection of more detailed data from the source.

Based on an initial review of available data, the WASH accounts team will need to prepare questionnaires and pro-forma documents for data collection. The TrackFin Secretariat can make some examples available on request. For the purpose of pilot testing the Guidance Document, a simple data collection tool in Excel format was developed, based on the software used to prepare Health Accounts.

During the piloting, it was found that standard spreadsheets could be used as guides to develop country-specific data collection tools. In Brazil and Morocco, the WASH accounts team developed their own tailor-made Excel spreadsheet to reflect data availability at the country level. This was done to minimize the need for retreatment of the data. However, the data gathering exercise entailed the collection of a large number of financial data items (up to 13,000 data items in the case of Morocco) and their compilation in multiple dimensions, which was challenging to handle in Excel. The TrackFin tool was used in Ghana—the country that had the least detailed data.

Based on the pilot exercise and health sector experience, there are medium-term plans to develop an automated "data collection tool" to facilitate the compilation of WASH accounts over the course of several years. This will facilitate ongoing monitoring, as explained in more detail below.

Developing a data collection tool for WASH accounts on the model of the Heath Accounts tools

- Building on experience in the health sector, a data collection and analysis tool, similar to the Heath Accounts tools, will be developed in the coming years. This could be used to prepare WASH accounts on a regular basis with a minimum of external support. The health sector has developed two separate tools: a Health Accounts production and a Health Accounts analysis tool. These tools are now used by over 40 countries, and are valued for the systematic support they provide. The production and analysis tools can potentially be combined into a single tool.
- Software similar to the Heath Accounts tools will be created to simplify the exercise, standardizing the data treatment and cutting down the costs of replicating the exercise annually. This tool will process information in different formats in different countries, but operators will need to assign codes to each type of data so that it can be processed for the production of the WASH accounts. If the same data formats are used in subsequent years, the need for data coding will be greatly reduced in successive iterations.
- The tool will also help with coding different types of flows, avoiding double counting, visualizing how financial flows are distributed between different financing types or financing units, and producing summary tables and pivot tables of WASH accounts. It will also support proper traceability and accountability of the work underlying the figures, and can be used as a repository for the questionnaires and pro-forma documents for data collection that have been tailor-made for the country.

One important data source is likely to be the National Statistics Office (NSO). It is important to verify whether the NSO already collects data on financing to WASH and if so, to understand the methodology it uses. Information gathered by NSOs can provide useful background information, and indicate whether or not the NSO has established systems for data-gathering from the WASH sector. Information gathered by the NSO has limitations, however. Firstly, the SNA focuses on one main aspect of national expenditure, namely the creation of value in production processes. Therefore, this information can principally be used to estimate service providers' costs and revenue. Secondly, the information gathered through the National Accounts system is likely to be difficult to understand and interpret. It uses terminology and concepts that WASH sector actors may not be familiar with, and the information is unlikely to provide the level of detail required to support policy-making at sector level. Nonetheless, engaging the NSO is important in order to better understand their methodologies for gathering data, and influence how they conduct regular surveys (for example, on household expenditure on WASH). This should facilitate the collection of accurate data and ensure NSO involvement in the recurrent preparation of WASH accounts.

Other important sources of information are the main service providers and financing units in the country. The team should be able to collect primary information on expenditure patterns from these sources. It may also be possible to obtain data from an existing sector monitoring and information system, as was the case in Brazil through the National Sanitation Information System (SNIS). This has been in existence for 20 years and compiles data on a very large number of service providers throughout the country (see Box 10 for more detail).

Data for the Financing Type and Cost-based Approaches should be identified in parallel. To help create the database, the WASH accounts team should identify the main data sources from which information on expenditure can be extracted. Building an inventory of data sources can help keep track of the core data sets available, and identify whether information is missing or additional investigation, such as household surveys, is required. For each type of data, it is useful to collect the type of information indicated in Box 9 below.

Box 9. Building a repository of data sources

For each data source, it is important to gather the following metadata (i.e. data that describe and provide information about other data). This will assist in keeping track of where the data came from, how they were collected, and clarify what they include, so as to provide a basis for replicating the exercise in successive years.

- Name of data source
- Administration/institution/origin of the source
- Type of data source (registers, business surveys)
- Method of collection (administrative source, statistical full-scope or sample survey; national source versus standardized international survey)
- Availability of data (years of data available)
- Concept of the measuring units (costs, expenditures, turnover)
- Variation in the methodology used to estimate data over time
- Data reliability bands, i.e. how reliable is the data? Is the methodology to compile the data traceable? This can be assessed with a scoring system.

Box 9. Building a repository of data sources, continued

Regarding expenditure data, it will be important to record the level of disaggregation possible for the different data sources, in order to answer the following questions:

- Can expenditure be assigned to categories of providers or financing types and units?
- Can expenditure be assigned to categories of WASH services?
- Can expenditure be allocated by type (for example to differentiate between investment costs, operating and maintenance, or large capital maintenance costs)?

Where it is obvious that no reliable "hard" data is available, the WASH accounts team will need to make estimates to fill the gaps. It will also need to specify how these estimates can be refined in later iterations of the exercise. To that end, the data repository should clearly signal where estimates have been made for each type of data collected.

Box 10 below presents the main type of data sources used in the countries where the methodology was piloted, and the methods proposed to estimate missing data. Data sources used by each country depended on the state of the monitoring and information system for the sector, and the availability of financial data. In all three countries, no information was readily available from the National Statistics Offices, but the TrackFin exercise provided a useful platform for WASH sector stakeholders to engage in dialogue with the NSO on ways of increasing WASH data availability.

Box 10. Examples of data collection methods from the pilot exercise

In Brazil, the WASH accounts team was able to rely on the National Sanitation Information System (SNIS), an online database that gathers economic and financial data on the WASH service provision from municipalities. The SNIS covers the whole country, but as the provision of data is voluntary, it currently contains data for approximately 89% of the municipalities for water services and 35% for sewage services. However, most municipalities that do not provide data are small and rural. This means that existing data accounts for 97.3% and 80.4% of the urban population for water and sanitation respectively. The SNIS has no systematic data on services in rural areas, particularly for smaller villages. For larger rural agglomerations, the data is usually aggregated with the urban sector.

To allocate service providers' expenditure in more detail, financial reports for the biggest WASH service providers were also collected. The annual report on public expenditure for "saneamento basico" (which includes water, sanitation and solid waste) prepared by the Ministry of Cities was also an important source of data, as was the Transparency Portal of the federal government. It contains systematic and detailed information on federal government expenditure on the WASH sector, at all levels of government, including on domestic transfers to sub-national governments, and regional and local public institutions and NGOs operating in the sector. Finally, the national household survey and household budget surveys of IBGE (the national statistics bureau) were used to estimate household self-expenditure. The TrackFin exercise helped identify potential improvements to those surveys, which IBGE was prepared to take on board at the end of the exercise. Data disaggregated between regions is available, which indicates that regional analysis is possible where resources are available.

In Ghana, data availability was a key constraint for the exercise, as data are not readily available in any information system. Data had to be collected from each institution's own system or reports, where these existed. The data obtained were usually available at the level of disaggregation required for analysis. The TrackFin exercise was therefore key to identifying data gaps and proposing measures to improve data collection in the sector. The exercise coincided with the rolling out of a central financial management system for the public sector—the Ghana Integrated Financial Management Information Systems (GIFMIS)—to improve tracking of government expenditure. One key issue identified during the exercise is that there is no specific code for water or sanitation in the system at present. The national consultant made a presentation to the GIFMIS Steering Committee on the development of the WASH Sector Information Systems, underlining the necessity of tracking government expenditure to WASH, and creating new GIFMIS codes to increase the potential for disaggregated tracking of WASH expenditure.

In Morocco, the sector information system does not collect financial information from utilities. A questionnaire was therefore designed to collect primary data directly from the main utilities, public agencies and the ministries. Financial reports were also collected from these institutions. It was not possible to collect data from smaller municipalities not served by ONEE (the main national utility) or a private concessionaire. These small municipalities provide the service directly, or through a CBO. As a result, data on rural WASH was largely missing. For the next exercise, it was proposed to conduct a survey from a sample of municipalities to fill the gap. There is also no consolidated information on international donor funding, so in the next exercise, a questionnaire for donors could be developed to acquire further detail on financing types.

Once data sources and categories are identified, and before starting data collection, the WASH accounts team should prepare an interim report, summarizing key findings from Steps 1, 2.1 and 2.2, for submission to the TrackFin champion and the national stakeholder group. This report should ideally be presented at a meeting of the national stakeholder group where in-depth discussions on data availability, constraints, and methods to fill data gaps can take place prior to engaging in any data collection exercises.

A proposed outline for the interim report can be found on the TrackFin website. This report should contain the following information:

- Definition of the scope of WASH accounts (the duration, geographic boundaries, and the WASH services for which financial flows will be tracked);
- Identification of key actors and financial flows in the WASH sector, and the associated map of financial flows;
- The classifications of WASH uses, actors and financial flows;
- An overview of potentially available data sources;
- Definition of specific estimation methods to value financial flows and fixed asset stocks, with the identification of potential methodological issues;
- A preliminary list of the WASH accounts tables and indicators to be prepared; and
- Possible implementation considerations that may affect the preparation of the WASH accounts.

2.3.3.2 Collect data, create database, and categorize financial flows

The third task entails creating a database of WASH financial data based on the initial investigation. Once the list of data sources is complete and the methodologies to be applied are clearer, the WASH accounts team should create a database to house all available data. Its structure should facilitate ongoing maintenance.

The team should then collect financial flow data and enter it into the database, starting with the approach likely to generate the most comprehensive data set – i.e. the approach for which data availability is greatest and access the easiest. Other approaches can then be introduced at a later stage to fill gaps and gather complementary information where greater detail is needed for policy analysis. To estimate financial flows, both the Financing Type and the Cost-based Approaches will need to be applied in parallel, as some data may only be available based on cost, whereas other data may be more readily available through examination of funding sources, expressed as expenditure.

Ideally, the WASH accounts team should try to collect cost information from each service provider. If this is not possible, for example in circumstances where countries have large numbers of service providers, it may be feasible to collect data from a sample of service providers and extrapolate from the results.

To refine initial estimates, the data collection process needs to be iterative. The database will be completed progressively through successive cycles, during which remaining data gaps can be filled and estimates reconciled as more data becomes available. Data collection must be carefully planned to avoid burdening data providers with overwhelming requests for data and related tasks.

When data entry is complete, WASH accounts classification codes should be assigned to all entries to enable identification of the following:

- The financing unit from which the flow originated;
- The service provider receiving the funds;
- The WASH services it funded, the intended use, and in which geographic area; and
- The costs that were covered by this financial flow.

More guidance can be found in Methodological Notes 3 to 6 on how to allocate spending to the different categories—for example to estimate spending on a particular use, or a category of spending such as household expenditure on self-supply.

2.3.3.3 Triangulate and reconcile the data collected

The final activity consists of reconciling the different data sets by combining them to refine the allocation of spending to different categories. If significant gaps are found between the results of the two different approaches to capturing financial flow information, further investigation is required to identify estimation errors or missing flows. Potential reasons for this gap are identified in Box 11 below. This may require supplementary information gathering from primary data sources, applying estimates, or using cost allocation keys to estimate data.

Box 11. Reconciling differences between the Cost-based Approach and the Financing Type Approach

As different data sources are used in the two approaches, the total expenditure calculated is bound to be somewhat different. If this gap seems significant after initial data computation, it is essential to identify potential reasons for the gap in order to reduce sources of error and arrive at the best estimate of total sector expenditure. Factors that could explain differences at the provider level between financial flows received (cash inflows) and costs / expenditures (cash outflows) are as follows:

- Variations in the net cash balance between the beginning and end of the period. This is a normal difference for which correction is not possible. The difference might come, for example, from the expenditure or repayment of a loan. More guidance on the treatment of loans is available in Methodological Note No 3: Estimating financial flows on a cash flow basis and alternative methodologies.
- Missing data, or inadequacy in the estimation methods used. The methods for estimating costs and financing types have been designed for consistency. The data sources may not, however, provide the figures in the way envisaged by the method, which may create false variations between the two approaches:
  - In the Financing Type Approach, the value considered for FT1 Tariffs for Service Provided, should be the amount of funds actually collected, rather than the gross revenue billed—which is what appears in the profit and loss account of the service provider. If only the gross revenue as billed is available, these figures should be adjusted by increasing or decreasing the balance of accounts receivable.
  - In the Cost-based Approach:
    - Data for current capital expenditure on works in progress may be missing from the Investment Costs category (C1). Indeed, available data might only include expenditure on completed works, especially if estimates are based on the value of the completed asset in the balance sheet;
    - Depreciation and amortization of fixed assets should not be included in the Investment Costs category (C1); and
    - Data on Financial Costs (C4), which include capital repayments, interest payments and dividends, may not be available.
- Double counting of some flows.

As indicated in the Challenge Box in Section 2.2.2 above on financing units, a potential difficulty is avoiding the double counting of financial flows, particularly when resources are channelled through several financing units. More guidance can be found in Methodological Note No 4: Estimating financial flows with the Financing Type Approach

Finally, as already indicated, some degree of estimation will be necessary (see Box 12 below) or additional data gathering required. In the event of the latter, the WASH accounts team should make a request to the national stakeholder group, as additional budget may be required. Assumptions should be tested, possibly by enquiring further into the cost structure of the service provider. All estimation methods and assumptions should be clearly presented in metadata attached to the final results; they should be justified and well documented. Transparency is a key part of WASH accounts development, and provides clearer understanding of how the data was compiled. It also facilitates subsequent compilation rounds.

Box 12. Filling data gaps: Making assumptions and using allocation keys

In some cases, data will not be available to comprehensively estimate a category of WASH accounts. In these cases, estimation methodologies should be proposed, together with recommendations on obtaining more accurate information in the next iteration of the exercise.

It may be necessary to use other kinds of information, such as physical information, to derive "allocation keys" for estimating the breakdown of financial flows. If, for example, there is no information on the distribution of expenditure across WASH services for a particular actor, the distribution of its activities can be used as the "key" for allocating expenditure.

Making assumptions may also be necessary where insufficient information is available. Estimating the allocation of software costs (i.e. costs associated with infrastructure development such as project preparation, capacity building, training, or community mobilization and behavioural change activities) through the activities of a service provider can be difficult when only its total expenditure is known. It may be necessary to make an assumption about the amounts that should be attributed to each kind of support activity. Support costs may not, however, be directly linked to overall expenditure on a service. Typically, for a public provider of rural WASH services, support costs as a percentage of total costs tend to be higher for sanitation than for water supply. This is because households are increasingly expected to invest in sanitation themselves rather than receiving a subsidy, which means that the support costs borne by the public party may represent a higher share of their total investment than for water. Public investment in water, particularly for capital expenditure, is still very much the norm.

Using small-scale studies and extrapolating from these to the rest of the population: In some cases, the results of a small-scale study can be used to estimate the data for a particular component. For example, a survey on the allocation of NGO expenditure can be used more broadly to cover this component in WASH accounts, as NGO expenditure and allocation is usually not known in any detail. This approach does carry risks, however, as the selected sample may not be representative of all NGOs in the country. It is therefore important to document the methods employed and any potential biases from such methods. This approach can be used for households, NGOs or CBOs in a variety of areas where a separate accounting mechanism for WASH expenditure does not exist.

3 Step 3 – Analyse data and report findings

This section sets out how the WASH accounts and associated indicators should be compiled, and provides guidance on how the data can be interpreted and used for policy-making.

3.1 Compile WASH accounts and indicators

The WASH accounts and indicators can be compiled only after the data has been collected.

Step 3.1 – Tasks to be undertaken

- Identify, from the comprehensive list of potential WASH accounts tables and indicators, those most relevant to the country's policy questions;
- Compile WASH accounts tables and verify their coherence;
- Calculate WASH accounts indicators; and
- Prepare an Annex to the WASH accounts report.

3.1.1 Create the WASH accounts tables and indicators

The WASH accounts team should now construct a number of tables, presenting the information obtained in a format that can be easily understood and used by policy-makers. Taken together, these tables form the WASH accounts. Comparable indicators can be derived from these tables.

The TrackFin methodology proposes a number of standard tables that can address most policy needs. Their chief purpose is to provide responses to the fundamental policy questions defined at the start of the exercise. These are:

- What is the total expenditure in the WASH sector?
- How are funds distributed to the different WASH services and expenditure types?
- Who pays for WASH services and how much do they pay?
- What entities are the main funding channels for the WASH sector?

All countries taking part in the TrackFin initiative should preferably use a basic set of common WASH accounts tables and indicators, created in a similar format to facilitate international comparison. Depending on their policy needs and the information available, countries may choose to prepare fewer tables or to present more detailed information on aspects relevant to their own priorities. Table 3 below presents the set of tables required to obtain a comprehensive national picture of WASH financing. The tables required as a minimum are highlighted in bold text.

Table 3. Recommended WASH accounts tables

Table WA 1 (SxA) – WASH expenditure by main WASH service and service area
Table WA 2 (SxU) – WASH expenditure by type of WASH service and use
Table WA 3 (SxP) – WASH expenditure by type of WASH service and provider
Table WA 4 (PxFT) – WASH expenditure by type of WASH provider and financing type
Table WA 5 (SxFT) – WASH expenditure by type of WASH service and financing type
Table WA 6 (SxFU) – WASH expenditure by WASH service and financing unit
Table WA 7 (PxFU) – WASH expenditure by WASH provider and financing unit
Table WA 8 (FTxFU) – WASH expenditure by financing type and financing unit
Table WA 9 (CxP) – WASH expenditure by type of cost and WASH provider
Table WA 10 (CxS) – WASH expenditure by type of cost and main WASH service
Table WA 11 (ASxP) – Fixed asset stocks by type of WASH provider

WASH accounts indicators are a set of key headline figures derived from the tables. They provide the core information in a quicker and more digestible way, useful for easy assimilation and widespread dissemination of the results. Box 13 below presents key WASH accounts indicators that can be calculated from the tables. They should be systematically estimated using the same parameters to ensure international comparability.[1]

Box 13. Key WASH accounts indicators

1. Total WASH sector expenditure at the national level
2. Total WASH expenditure per capita at the national level
3. Total WASH expenditure in the country as a percentage of GDP (This can be compared to the total health expenditure as a percentage of GDP)
4. Expenditure on sanitation as a percentage of total WASH expenditure
5. WASH expenditure in the urban sector as a percentage of total WASH expenditure
6. Public expenditure on WASH as a percentage of total public expenditure (Public expenditure includes funding from national, regional and local authorities, bilateral and multilateral donors for all domestic public transfers, and international public transfers and public loans)
7. User expenditure as a percentage of total WASH expenditure (the sum of FT1 Tariffs, and FT2 User self-expenditure)
8. Domestic public transfers as a percentage of total WASH expenditure
9. International public transfers as a percentage of total WASH expenditure
10. Total maintenance and operating costs as a percentage of total WASH expenditure

Further indicators can be derived based on country needs, which are presented in Methodological Note No 7: WASH accounts tables and indicators. Countries may select those most representative of their needs.

Methodological Note No 7: WASH accounts tables and indicators. This contains the actual tables, explaining in detail how they are created and for what purposes they can be used.

3.1.2 Select appropriate tables and verify data consistency

The WASH accounts team should firstly determine which tables from the proposed full list it plans to produce (see Methodological Note No 7: WASH accounts tables and indicators). This will depend on their relevance to national policy requirements, and on the available data. International benchmarking should also be a key consideration when selecting appropriate tables.

Data then needs to be extracted from the database (Step 2.3) to complete the tables. It may be helpful to begin with the most disaggregated tables, then move on to more aggregated levels. One major advantage of developing data collection and analysis software, as described in Section 2.3.3.1, is that it facilitates the creation of tables automatically from the database, hence saving a considerable amount of time.

Finally, the WASH accounts team should verify that the data presented in the tables is robust and internally consistent. It is important to check points such as the following:

- Totals should be consistent across all tables. The total expenditure on consumption should also hold for provision and financing;
- Totals reported should be equal to the sum of the constituent parts;
- Values for similar items of expense from the same classification should be consistent across tables; and
- The indicators are plausible in relation to a) the total expenditure figures, b) the population (per capita value), c) GDP, and d) historical values, if there are several time series of WASH accounts.

Throughout this procedure, the compilation process and methods used to estimate the figures shown in the tables should be reported to enable assessment of data quality. An annex to the final report should clearly address how estimations were made and how the tables were constructed (see Step 4.2.1). Documenting the metadata and data sources in an annex to the tables is essential if they are to be appropriately interpreted and used. At a minimum, background information should include the data sources, how they were validated (especially where there are multiple sources), the hypothesis used when evaluating data (method of accounting

[1] Regarding exchange rates, the team should convert the results into dollars and use the World Bank official exchange rate (average for the period) available on the World DataBank.

chosen), the reasoning behind the selection of data used in the estimation, and the procedures applied to render the data usable.

3.2 Prepare WASH accounts reports

Step 3.2 – Tasks to be undertaken

- Prepare the WASH accounts final report:
  - Gather information on the sector context (access data, institutional and policy background)
  - Summarize the methodology used
  - Summarize key findings from WASH accounts using graphs and tables to answer the four main questions and any additional policy questions
  - Interpret WASH accounts data to answer policy questions
- Present the WASH accounts findings to the national stakeholder group for validation

3.2.1 Rationale

Data are not information. In addition to producing tables and indicators, it is important to analyse the data in relation to background information on the WASH sector. This will ensure that the figures derived are correctly interpreted. If it is to be used effectively by policy-makers, the information from WASH accounts must be concise, meaningful, and directly relevant to policy purposes.

Table 4 below summarizes how elements of WASH accounts tables and indicators can address policy questions and support policy development. A discussion follows on how these data can be used and interpreted to answer the key policy questions of the exercise.

Table 4. Link between WASH accounts information and policy questions

WASH accounts Tables (T)	WASH accounts Indicators (I)	Policy questions answered by these data
1. What is the total expenditure in the sector?		
Total from Table WA 10 (CxS) and Table WA 5 (SxFT)	Comparison of total WASH expenditure estimated from the Financing Type and Cost-based Approaches • Total WASH sector expenditure (at the national level) • Total WASH expenditure per capita (at the national level) • Total WASH expenditure in the country as a percentage of GDP (this can be compared to the total health expenditure as a percentage of GDP)	• What is total funding to WASH? Is current funding sufficient? • What is the trend in funding? Is it increasing or decreasing? • How does the level of funding compare to countries with a similar level of income, or with neighbouring countries? • How does the level of funding compare with other social sectors such as health or education?
2. How are funds distributed to the different WASH services and expenditure types?		
Table WA 1 (SxA) - WASH expenditure by WASH service area (urban/rural/central)	• Expenditure on (rural/urban) sanitation as a percentage of total WASH expenditure • Expenditure on (rural/urban) water as a percentage of total WASH expenditure • WASH expenditure in the urban sector as a percentage of total WASH expenditure • WASH expenditure in the rural sector as a percentage of total WASH expenditure	• What is the urban/ rural, water/sanitation split in spending? • Is spending allocated to the WASH sub-sectors that need it most? • Is funding going to areas that need it most?
Table WA 2 (SxU) – WASH expenditure by type of WASH service and use	• Total expenditure per type of service use	• Which types of use are benefiting most from the financial resources allocated to the WASH sector?
Table WA 10 (CxS) – WASH expenditure by type of cost and main WASH service	• Maintenance and operating costs as a percentage of total WASH expenditure • Investment costs as a percentage of total WASH expenditure	• Is sufficient spending allocated to operations and maintenance as opposed to investment?
Table WA 11 (ASxP) – Fixed asset stocks by type of WASH provider	• Total WASH asset stocks per capita	• What is the stock of fixed assets for WASH services and for each sub-sector? • Is the fixed asset stock being increased or run down?

Table 4. Link between WASH accounts information and policy questions, continued

WASH accounts Tables (T)	WASH accounts Indicators (I)	Policy questions answered by these data
3. Who pays for WASH services and how much?		
Table WA 5 (SxFT) – WASH expenditure by type of WASH service and financing type	• Public expenditure on WASH as a percentage of total public expenditure • User expenditure as a percentage of total WASH expenditure • Domestic public transfers as a percentage of total WASH expenditure • International public transfers as a percentage of total WASH expenditure	• By whom is each type of service financed? • What is the financial burden on households? Are policies and utilization of public funds effective at leveraging private investment, including from households? • What is the share of public vs. private expenditure? • What is the share of donor contribution? How much is donor spending in relation to the total government budget? • Are government and donor commitments on WASH financing respected?
4. Which entities are the main funding channels for the WASH sector?		
Table WA 6 (SxFU) – WASH expenditure by type of WASH service and financing unit	• Focus on WASH expenditure by financing units that channel funds	• How is funding in the WASH sector channelled? • What percentage of WASH public expenditure is channelled via local governments and how can they be supported?

3.2.2 The WASH accounts final report

To conclude the exercise, the WASH accounts team should produce the final report, presenting the results systematically in response to key policy questions and reform needs. A draft Executive Summary should be included. The report should also provide careful documentation of data sources, classifications, and the methodology used to estimate the results, so that differences observed between countries or in one country over time can be understood and put in the appropriate context.

The final report should cover the context of the exercise, national motivation for undertaking it, and its specific sectoral challenges, but crucially must remain concise and to the point. It should not exceed 40 pages, excluding annexes. The findings should be summarized principally in tables and graphs. To the extent possible, final reports should use a similar format across countries to facilitate comparison and use of the data at both the national and international level.

The WASH accounts final report should contain the following elements:

- An introduction setting out the objectives of the WASH accounts and the policy questions the exercise aims to answer.
- Country background information. This should present the general socioeconomic characteristics of the country, as well as key data on access to WASH services. It provides the context for interpreting and understanding the WASH accounts findings.
- An overview of the water and sanitation sector in the country, setting out the institutional and financing arrangements and mapping the main actors and financial flows. To place the findings in context, it should also present major policy issues such as recent reforms and those still required, current policies, and the institutional framework.
- The methodology used to compute the WASH accounts tables, including information on the scope of the exercise, the geographic range, sub-sectors involved, and number of years covered by the study. It should address the classifications used to generate the WASH accounts and the approaches used, highlighting the main methodological choices made for data collection and analysis.
- The findings, which are the heart of the report. These should cover the main indicators calculated from the WASH accounts data, translating the core quantitative findings from the tables into qualitative information in order to provide answers to the main policy questions.
- Policy recommendations, extracting the main policy implications from the findings and formulating recommendations for future exercises in the country. Guidance on future applications of the methodology should also be provided.

The annexes to the report should contain the following:

- The full WASH accounts tables;
- Detailed information on the data collection and estimation methods used;

- Documentation of the WASH accounts data sources and any methodological information essential for correctly interpreting the results; and
- Lessons learned from the exercise: Feedback from the WASH accounts team on the implementation of TrackFin, focusing on the methodology used but also on organizational and procedural aspects, for example the cost and resource requirements of the exercise.

In addition, an executive summary should be produced, summarizing the main findings. This should be a stand-alone document of maximum ten pages that can be shared with high level decision-makers.

The WASH accounts draft final report and draft executive summary should be presented at a national stakeholder group meeting. The meeting should validate the results and help clarify the main policy findings. This will provide the basis for engaging in broader dissemination of the results, as detailed in Section 3.3 below.

Outlines for the final WASH accounts report and the Executive Summary are available on the TrackFin website. These include the summary findings from the three countries where the exercise was piloted.

3.3 Disseminate the policy analysis

Step 3.3 – Tasks to be undertaken

- Prepare policy briefs for decision-makers focusing on their specific policy questions; and
- Communicate the findings to the wider sector and a broad general audience.

Once the results have been validated and the key policy messages emerging from the analysis have been extracted, the WASH accounts team should finalize the Executive Summary.

Short policy briefs (maximum of four pages) that extract key information in response to the main policy issues expressed in Step 1 should be prepared. This is a critical measure for conveying the results of the exercise to policy-makers and other sector actors in a clear and easily understandable way. Each policy brief could focus on a specific question, such as, “Does the geographical balance of WASH sector expenditure needs rebalancing?” “Does the country need to spend more on sanitation?” or, “How can additional funding from users be leveraged?” Writing these policy briefs will require a solid understanding of the sector context and the key policy decisions being debated.

This information and analysis can be used at the following stages of the policy process, as discussed in more detail in the Policy Note available on the TrackFin website:

- Advocacy and attracting funds
- Defining financing strategies
- Budgeting and planning
- Monitoring
- Regular tracking of funding, commitments, and targets
- Benchmarking against other sectors or other countries
- Coordinating donor aid.

These policy briefs should be circulated as widely as possible across the WASH sector, to decision-makers, high level members of government, WASH advocates, NGOs, and international organizations in the country. This wide dissemination is crucial to ensuring that the findings of the WASH accounts are understood, and also to raise awareness, gain support, and create future demand for such financial information.

In addition, countries should aim to make the collected data available online (downloadable in Excel format, for example) so that it can be used for further analysis by sector actors such as NGOs, think tanks, or policy research institutions. This can enhance transparency in the sector and provide insights to inform policy.

4 Step 4 – Prepare for the next WASH accounts

Step 4. – Tasks to be undertaken

- Make recommendations for the next exercise in terms of: scope and years to be covered; timing for the next data collection phase; testing other estimation methods; additional data collection; and possible improvements to existing information systems;
- Plan for the next stage: seek funding for the exercise and ways of building the capacity of the WASH accounts team; and
- Contribute to improving the methodology by responding to the feedback questionnaire:
  - Assess and comment on the suitability of the proposed classifications that define the WASH sector and its financing;
  - Assess and comment on the feasibility of collecting the kind of data required;
  - Assess the methodology proposed to value the financial flows and fixed asset stocks; and
  - Suggest improvements in respect of the classifications and the methodology.

4.1 Rationale for further rounds

Maximum value can be gained from the WASH accounts exercise when many countries apply the methodology and repeat it on a regular basis. The end goal of WASH accounts is not to produce data, which in itself has limited value, but to ensure that the data generated are transformed into policy insights and used to strengthen policy-making. Using the data is crucial, especially in the first exercise, to "make the case" for WASH accounts, demonstrate its pertinence to sector decision-making, and to encourage national decision-makers to keep producing WASH data over successive years.

Monitoring expenditure over time can also help to promulgate WASH accounts in other countries. Involving more countries in the production of WASH accounts on a regular basis will benefit all, as it provides the basis for benchmarking results and increasing understanding of differences in data analysis and outcomes.

Using WASH accounts to strengthen policy will also pave the way for institutionalizing the process. This will only take place if there is routine, government-mandated and country-owned production and utilization of a set of WASH expenditure indicators.

Fig. 8 below is based on lessons from the health sector, and illustrates how producing and using WASH accounts on a regular basis can generate a virtuous cycle. In order for this to happen, three key structural factors need to be in place:

- *A clear governance structure for the WASH accounts exercise* (including formal and informal arrangements), setting out who is responsible for what in respect of each WASH accounts activity. If the exercise is conducted by consultants, there has to be continuity between the exercises. One institution should be responsible for leading, planning, supervising, and providing quality insurance for the WASH accounts. This institution should also hold the database where data from all previous exercises is recorded and WASH accounts tables computed. The national stakeholder group and WASH Account team should be established as permanent bodies and meet on a regular basis.
- *Staff capacity*: Members of the WASH accounts team should be trained to implement the methodology, either by former members of the team (if there is staff turnover), international consultants, or nationals of other countries that have already implemented the methodology. This should include a "learning-by-doing" component on how to use the data collection tool.
- *Financing for WASH accounts production, and the dissemination and translation of findings*: Financing for WASH accounts activities should be secured by the lead institution. Countries may seek funding from development partners, or ask the TrackFin Secretariat for support in this endeavour.

Figure 8. Framework for institutionalizing the production and use of WASH accounts

Source: Authors. Adapted from World Bank (2011), Harnessing National Health Accounts to Strengthen Policymaking – A Compendium of Case Studies.

4.2 Formulate recommendations for the next WASH accounts in the country

To facilitate the regular production of WASH accounts, the team should initiate the subsequent iteration as soon as an ongoing exercise is completed. It is crucial to maintain momentum if capacity and experience are not to be lost.

Based on their experience, the WASH accounts team should formulate recommendations to the TrackFin champion and the national stakeholder group on how to improve the process for the next exercise. It should advise on scope (by sub-sector) and duration, and whether new data from additional actors or financing types should be gathered, potentially through ad hoc surveys. This could include household surveys, or surveys at the local government level, to collect more detailed estimates on funding allocation and spending. Additional data might be obtainable from existing sector data collection tools, surveys or information systems. This requires working with the partner institutions responsible for these tools or data collection methods.

Data could also be collected at a more disaggregated level. Expenditure on repayable financing from international donors, for example, can be divided into concessionary and non-concessionary repayable financing if extra data on the nature of each loan can be collected from primary sources.

4.2.1 Plan for the next stage

At the end of the exercise, the TrackFin champion and TrackFin Focal Point should come together to plan the next iteration, based on guidance from the national stakeholder group. It is essential to take advantage of the momentum created by the final report and policy briefs, and to maximize the attention of policy-makers and development partners to the results they show.

Fundraising is a critical aspect of planning the next stage. The planning should happen at the same time as the dissemination of findings, so that the national Focal Point can follow up rapidly with interested funders, including the national government, and present them with a proposal for a future exercise. The WASH accounts team, under the supervision of the Focal Point, should draft a budget and work plan for the next stage. This should include capacity building for the team.

The WASH accounts team should advise on the timing for the next data collection phase. New data collection may take place every one or two years depending on what is most appropriate for the policy and budgeting cycles, and taking account of habitual timing for the release of key data, such as national household surveys or census data.

4.2.2 Provide feedback on the methodology proposed

The WASH accounts team should also complete the feedback questionnaire, reporting on their experience with preparing WASH accounts and using this Guidance Document. This allows them to evaluate any methodological issues they have faced, and to suggest potential modifications to the methodology and classifications. Feedback is essential for the improvement of future exercises at the national level, but also to inform ongoing revisions to the methodology and Guidance Document at the international level.

A feedback questionnaire is provided for countries to report on their experiences with the implementation of TrackFin and application of the methodology.

Methodological Note No 1: WASH services classification systems

Objectives: This note presents existing international systems of classification of WASH-related products, services and activities. These have been used to develop the TrackFin classification system. The purpose of this Note is to increase the WASH accounts team's understanding of data from National Statistics Offices, which often use these classifications. It also highlights areas requiring longer-term methodological refinement to better capture WASH activities at the level of detail needed to inform policy-making. In particular, it proposes a separate category for hygiene services for immediate use and subsequent further development in TrackFin exercises.

MN 1.1. Existing WASH services classification systems

This section presents a list of existing international classification systems, showing how they capture water, sanitation, and hygiene activities. There are three main international systems of classification used to categorize industries, activities, goods and services. These are described in Table 5 below.

Table 5. Summary of main international systems of classification of goods and services

Classification	Purpose
CPC VERSION 2 (Central Product Classification)	Classifies goods and services to help answer the question, "What is being consumed?"
ISIC REV. 4 (International Standard Industrial Classification of All Economic Activities)	Classifies service providers to help answer the question, "Who provides these goods and services?"
COFOG (Classification of the Functions of Government)	Classifies functions performed to ensure that these products are provided. There are also other functional classifications such as CEPA (Classification of Environment Protection Activities), which are less frequently used.

Table 6 – Similarities between CPC, ISIC and COFOG classifications along the water and sanitation value chain below summarizes where the CPC, ISIC and COFOG classifications correspond along the water and sanitation value chain. The nature of these classifications is clarified below the table, with an explanation of the codes most relevant to the WASH sector.

The Central Product Classification (CPC) is a system used in national accounts to classify all goods and services based on their physical properties and intrinsic nature, and on their industrial origin. It is comprehensive, internationally recognized, and includes all economic activities. Its breakdown of activities into categories is not, however, a close match with WASH accounts' needs.

There is no clearly identified CPC category for sanitation and hygiene promotion services, although these may be aggregated into other "public service" categories, for example non-WASH education activities. In addition, services provided by government (i.e. public administrative functions) are classified on a highly aggregated basis. This prevents the identification of specific government functions.

Learning from SEEA-Water: Simplified standard SEEA-Water tables use only two of the products related to water: CPC 18000 (natural water) and CPC 94100 (sewerage, sewage treatment and septic tank cleaning services). This could be because they track products produced by water and sanitation industries (ISIC 36 and 37) and consider that other products are produced by the construction industry. However, to track expenditure related to capital investments, it is essential to track water and sanitation-related construction services.

The International Standard Industrial Classification of All Economic Activities (ISIC) is a United Nations system. It classifies economic data according to the type of activity carried out by an economic unit. An "industry" is defined as a set of production units engaged primarily in the same or similar productive economic activities. This classification examines only the activities undertaken and does not distinguish between them according to their legal status (i.e. whether the producers are governmental, non-governmental, or private).

Table 6. **Similarities between CPC, ISIC and COFOG classifications along the water and sanitation value chain**

Value chain	CPC (Central Products Classification)		ISIC (International Standard Industrial Classification)			COFOG	
	Code	Description	Code	Description	What it includes	Code	Description
Water supply services (S1)	53233	Dams	4290	Construction of other civil engineering projects			
	53231	Aqueducts and other water supply conduits, except pipelines	4220	Construction of utility projects			
	54341	Water well drilling services			Water well drilling and septic system installation services		
	18000	Natural water	3600	Water collection, treatment and supply	Collection of rain water and water from various sources such as rivers, lakes, wells		
					Purification of water for water supply purposes		
					Desalination of sea or groundwater to produce water as the principal product		
	69210	Water distribution through mains, except steam and hot water (on own account)			Distribution of water through mains		
	86330	Water distribution services through mains (on a fee or contract basis)					
	69230	Water distribution, except through mains (on own account)			Distribution of water by trucks or other means		
	86350	Water distribution services, except through mains (on a fee or contract basis)					
Sanitation services (S2)	54342	Septic system installation services	4220	Construction of utility projects	Water well drilling and septic system installation services		
	94120	Septic tank emptying and cleaning services	3700	Sewerage	Collection of sewage by sewer systems or sewage treatment facilities		
	94110	Sewerage and sewage treatment services			Treatment and disposal of sewage by sewer systems or sewage treatment facilities		

Table 6. **Similarities between CPC, ISIC and COFOG classifications along the water and sanitation value chain (continued)**

Value chain	CPC (Central Products Classification)		ISIC (International Standard Industrial Classification)			COFOG	
	Code	Description	Code	Description	What it includes	Code	Description
Unallocated construction activities (for both water and sanitation services) (S1 and S2)	53251	Local pipelines (water and sewerage)	4220	Construction of utility projects	Construction of pipelines and long-distance transport of water and sewage		
	53253	Sewage and water treatment plants			Construction of sewage disposal plants		
	54241	General construction of long-distance pipelines			Construction of pipelines and long-distance transport of water and sewage		
	54251	General construction of local pipelines			Construction of pipelines and long-distance transport of water and sewage		
	54253	General construction of sewage services and water treatment plants					
Support services (S3)	91123	Public administrative services related to housing and community amenities	8412	Regulation of activities that provide health care, education, cultural services and other social services, excluding social security	Public administration of programmes to increase personal wellbeing: health, education, culture, sport, recreation, environment, housing, or social services This class includes: • Administration of potable water supply programmes • Administration of waste collection and disposal operations	5.2	Wastewater management
						6.3	Water supply

There are two main categories relating to WASH activities, namely ISIC class 36 covering the collection, treatment and supply of water, and ISIC class 37 covering sewerage. These two categories are utilized by SEEA-Water in their Economic Accounts. While they are service-oriented, they do not capture the full range of activities involved in providing access to and delivery of water and sanitation services, such as construction of WASH infrastructure, or water resource management. Moreover, ISIC 36 does not separate water provided for domestic use from that provided for industrial use, or for irrigation canals, while ISIC 37 does not explicitly include faecal sludge management or hygiene promotion. Finally, activities under ISIC 84 (activities linked to collective government activities) are aggregated, so those specifically relating to the water and sanitation sector cannot be singled out in this system.

Classification of the Functions of Government (COFOG) is a classification of government expenditure according to purpose. It classifies transactions such as outlays on final consumption expenditure, intermediate consumption, gross capital formation, and capital and current transfers according to the function that the transaction serves. These COFOG categories allow further breakdown of the broad ISIC category in which water supply and sewage administration are included, i.e. ISIC 8412 (Public Administration).

Four COFOG categories relate to water management in general: wastewater management, soil and ground water protection, environmental protection not elsewhere classified, and water supply. These COFOG categories refer to collective services of government (formulation and administration of government policy, the setting and enforcement of public standards, and the regulation, licensing or supervision of producers, as in the case of education and health).

Other systems of classification of government environmental protection activities have been developed and could potentially be used. For example, Classification of Environmental Protection Activities (CEPA) was developed by Eurostat in cooperation with the United Nations to classify environmental protection activities, environmental protection products, and expenditures for environmental protection. These environmental protection activities are production activities in the sense of the SNA as they combine resources, such as equipment, labour, manufacturing techniques and information networks or products in order to create an output of goods or services. In the case of water, CEPA includes wastewater management and protection and remediation of soil, ground water and surface water.

Learning from SEEA-Water: SEEA-Water uses the CEPA definition of wastewater management to classify expenditure for activities and measures aimed at preventing the pollution and protection of water through reductions in the release of wastewater into inland surface water and seawater. As a CEPA category does not exist for water management and exploitation, SEEA-Water has created this classification, which corresponds to ISIC 36 and part of ISIC 84. However, according to the UN Statistics Division, this classification is not greatly used in developing countries.

MN 1.2. Approach to defining the TrackFin classification of services

Existing international classification systems do not fully capture the reality of the WASH sector and hence have limited capacity to answer policy questions. CPC categories are too infrastructure-based, while ISIC categories do not explicitly include some services essential to developing countries, such as faecal sludge management. The TrackFin classification of water and sanitation services presented in Table 1 of the Guidance Document builds to the extent possible on existing classifications and definitions. It also seeks to better reflect the realities of providing water and sanitation services, particularly in developing countries.

This classification covers the main activities alongside the WASH value chain, including hygiene. Table 1 also shows whether and to what extent the categories proposed for WASH accounts and those of international classification systems correspond. Water Resource Management activities directly relevant to water and sanitation services provision (S4 in the TrackFin classification) are not explicitly mentioned as a separate category in CPC, ISIC, and COFOG, which is why they are not shown as corresponding.

In the longer term, the WASH international community should examine whether a revised and more disaggregated classification of WASH services is needed to create even closer matches with the sector's analytical and policy needs.

If this long-term objective were pursued, the following limitations of the current TrackFin classification system would need to be addressed:

- There is no internationally agreed definition and classification of hygiene services. Section MN 1.3 below presents the rationale for the proposed TrackFin classification but also identifies how it would need to be further developed in subsequent exercises; and
- The list of support services (usually provided by government) is rather limited and needs to be further developed in the context of country needs.

MN 1.3. Proposals for further developing the classification for hygiene services

As indicated above, there is no internationally agreed definition for hygiene at present. Furthermore, none of the existing international classification systems identifies hygiene activities relating to water and sanitation as a specific product or service category. If hygiene financing is to be adequately tracked, this requires the development, adoption, and mainstreaming of specific classifications for hygiene products, service providers, and functions.

During the TrackFin pilot phase, countries identified the need for a separate category of hygiene activities. In the earlier version of the Guidance Document, hygiene promotion had been designated under either sanitation or support services to WASH. The creation of a definition for hygiene and a list of hygiene related activities is therefore now proposed.

Existing definitions of hygiene: WHO defines hygiene as "the conditions and practices that help to maintain health and prevent the spread of diseases". In its Hygiene Framework, WaterAid defines hygiene as "personal and household practices such as handwashing, bathing, and management of stored water in the home, all aimed at preserving cleanliness and health" (WaterAid, 2012). This last definition is focused on household hygiene, however, whereas it should also encompass practices in the community and in public places, such as in schools and health facilities.

Water Aid's hygiene framework identifies various areas of hygiene behaviour that have a significant impact on the transmission of water and sanitation-related diseases. These are:

- Safe disposal of human excreta (including that of children and infants);
- Water source protection and use (from water source to transportation, storage, and point of use);
- Personal hygiene (handwashing with soap at critical times, as well as body, face and clothes);
- Food hygiene (cooking, washing, storing, preventing cross contamination); and
- Domestic and environmental hygiene (disposal of solid waste and animal excreta, control of wastewater and rainwater, cleanliness of the house and its surroundings).

In addition, other frameworks also include menstrual hygiene management as part of personal hygiene. Some of these areas fall outside the WASH sector, for example food hygiene, animal hygiene, and solid waste management. Some of these areas are already included in water or sanitation service classification systems, such as safe disposal of human excreta, and water source protection and use. The TrackFin methodology therefore proposes to clearly identify the scope of hygiene activities and their allocation between sub-sectors.

The proposed list of activities falling within the "hygiene" category is as follows:

- Hygiene promotion programmes by government or service providers, for households, communities and in public places such as schools and clinics: This includes hardware and software interventions, including handwashing campaigns, sanitation promotion and hygiene education, menstrual hygiene management, distribution of hygiene products, and chlorine distribution; and

- Personal and household-level hygiene activities related to water and sanitation: This includes handwashing, bathing, washing clothes and washing material/equipment (soap, tippy taps, bathroom); chlorine for point of use water treatment. This item was removed from the “water” category.

Food hygiene, animal hygiene, and solid waste management are excluded from this category.

Improving the definition of hygiene services will require further research and consultation, preferably conducted collaboratively by institutions involved in the provision of these services, with the aim of adopting and mainstreaming an international definition and classifications.

Methodological Note No 2: Classification of WASH uses, actors and financing types

Objectives: This note presents existing internationally-accepted classification systems for WASH uses, actors and financing types that have been used as reference points for developing the TrackFin system. Classifications of WASH service use, service providers and financing units were adapted from SEEA-Water, while the classification of financing types is an adaptation from the OECD 3Ts (Tariffs, Taxes and Transfers).

MN 2.1. Classification of WASH service uses, service providers and financing units

This section covers the classifications used by SEEA-Water. These are based on internationally accepted statistical conventions, and were used as the basis for developing the TrackFin classification of WASH service uses, service providers and financing units.

Classification of WASH service users: Existing international classification systems do not refer to water uses but rather to water users. This is the case of SEEA-Water, which classifies water users based on the ISIC classification system (see Table 6 – Similarities between CPC, ISIC and COFOG classifications along the water and sanitation value chain for more detail). Table 7 below summarizes how WASH service users are classified in the SEEA-Water methodology.

Table 7. Classification of water services users in the SEEA-Water system

Categories of water service users in SEEA-Water	Explanation and matching categories
Specialized producers – intermediate consumption • ISIC 36 water producers • ISIC 37 sewerage services producers	ISIC 36 and ISIC 37 producers are identified as users only if they themselves consume the water and sanitation services they produce
Other producers (ISIC 1–3, 5–33, 41–43, 35, 38, 39, 45–99) – intermediate consumption	Includes producers involved in other types of activity that consume water and sanitation for industrial or commercial purposes
Households	Domestic use
General government • Can be disaggregated into central and local government	Institutional use
Rest of the world	International users; for water supply and sanitation, this is not directly relevant

Classification of WASH service providers: SEEA-Water classifies producers into "relevant ISIC categories, regardless of the kind of ownership, type of legal organization and mode of operation. Even when activities for water collection treatment and supply (ISIC 36) and sewerage (ISIC 37) are carried out by the government, they are therefore classified as far as possible in the specific division (ISIC 36 and 37)." It also shows in separate tables water and sewerage services self-provided by households, and water-related collective consumption services provided by government.

Table 8 below sets out the different categories of water service providers used in SEEA-Water.

Table 8. Classification of water services providers in the SEEA-Water system

Categories of water service providers
Specialized producers: • ISIC 36 water producers • ISIC 37 sewerage service producers
Other Producers (ISIC 1–3, 5–33, 41–43, 35, 38, 39, 45–99)
Households (as producers for their own use)
General government (as a producer of water-related collective consumption services) • Can be disaggregated into central and local government

Classification of WASH financing units: To identify the sources of financing, SEEA-Water refers to "financing sectors". These are the entities actually bearing the cost, and are characterized by type of ownership, which includes: General Government, potentially disaggregated into central and local government; Not-for-profit institutions serving households; Corporations; Households; Rest of the world. These financing sectors are shown in Table 9 – Classification of water financing sectors in the SEEA-Water system below.

Table 9. Classification of water financing sectors in the SEEA-Water system

Categories of financing sectors
General government • Can be disaggregated into central and local government
Not-for-profit institutions serving households
Corporations • Specialized producers: (ISIC 36 water producers; ISIC 37 sewerage service producers) • Other Producers (ISIC 1–3, 5–33, 41–43, 35, 38, 39, 45–99)
Households
Rest of the world

In the same way, financing units in WASH accounts are classified by type of institutional sectors, as this provides the best response to policy questions on the origins and channelling of funds received by service providers.

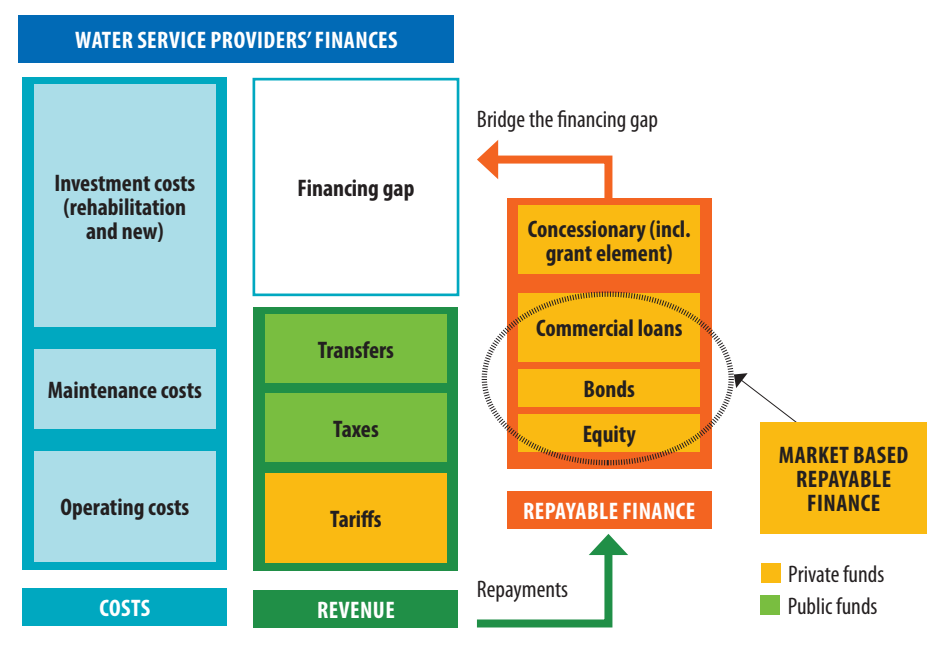
MN 2.2. Classification of WASH financing types

This section presents two existing classification systems that identify financing types: the OECD 3Ts classification, which refers to financing types as "financing sources", and SEEA-Water. The OECD 3Ts system was used as the principal basis for the TrackFin classification of financing types.

WASH sector financing sources according to the OECD: the 3Ts

Since the Camdessus report on water financing (Winpenny, 2003), the water sector has referred to three main sources of finance for the water sector as the "3Ts", i.e. tariffs, taxes and transfers, to which must be added repayable financing sources. These sources of finance can be combined to cover the costs of water service provision, as summarized by the OECD in Fig. 9 below (OECD, 2010).

Figure 9. Sources of finance for the WASH sector



Source: (OECD, 2010), *Innovative financing mechanisms for the water sector.*

The OECD defines these sources of finance as follows:

- Tariffs are funds contributed by WASH service users to obtain the services. Users generally make payments to service providers for access to and use of the service. Where a service is self-provided, for example, if a household builds and operates its own household latrine, the equity invested by the household in the form of cash, material or time – "sweat equity" – would also fall under tariffs.

- Taxes refer to funds originating from domestic taxes that are channelled to the sector via transfers from any level of government – national, regional or local. Such funds would typically be provided as subsidies for capital investment or operations. "Hidden" subsidies may include tax rebates, soft loans (i.e. at a subsidised interest rate) or subsidised services such as electricity.

- Transfers refer to funds from international donors and charitable foundations (including NGOs, decentralized cooperation or local civil society organizations) typically originating from other countries. These may take the form of grants, guarantees, or concessionary loans (i.e. through the grant element included in a concessionary loan, in the form of a subsidised interest rate or a grace period).

WASH sector investments tend to be capital-intensive and 'lumpy' by nature, characterized by relatively large investments with a long asset life. It is therefore seldom possible to finance all necessary investments up-front. If additional financing cannot be raised, either by reducing costs or by increasing the 3Ts, it is standard practice for the financing gap to be "bridged" with a mix of repayable financing types. These may include the following:[1]

- Bank loans, including commercial finance, microfinance and concessionary loans. The latter are loans from donors that would include a grant or transfer element in the form of an interest rate below market rate, or a grace period;
- Equity provided by investors with the expectation that it would be repaid and would earn a rate of return on the capital invested. In going concerns, equity may be provided over very long periods of time and may therefore not be repaid. A hidden form of public subsidy (or transfer) may consist of making an equity investment with no expectation of repayment or return; and
- Other financial instruments, such as bonds, whereby a debt title is sold in the market to a large group of bond investors. Bond issuers may include municipalities –"municipal bonds" – or public and private companies – "corporate bonds."

Evaluation of the relevance of the OECD 3T typology for WASH accounts

The OECD 3T typology is relevant to WASH accounts in the sense that it categorizes the flows of funding according to their origin and nature (for example, distinguishing between revenue from services, and external subsidies). This terminology has become well known and accepted in the sector. Its value is in conveying in simple terms a number of key concepts about WASH sector financing, such as the understanding that full cost-recovery from tariffs should not be the only objective and that sustainable cost recovery from a mix of the 3Ts is an acceptable alternative.

Concerns regarding this typology were, however, raised in previous consultations:

- Some sector stakeholders expressed concern that this typology is principally recognized by international organizations and external support agencies such as donors or NGOs. Its ownership by developing country actors is still in progress.
- The terminology can be confusing in the context of some developing countries. As WASH accounts are intended for use by policy-makers, the classifications adopted need to be straightforward and easily understood, without allowing for any misinterpretation.

[1] For large, capital intensive service providers individual loans may be repaid, but the total debt level may not reduce as loans are 'rolled-over' or renewed to maintain the same balance between debt and equity finance.

Additional concerns have been raised about the 3T terminology, including the following points:

- The term tariff is understood in common language as the tariff paid by users to utilities. However the OECD typology includes in this category payments made by households for self-provision. These two types of financing are substantially different, with different data sources. Thus the two types of financing should be clearly separated if possible.
- Under the item transfer, the OECD typology includes "funds from international donors and charitable foundations (including NGOs, decentralized cooperation or local civil society organizations) that typically come from other countries". In several countries, however, such as India or many Latin American countries, the term transfer often refers to central government budget allocated to local government in decentralized settings. This is part of what the OECD terminology refers to as taxes, although this term is relatively vague and can be misunderstood in developing countries.

Given the interpretation differences that could arise around the OECD terminology, it was adjusted to provide the basis for the TrackFin classification of financing types. These are the equivalent of what the OECD would refer to as "financing sources."

WASH sector financing types according to SEEA-Water: Financing units and sectors

SEEA-Water does not consider financing types as such. But the financing sectors identified by SEEA-Water (as defined in Table 9 – Classification of water financing sectors in the SEEA-Water system above) comprise categories of financing types not explicitly considered by the OECD 3T terminology. These include transfers from not-for-profit institutions serving households (which might be in kind or in cash, and may originate from domestic voluntary sources as opposed only to international transfers). International transfers from the rest of the world, which might not be described as Official Development Assistance (such as transfers from non-OECD donors, including from BRICS), might also be included.

TrackFin classification of financial types

The TrackFin classification of financing types broadly aligns with the 3T terminology, but provides additional disaggregation and reconciles with the SEEA-Water terminology. It is presented in Table 10 – TrackFin classification of WASH financing types below, showing where it matches the OECD 3T and SEEA-Water classifications.

Table 10. TrackFin classification of WASH financing types

TrackFin financing types		Definition	Alignment with OECD typology of financing sources	Alignment with SEEA-Water categories of financing sectors
FT1	Tariffs for services provided	Payment by users to service providers for access to and use of a service. This category can be further disaggregated into two sub-categories: FT1.1 Domestic tariffs for services provided, FT1.2 Non-domestic tariffs for services provided.	TARIFFS	Part of funding via "Corporations"
FT2	User expenditure on self-supply	Funding from users to invest in or provide the service themselves. Self-providing users have to pay an initial investment up-front (in a well, a private water production system, or a private latrine) for access to the service, and must then cover operating and maintenance costs themselves; this can be in form of cash, material or time. This category can be further disaggregated into two sub-categories: FT2.1 Domestic user expenditure on self-supply, FT2.2 Non-domestic user expenditure on self-supply.		Households and "Corporations"
FT3	Domestic public transfers	Public transfers from government agencies (central or local government) to WASH actors. These are often subsidies from taxes or other sources of government revenue. This category includes only grants and excludes concessionary loans that are included in FT6 Repayable financing.	TAXES	Governments
FT4	International public transfers	Voluntary donations (or grants) from public donors and multilateral agencies that come from other countries. Concessionary loans are excluded from this category and entirely included in FT6 Repayable financing.	TRANSFERS	Rest of the world
FT5	Voluntary contributions	Voluntary donations (or grants) from international and national non-governmental donors including from charitable foundations, non-governmental organizations (NGOs), civil society organizations and individuals (remittances). Concessionary loans are excluded from this category and entirely included in FT6 Repayable financing.		Not-for-profit institutions serving households
FT6	Repayable financing	Sources of finance from private or public sources that ultimately need to be repaid, such as loans (including concessionary loans and guarantees), equity investments, or other financial instruments such as bonds. This category can be divided into two sub-categories: FT6.1 Concessionary repayable financing, and FT6.2 Non-concessionary repayable financing.	REPAYABLE FINANCING	Part of funding via "Corporations"

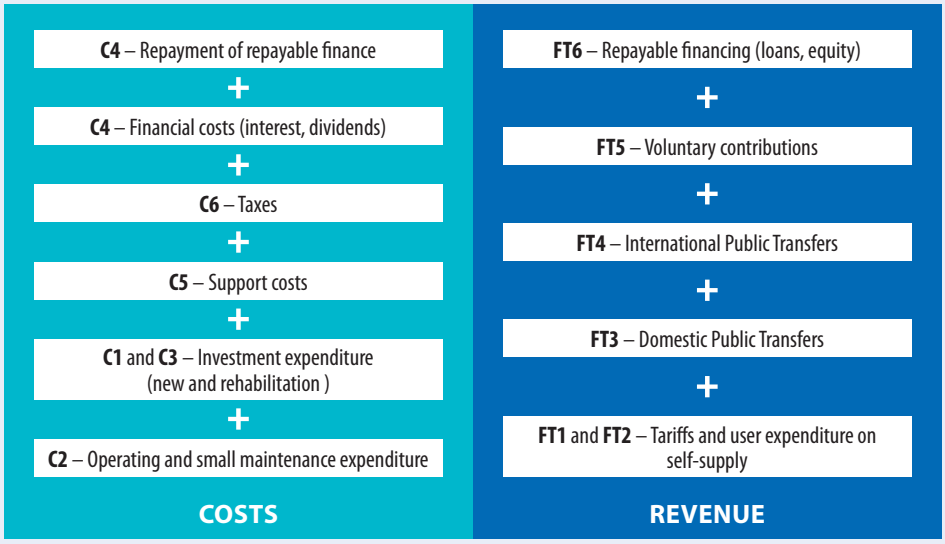
Methodological Note No 3: Estimating financial flows on a cash flow basis and alternative methodologies

Objectives: This note provides guidance on the methodologies required to track financing types (i.e. sector revenue) and costs on a comparable basis. It argues that a cash flow approach should be used wherever possible. It also outlines a possible longer-term development, which would entail using an economic approach to estimate financial flows.

MN 3.1. Rationale for estimating financial flows on a cash flow basis

The underlying philosophy of the Financial Flow Approach is to achieve the recording of financial flows on a yearly basis, i.e. the actual cash flows to cover costs that come in and out of the sector. In theory, financial flows computed using the Financing Type Approach (to estimate sector revenue) and the Cost-based Approach (to estimate the costs incurred by the sector) should balance, as represented in Fig.10 below.

Figure 10. Costs and revenue to be computed for the Financial Flow Approach



In practice, however, differences in accounting treatment of financial flows are likely to introduce slight differences between financial flows using these two methods of computation. Financial flows on the cost and revenue sides do not necessarily happen simultaneously, and the point in time at which they are recorded is significant. How financial flows are computed depends on the accounting methods used by the different actors from which data is collected, i.e. on whether the cash flow or the accrual accounting method is used, as described in more detail in Box 14 below.

Box 14. Accounting methodologies and financial statements

Financial transactions can be recorded through two accounting methods:

- Cash flow accounting records cash flows received and disbursed when payment is made (or received);
- Accrual accounting records a transaction when economic value is created, transferred or extinguished. This means that an economic event is recorded at the time the transaction occurs rather than when payment is made (or received).

In the case of tariffs for network water supply services, the cash flow method records these based on bills collected, i.e. the amount of cash paid by users to service providers in the accounting period. By contrast, the accrual accounting method records tariffs based on revenue calculated when bills are sent to users, i.e. the tariffs that are due rather than tariffs actually paid.

The three main financial statements prepared by most companies above a certain size compute financial transactions in different ways:

- The Cash Flow statement records the flows of cash in and out of a company's bank account for a certain time period. It is based on the cash flow accounting method.
- The Income and Expenditure statement (or the Profit and Loss account) records the wealth-creating revenue and the wealth-destroying charges of a company for a certain time period. It is based on the accrual accounting method.
- The Balance Sheet is a picture of the value of assets and liabilities of a company at a fixed point in time.

The data obtained from different types of stakeholder with different accounting systems can either be computed on a cash basis or on an accrual basis. For example, governments or donors disbursing funds to the sector are likely to use a cash flow approach and to record such funds when payment is made, whereas service providers above a certain size are more likely to use accrual accounting methods. They may also be less likely to publish cash flow statements, or compilations of cash flow statements at sector level are less likely to exist.

Using the accrual method, as recommended by the System of Health Accounts and in line with the System of National Accounts, would construct a more accurate picture of sector financing, as transactions would be recorded when they result in wealth creation. However, the challenges of compiling WASH accounts at the national level based on accrual accounting are likely to be the same as those encountered in the health sector, namely that it is not possible to get into the detail of each financial statement collected from service providers. More detail is given in the box below.

Accounting methods used in the System of Heath Accounts and challenges

The SHA Manual points to the methodological difficulties associated with seeking to use an accrual method. "This [System of Health Accounts] Manual recommends the accrual method, in which expenditures are attributed to the time period during which the activity took place, rather than the cash method, in which expenditures are registered when the transaction that paid for the activity took place. However, it is recognized that cash accounting may still be applied in some countries or in some parts of the health system. Health accountants may find a variety of accounting practices in their data sources. Good practice should involve converting everything to an accrual basis to the extent possible".

Source: *A System of Health Accounts* (OECD, 2011:111).

As the objectives of TrackFin are to track funding flows, and given the importance of government and donor funding in the sector, the cash flow approach is recommended wherever possible. Tariffs should therefore be recorded based on the actual cash received (not billed) from users for services provided. Where cash flow statements from utilities are available, cash flows should be used. If these are not easily available, however, information from Income & Expenditure statements can also be used. Repayable financing should be accounted for at the time and value that the cash flow is received by the service providers, assuming it is used in the same year. Repayments and costs of capital should also be recorded as expenditure. More guidance on the treatment of loans is given in Methodological Note No 4: Estimating financial flows with the Financing Type Approach.

The box below presents a summary of the advantages and disadvantages of using a cash flow approach to estimate financial flows.

Box 15. Advantages and disadvantages of using the cash flow approach to estimate financial flows

Advantages

- Easier to compile as many data sources record expenditure based on cash flows
- Less risk of mixing different accounting methods
- Shows the actual expenditure and revenue in that year, taking into account expenditure that was not paid and the revenue not collected
- Shows flows of capital expenditure (which would not appear using an accrual method)

Disadvantages

- Shows repayable financing received and thus does not show whether "actual" revenue to the sector is sufficient to cover expenditure

MN 3.2. Using an economic approach as a possible alternative

Because it is based on cash flow accounting, the proposed cash flow approach to estimating financial flows does not provide information about whether the sector is solvent, i.e. whether non-repayable revenue (real revenue) is sufficient to recover the full costs, including capital maintenance costs, required to keep fixed assets functioning. This approach therefore does not reveal whether or not the sector is financially sustainable in the long-run.

To address these concerns, economic regulation usually relies on an economic approach, based on accrual accounting, to estimate the financing requirements of service providers. Applying this approach at sector level would be an interesting way to assess the financial sustainability of the sector as a whole. Box 16 below indicates how this economic approach might work.

Box 16. A possible economic approach to estimating financial flows in the WASH sector

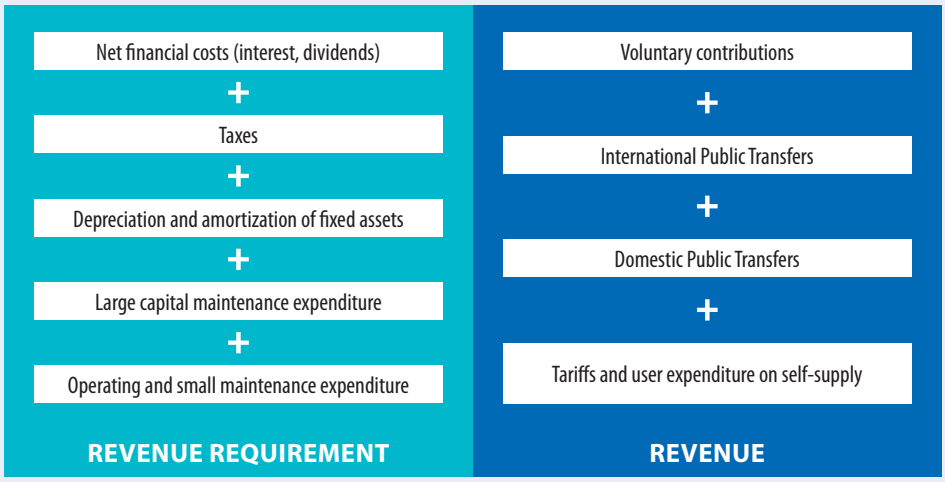
An economic approach could be used to estimate the revenue required to recover the full costs of the life-cycle of service provision. This economic approach would capture operating and maintenance costs, large capital maintenance expenditure and financial costs and taxes, but would exclude net capital expenditure and include only the depreciation of assets. It would show if, in the long-term, the sector is generating sufficient revenue to cover the full life-cycle costs and the repayable finance.

An economic approach would estimate the financing requirements of the sector based on projected costs, including the following:

- Operation and maintenance recurrent costs.
- Capital maintenance costs (for capital maintenance expenditure). A very crude measure of these capital maintenance costs can arguably be depreciation, as depreciation can be seen as "what needs to be set aside to replace past investments." However, whether depreciation amounts can adequately reflect what needs to be spent on capital maintenance would largely depend on asset valuation methods. In most cases, when depreciation is set based on historical asset values, corresponding depreciation amounts are likely to be insufficient to cover real capital maintenance requirements. A regulator such as Ofwat has sought to address this by introducing specific capital maintenance costs when estimating utilities' revenue requirements (to be covered through tariffs). Attributing such values can, however, be difficult and controversial, and are usually not estimated in most water sectors.
- An expected return on the asset base (estimated by applying a Weighted Average Cost of Capital (WACC) to the projected asset base, which includes projected new investments). This provides a sound basis for budgeting and tariff setting as it allows the smoothing out of future revenue requirements.

Estimation of the revenue requirement in this way could be compared to the actual revenue for the sector (from tariffs, users' non-tariff contributions or non-repayable transfers) to assess whether or not the sector is sustainably financed.

Figure 11. Costs and financing types recorded by the economic approach



Using the economic approach is not recommended at this stage. It would add further complexity and elements to the requirements for estimating revenue that are likely to be very difficult to compile. Moreover, as this approach has to be applied at service provider level, it is not certain whether expenditure can simply be added together across service providers to create a sector picture. As service providers can be public, private, corporate, or government organizations, and even communities, it may not be possible to estimate all expenditure based on accrual accounting.

An additional methodological challenge lies in the estimation of large capital maintenance expenditure and depreciation of fixed assets, which would need to be done based on an ideal lifetime of assets and estimation of their current value using IFRS standards. A simplified model for estimating large capital maintenance expenditure could be developed based on the current UK Ofwat approach.

Methodological Note No 4: Estimating financial flows with the Financing Type Approach

Objectives: This note provides guidance on tracking financial flows in the WASH sector using the Financing Type Approach. It draws on the experience of the System of Health Accounts in estimating financing types. The note indicates what the potential sources of information and data might be for each type of financing, identifying challenges and possible solutions in each case.

MN 4.1. Collecting data by financing types

As explained in the main Guidance Document, there are numerous types of financing that can be drawn upon to finance the sector. Identifying information on each type can be done in various ways, as outlined in Table 11 below. The most appropriate method for gathering data on financing types has to be decided on a country-by-country basis, depending on data availability. Additional guidance on information gathering for each type of financing is provided below the table.

Table 11. Gathering data on financing types

Categories of financing types	Data sources and collection methods
Tariffs for services provided (FT1)	• Use existing sources where available, such as IBNET, national regulators or service providers' associations, and strategic financial planning exercises at national level • For main service providers, obtain turnover data per WASH service; in decentralized countries, organize a survey of formal service providers • Organize an inventory and survey of other service providers (including small-scale informal providers) to assess their overall tariff revenue
User expenditure on self-supply (FT2)	• For households: – Rely on existing household survey data on coverage – Organize ad hoc household surveys to assess their investments in self-provided water or sanitation • For other user types, it can be difficult to obtain data. Water basin authorities or environmental protection agencies might collect data on self-supply from industries and should be consulted
Domestic public transfers (FT3)	• Rely on national and local government financial accounts. These may be consolidated in the main public financial information system recording public expenditure, or could be held by the Ministry of Finance. • Rely on national and local government actual expenditure data collected by National Statistics Offices (NSOs) • Collect expenditure reports from main governmental WASH programmes • For central ministries and public agencies: Create specific questionnaires to collect primary data on transfers received and provided • For decentralized public bodies (such as local governments): Create a specific questionnaire to collect primary data, at least from a sample • For main service providers: Create a specific questionnaire to collect primary data from a sample on transfers received
International public transfers (FT4)	• Obtain data from the OECD DAC database • Collect data on transfers received from national and local government financial accounts and main service providers • Collect data on transfers sent by creating specific questionnaires to collect primary data from multilateral and bilateral donors
Voluntary transfers (FT5)	• Collect data on transfers received from national and local government financial accounts • Collect data on transfers received by creating specific questionnaires to acquire primary data from a sample of NGOs and other charitable organizations
Repayable financing (FT6)	• Rely on surveys of the commercial banking sector • Collect data on repayable financing provided by creating specific questionnaires to acquire primary data from main lenders (government agencies and development banks, multilateral and bilateral donors) • Collect data on repayable financing received by creating specific questionnaires to acquire primary data from main borrowers (main service providers)

FT1: Tariffs for services provided

Information on tariffs paid to formal WASH service providers exists at a disaggregated level (i.e. at the level of each service provider) but obtaining this information usually requires careful examination of the service providers' financial accounts and tariff schedules.

Following the Cash Flow Approach (see Methodological Note No 3: Estimating financial flows on a cash flow basis and alternative methodologies) actual tariffs paid by users and collected by service providers should be tracked, including subsidies and taxes on products.

This approach differs from that used in the SNA, which recommends calculating the "output" or total amount of sales, shipments or turnover following the accrual accounting methods (referred to as the economic approach in the Guidance Document). It can be expressed either in terms of producers' prices or basic prices. The differences are due to subsidies and taxes on products. Basic prices include subsidies on products and exclude taxes on products. Producers' prices exclude subsidies on products and include taxes on products.

Some countries or organizations have gathered data on average tariffs in a given country or in different cities,[1] while other organizations gather and present data on tariff structures at country level. However, few if any countries consistently and regularly collect data on the total amount of revenue generated through tariffs paid by users for services provided.

The TrackFin methodology requires gathering data of this kind at both aggregated and disaggregated levels:

- *Aggregate information on revenue from tariffs*: This is the aggregate of all revenue generated from all types of service at the level of service providers, based on what is usually referred to as "turnover from sales of water/sanitation services." It is extracted from the profit and loss accounts of service providers, preferably relying on existing databases in the case of multiple providers.
- *Disaggregated information on revenue from tariffs*: In most cases, disaggregated information on the distribution of revenue from tariffs between various services (water, sanitation and other services), between various types of users (households, businesses or industries, institutions) or various regions can be obtained from commercial data. This requires a specific visit, or sending a questionnaire, to each service provider, unless this has already been computed in a database.

Where the provision of WASH services is highly decentralized, there may be a large number of service providers. Informal providers may account for a large share of the market.

To overcome these potential difficulties, the WASH accounts team can seek to obtain data from:

- National water sector economic regulators (for example, NWASCO, the National Water Supply and Sanitation Council in Zambia, PURC in Ghana, and WASREB in Kenya);
- National utility associations such as ABCON[2] in Brazil;
- Global surveys and databases that collect information on tariffs, such as the International Benchmarking Network for Water and Sanitation Utilities (IBNET) benchmarking platform managed by the World Bank, which includes a water tariff database developed in 2011; and
- Strategic Financial Planning exercises for the sector, sometimes carried out under the auspices of international organizations such as the OECD or the World Bank.[3]

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1 An example is the OECD data for a set of cities and countries around the world (OECD, 2009. Managing Water for All – An OECD perspective on pricing and financing. Paris: OECD Publications.)

2 "ABCON: Associação Brasileira das Concessionárias Privadas de Serviços Públicos de Água e Esgoto": The association of private and public concessionaries for water and sewerage.

3 The following OECD publication gives an overview of tools that can be used to improve financial management in the sector, including strategic financial planning tools. http://www.oecd.org/env/resources/meetingthechallengeoffinancingwaterandsanitationtoolsandapproaches2011.htm

Box 17. Regulatory data on tariffs of service provision from national regulators

Data on tariff structures may be available from the national regulator of water and sewerage. For example, the Office of Water Services (Ofwat) is the economic regulator of the water industry in England and Wales. Every year, Ofwat monitors and approves each company's water and sewerage charges to check that they respect the price limits set. Results were published yearly, and are now available online.

These price limits are set by the regulator every five years by assessing in detail the operators' business and financial models. To conduct price reviews, they rely on financial models that capture all financial flows, including revenue from tariffs and other sources, and sources of repayable financing. The regulator builds into the price limits, and therefore the tariffs charged to customers, the cost of servicing the debt and equity by estimating the value of the regulatory fixed assets base. All this information is made publically available online, except for any information deemed commercially sensitive.

To create WASH accounts, financing types must be tracked by use. For served use, the revenue from tariffs should be tracked by user types, differentiating at a minimum between domestic and non-domestic users. If the total revenue only is available in the service providers' financial statements, the WASH accounts team should collect additional data on the average tariff charged to each user category, and the volume consumed by each user type, in order to allocate revenue to their financing units. When recording the data, this category can be further disaggregated into additional sub-categories such as: FT1.1 Domestic tariffs for services provided and FT1.2 Non-domestic tariffs for services provided.

As stated above, tariff surveys are unlikely to estimate total revenue from tariffs but are more likely to include data on average tariffs or tariff structures. The WASH accounts team should therefore process this data, using complementary datasets on the number of customers and their respective consumption. This could, however, become a somewhat complex exercise when tariffs are structured around consumption blocks, in which case some approximations may be necessary.

In the case of informal service providers, it is unlikely that information on their revenue from tariffs is readily available. Where informal providers serve a substantial share of the market, surveys based on a representative number (and their customers) should be conducted in order to obtain data on the revenue from tariffs that they receive. The tariffs they charge are likely to be higher than those of formal operators, but the volumes consumed will inevitably be lower, so information on tariffs as well as volumes consumed should be collected for a representative sample. Extrapolation from the resulting data should be based on the average number (and size) of informal service providers, but should exclude households, which are covered under FT2 User expenditure on self-supply. The additional effort of collecting information on tariffs paid to informal providers would only be justified in countries where this expenditure is significant.

FT2: User expenditure on self-supply

The second financing type emanating directly from users is referred to as user expenditure on self-supply.[1] This financing type principally captures investment in water self-supply solutions (private or community wells, small private water production systems, water tanks) and household level sanitation.

If possible, the category User expenditure on self-supply should be disaggregated into at least two sub-categories: FT2.1 Domestic user expenditure on self-supply and FT2.1 Non-domestic user expenditure on self-supply, to clearly distinguish whether expenditure by households or non-domestic use is being tracked.

Potential challenge: Distinguishing between household expenditure on self-supply and non-domestic expenditure on self-supply

- For completeness, this category includes all user expenditure on self-supply, including investments and operation and maintenance made by non-domestic users, such as industries or institutions with their own water supply. This can include building small systems for water required in industrial processes or for distributing drinking-water on their production sites. Some industries, such as mining, can be major investors. If these users do not distribute their water as a service to customers, the expenditure should be recorded as self-supply.
- It may be difficult to track non-domestic expenditure on self-supply as there is very little information publicly available. Some information may be found in surveys administered to industries by water basin agencies, or an environmental protection agency that issues water abstraction licences.

[1] Note that in the OECD 3T terminology, these are included in "tariffs." They are separated in the WASH accounts classification because they represent very different financial flows that have to be recognized in their own right, and because the methodology for their estimation is different.

It is important to track this financing type as it can represent a substantial proportion of investment in water and sanitation, not only by users (particularly households), but by the country as a whole. Yet it is not normally tracked, in large part because doing so is difficult. This is discussed below.

Estimation of user expenditure on self-supply lies at the intersection of the Financing Type and the Cost-based Approaches, as it captures both financing from users as financing units and expenditure from users as service providers. Two categories of cost are relevant to user self-expenditure: (C1) investment costs, and (C2) operating and maintenance costs (see the cost classification in Methodological Note No 5: Estimating the costs of providing service with the Cost-based Approach). Data collection methods for each are likely to be different.

In seeking to assess expenditure specifically from households, the WASH accounts team should identify which methodology can yield the best results on the basis of data availability. In most countries, it is unlikely that estimates of household expenditure on self-supply will exist or be readily available. Some household surveys may include questions on household WASH expenditure, but these will typically focus on monthly operating expenditure. They will not always distinguish between served and self-provided supply, so would therefore include both tariffs and household expenditure on self-supply.

To address this issue, the average expenditure of rural households can be used as a proxy. Rural households are less likely to be connected to a piped water supply, although this varies greatly from one country to another. They are not a sufficiently reliable data source to allow estimation of household expenditure on self-supply as described in the Box 18 below.

This view was expressed by the WASH accounts team in discussions with the NSOs in Brazil and Morocco. These NSOs agreed to consider revising the WASH-related questions in their future household surveys.

To derive estimates on expenditure in the absence of reliable data, it is therefore necessary to rely on existing survey data or to conduct ad hoc surveys. The data collection methods for C1 and C2 will be different, as discussed below. Average expenditure can be estimated for main activity types, for example on a latrine (by type of latrine), a water point (borehole), or a water tank. The methodology and assumptions used should be properly documented in an annex to the WASH accounts final report.

While households may allocate resources for self-supply both in cash and in kind, only monetary expenditure should be included in the WASH accounts. This is to ensure international comparability of estimates. It holds for both investments and operations and maintenance expenditure, and is in line with current guidance from the System of National Accounts. The latter also contribute to the System of Health Accounts, as detailed in the box below.

Learning from the health sector: Estimating the costs of self-provision

Whereas the actual costs of self-supply to households are estimated (such as investment or operating costs), free labour provided by households to build latrines should not be included. This is in line with the System of National Accounts, which does not include non-monetary contributions. It is also in line with System of Health Accounts practice. The value of these in-kind activities for self-supply can still be estimated and provided as a reference point, but it cannot be shown as part of the total expenditure used for comparison of WASH expenditure with other economic aggregates or for international comparisons.

Estimating household investment in self-supply: In the absence of reliable survey data, household investment can be estimated by combining estimated changes in domestic water and sanitation coverage rates, and estimates of average investment costs in self-provision (for example, the average cost of investing in a household latrine). At a minimum, surveys should provide the number of households with access to unimproved and improved WASH services. The annual increase in this number permits the calculation of household investments in WASH, although some challenges are likely to remain.

When coverage data is updated on a regular basis, it is possible to track investment by households over time. For example, the WHO/UNICEF Joint Monitoring Programme for Drinking Water and Sanitation (JMP) currently publishes coverage figures every other year, based on data from national household surveys such as DHS, MICS, WHS, LSMS, and population and housing censuses. These take place every two to five years, and in some cases could possibly be conducted more frequently. In many countries, however, reliable coverage information

is not gathered on an annual basis, so it would not be possible to track household annual expenditure on self-supply. This gives rise to the methodological challenges highlighted in the box below.

Potential challenge: Using coverage data to estimate household expenditure on self-supply

- If coverage data is not updated on an annual basis, household expenditure on self-supply can be estimated from coverage estimates for two available dates, and estimating the trend in coverage increase between those two dates to derive annual trends. If the most reliable information is the census, the dates may be five, 10 or 15 years apart.
- If there is no increase in national coverage data (as was the case in Ghana) or if the overall trend in coverage via self-supply solutions is negative (as was the case in Brazil), a more disaggregated level of coverage data should be identified. This is because the overall negative trend may mask an increase (and therefore investment) in specific areas or regions. Where the overall trend in coverage is constant in percentage terms, some investment may also be taking place due to population growth as the number of people with access to improved services will be increasing, or because households are improving their existing facilities. Using the coverage trend does not allow estimation of investment in improvements between service levels and replacements.

Coverage estimates should then be combined with information on average household investment and operation and maintenance expenditure by type of service, based on existing household surveys or project-related information. To enhance accuracy, and if coverage estimates are sufficiently detailed, these expenditure estimates should reflect the type of investment made by households and for what service (for example, the type of latrine).

The box below provides additional examples of methodological challenges that arose in relation to this issue in Ghana and Brazil, and how they were (or could be) addressed.

Box 18. Estimating household investment for self-supply (C1 costs for P5): Examples from the pilot exercise

In Ghana, household investment in new rural sanitation facilities could not be estimated. Indeed, the percentage of people with access to improved sanitation in rural areas has remained at 8% according to the JMP figures for 2010 and 2012. It was therefore not possible to estimate the number of new households gaining access to sanitation, although there was a nominal increase. There also was an increase in shared sanitation from 42% to 44% in the same period, and it is very likely that a large proportion of this was paid for by households. In that event, one solution is to estimate an average investment per rural household gaining access to a new improved latrine, and an average investment per rural household gaining access to a shared improved latrine.

This can be done through a bottom-up estimation that requires costing the latrine components, material and work needed (monetary and non-monetary costs), and the average number of people using the latrine. The actual number of new people gaining access to sanitation should then be estimated based on the total population number and its increase. For example, the number of rural households gaining access to improved sanitation each year between 2010 and 2012 was equal to (8% × number of rural households in 2012 - 8% × number of rural households in 2010)/(2012–2010). This equals 8,000 households a year. The same method can be applied to households gaining access to shared sanitation.

In Brazil, even though data on the number of existing sanitation facilities was available, the investment trend could not be estimated because the overall variation of the percentage of people using self-provided WASH services is negative. This is because there are more households closing down latrines to switch to network suppliers than households building new latrines. An increase in the number of facilities occurred only in a few municipalities, where the network did not grow as quickly as population growth, or in rural areas. However, it is negligible compared to overall investment in the sector.

Source: Final report on WASH accounts, Brazil, 2014. Final report on WASH accounts, Ghana, 2014.

Given the methodological challenges highlighted above, estimating these expenditures lends itself better to the Fixed Asset Stock Approach rather than the Financial Flow Approach as discussed in Methodological Note No 6: Estimating fixed asset stocks. Based on existing coverage figures, this approach allows estimation of the value of the total asset stocks in which households have invested. For simplicity, it may be preferable to value this asset stock at replacement value, as estimating an historical value would require information on the date of construction. This is not likely to be available unless specific surveys are conducted for this purpose.

Operation and maintenance expenditure must also be estimated. The boxes below show examples of how operation and maintenance costs for household expenditure on self-supply were estimated, providing a useful indication of how this can be done for the first round of the exercise. These estimates can be improved using the methods described above.

Box 19. Estimating households' operation and maintenance costs (C2 costs for P5) for self-supply: Examples from Brazil and Morocco

In Brazil, household operation and maintenance (O&M) expenditure on self-supply for water and sanitation was estimated using the number of self-provided households reported by the National Statistics Bureau (IBGE) census,[1] and the average expenditure per household for water and sanitation obtained from their Household Budget Survey – POF of IBGE[2] (2009). It was assumed that the expenditure recorded by households was recurrent rather than investment. Given that O&M expenditure by urban households includes tariffs paid to formal providers, the average O&M expenditure of rural households was considered as the reference and applied to all self-provided households, including urban. In order to improve this estimate in the next exercise, it was recommended that more detailed questions on household expenditure on self-supply be included in the IBGE household budget survey questionnaire, including separating recurrent expenditure from investment, as well as expenditure by served and self-supplied households.

In Morocco, it was only possible to estimate household self-supply expenditure on O&M. For sanitation, estimated expenditure per household was provided by the 2007 ENNVM HCP census for both rural and urban areas. The total expenditure was not estimated in relation to the number of self-provided households (i.e. those with no access to the sewerage network), but based on the number of self-provided households that reported making cash payments for operating their WASH services. This group represented 20.6% of the self-supplied urban population and 8.6% of the self-supplied rural population. The expenditure per household was estimated at 1336 DH per year for rural households, and 921 DH per year for urban households.

Household expenditure on self-supply of water was estimated only for rural households not served by the network, given that 100% of the urban population is served by the network or by water standpipes. The average expenditure per household was estimated at 600 DHR per year. It was estimated that 100% of self-supplied households were making cash payments.

Source: Final report on WASH accounts, Brazil, 2014:32,35. Final report on WASH accounts, Morocco, 2014:35.

If average expenditure figures on both investment and operation and maintenance for different types of service are not available, ad hoc household surveys to assess their investment level should be conducted. Using mobile phone technologies can greatly facilitate surveys of this kind, and can reduce the cost of data gathering and the risk of error. They have already been used extensively to gather information on water points (referred to as "water point mapping") including information on the geographic location, related investment costs, and functionality of rural hand-pumps. This kind of information, particularly in relation to investment cost, is critical to filling data gaps in household investment in self-supply. The SHARE research consortium in the UK has developed a prototype Sanitation Investment Tracker — a mobile phone application designed specifically for conducting this kind of survey.[3]

FT3: Domestic public transfers

Domestic public transfers are public funds transferred by government agencies (either at central or decentralized level) to WASH sector actors. Such funds would typically be provided as subsidies for capital investment or operations. This category includes only "pure" grants and excludes repayable financing and concessionary loans, which are included in FT6 Repayable financing.

Explicit subsidies (grants) are a priority area for the tracking exercise. It is also important to recognize that there may be "hidden" kinds of subsidies. These could include tax rebates or subsidised services such as electricity. As these hidden subsidies may be very difficult to identify and measure in financial terms, it would be sufficient to mention the existence of hidden subsidies rather than to seek to quantify them for the first round of WASH accounts. Attempting to quantify hidden subsidies could be done at later stages of methodological development.

Data on public transfers channelled to the WASH sector should be collected from a wide range of stakeholders and sources, including national and local governments or other public financing units. The latter may include common funding baskets, if a sector-wide approach to pool funding is adopted. This should be based on the mapping of sector financial flows conducted in Step 2.2.

[1] 2010 Census and PNAD 2011 and 2012.
[2] 2009 Household Budget Survey – POF.
[3] Information on the Sanitation Investment Tracker (SIT) is available on the SHARE website (www.shareresearch.org) here: http://www.shareresearch.org/Resource/Details/sit_note_1.

In some cases, aggregated data at the national level can be found in established tools for tracking and planning financial resources. They can also be found in programme budget reporting systems. For example, the Total Sanitation Campaign in India had a solid system of reporting, both for public financial flows and for achievements. These tools can be used to some extent, although independent spot-check verifications might be needed. See also the Brazilian example in Box 10, Section 2.3.3.

FT4: International public transfers

This category includes only voluntary donations from external public donors and multilateral agencies. These funds can be contributed in the form of grants or guarantees. Other forms of repayable financing from international donors, such as concessionary loans, are excluded from this category and are shown in FT6 Repayable financing.

Data on international public transfers can be sought from the following sources:

- The OECD International Development Statistics databases: These databases track most transfers in the form of official development assistance (ODA) from donor countries and international organizations (bilateral and multilateral cooperation). This is the best source of international public transfer data and offers the possibility of tracking grants and (concessionary) loans separately. However, there are a number of caveats. Firstly, data does not always match more detailed data obtained at the national level. Some degree of triangulation is therefore likely to be needed. Secondly, only since 2010 has the OECD/DAC database started differentiating spending on water from spending on sanitation, and no further disaggregation between services is currently available. Finally, the database covers only international public transfers from members of the Development Assistance Committee (DAC). This comprises 29 developed countries and tracks funding from emerging donors such as the United Arab Emirates, Kuwait, and Turkey, separately. It does not currently include important non-OECD aid flows such as those from China, Arab states, or India.
- National and local government financial accounts: These can be used to complement and refine data from OECD databases at the national level. In the event of conflicting information, however, it is essential to state which source has been given priority (which will depend on reliability). The Ministry of Finance should have aggregated reports on transfers from donors, but it may not differentiate between grants and concessionary loans.
- Public donor and multilateral agency financial accounts: It may be necessary to send a questionnaire to all major donors to collect more detailed information on international public transfers. This may be information on their use (for which sector, service, service providers) and on their nature (grants or concessionary loans).

Potential challenge: Collecting data on ODA and the issue of concessions

The OECD database tracks ODA from donor countries and international organizations according to the following definition: "Financial flows to countries and territories on the DAC which are:

- provided by official agencies, including state and local governments, or by their executive agencies; and
- each transaction of which:
  a) is administered with the promotion of the economic development and welfare of developing countries as its main objective; and
  b) is concessional in character and conveys a grant element of at least 25%, calculated at a rate of discount of 10% (except for capitalized interest included in rescheduling of ODA loans which is recorded as ODA, regardless of the grant element of the rescheduling.)"

To allocate the expenditure between FT4 International public transfers, and FT6 Repayable financing, it is therefore necessary to distinguish repayable loans from pure concessional finance (100% of grant element). Details on the conditionality of the financial flows can be found on the OECD databases and corroborated with national level information.

Source: http://www.oecd.org/dac/38429349.pdf.

FT5: Voluntary transfers

Voluntary donations may come from international and national non-governmental donors, including from charitable foundations, non-governmental organizations (NGOs), civil society organizations and individuals (remittances). Only donations that are 100% pure grants are included in this category. All forms of repayable financing (including concessionary loans and guarantees) are included in category FT6 Repayable financing. In many developing countries, voluntary organizations frequently contribute to funding the water and sanitation sector both in cash and in kind (for example, by digging a well or providing equipment). Such transfers are often not reliably recorded,

so there is little clarity over their actual contribution to sector financing.

To obtain data on voluntary transfers, the WASH accounts team could consult the following:

- National and local government financial accounts: Some governments have started collecting information on voluntary transfers to the water and sanitation sector, with the objective of ensuring better coordination of such financial flows. This now occurs in Bangladesh, for example, where NGO financing is recorded in the public sector budget, thereby greatly simplifying the task of collecting financial information on their contribution. This type of initiative, if deemed successful, could be replicated in other countries to improve coordination and facilitate the task of obtaining and recording information on such flows.
- Surveys of NGOs and other charitable organizations concerning their investments: Given the current lack of transparency on WASH spending by the voluntary sector, some international NGOs have taken the initiative of recording their donations in a more reliable manner. Washfunders is an example. Other initiatives, such as that developed by Interaction, the largest coalition of US-based NGOs, seek to map NGO-funded projects at country level (see example for Haiti). However, this information is not specifically gathered for water and sanitation and is only currently available for a very small number of countries.

FT6: Repayable financing

This category includes all types of repayable financing, including concessionary loans or guarantees. Information on repayable financing to the sector is very limited, but some can be found in existing databases:

- The OECD-CRS database contains information on concessionary lending;
- The International Financing Review compiles data on commercial loans or bonds; and
- The World Bank Private Participation in Infrastructure database reports the amount of capital investment committed by private operators at the start of a public private partnership contract. It is commonly used to track private investment in infrastructure. Although private operators would not typically bring "new" financing to the sector as they are not financing types as such, they can temporarily bridge the financing gap.

If possible, this category should be sub-divided into two sub-categories, FT6.1 Concessionary repayable financing and FT6.2 Non-concessionary repayable financing, as the two types are very different in nature. Approaches to this are set out below.

Potential challenge: Separating concessional from non-concessional repayable financing

The allocation of repayable financing flows between these two sub-categories can be made in two ways:

- Flows can be roughly characterized as concessional or non-concessional according to the ownership status of the lender. A repayable flow coming from a public sector agency could be characterized as concessional, while a repayable flow from a private sector agency could be termed non-concessional. However, some public sector agencies can themselves be involved in providing loans at market rates so this method of classification is very imperfect.
- To obtain a more refined estimation of these flows, data can be obtained on the lending conditions for specific loans where there are doubts about the category in which they fall. Concessional loans include a grant element in the form of a subsidised interest rate or a grace period. The OECD definition of concessional can be used to allocate the flows to the FT6.1 and FT6.2 sub-categories. Concessionary repayable financing would include repayable flows that convey a grant element of a least 25%, calculated at a rate of discount of 10% (except for capitalized interest included in rescheduling of ODA loans which is recorded as concessional, regardless of the grant element of the rescheduling).

Source: http://www.oecd.org/dac/38429349.pdf.

The WASH accounts team may, however, need to complement this information with ad hoc surveys, to better understand the extent to which development banks and commercial banks currently finance the water and sanitation sector and through what kind of instrument (for example commercial loans, bonds, equity issuance, or guarantees).

The box below presents examples of the kind of data available in the pilot countries to estimate loans. All three countries were able to include loans to some extent, depending on data availability. Allocating the financing according to type of service and use was more challenging, even impossible, in some cases.

Box 20. Estimating loans: Examples from country studies

In Brazil, data on repayable financing disbursed by the government to service providers was collected from databases of the public banks and funding schemes that are the main sources of repayable loans – namely the Caixa Economica Federal (CAIXA), and the BNDES (Banco Nacional de Desenvolvimento Econômico e Social) – two state-owned banks.

Data on repayable financing received from multilateral and bilateral agencies were obtained from the financial statements of state and municipal enterprises, and from private companies operating in the sector. This data could be partially allocated to types of service, providers, regions and by type of cost, but not by type of use. The allocation by service was made according to the relative share of investment by service available in the Sector National Sanitation Information System (SNIS). Only cash flows disbursed to final borrowers of funds were considered. Going forward, data gaps on repayable financing could be resolved by collecting better data from service providers through SNIS.

In Morocco, data on loans was collected from service providers' financial statements. It was not possible to cross-check this data with information from lenders (national commercial banks or international, multilateral or bilateral financial institutions) as there is no consolidated database. As a result, it was not possible to separate concessional loans from commercial loans. Only disbursements to borrowers (service providers) had been included (excluding financial charges as it was not possible to identify them separately in the financial statements). Going forward, this could be done by collecting detailed data from main lenders.

In Ghana, information on loans from donors to the government was obtained from the Ministry of Finance. Information on loans to the main utility, GWCL, appears in their financial statements. It was considered unlikely that other service providers would have taken loans for water supply or sanitation, but this information is difficult to verify. It would require surveying all the private providers through the Private Utilities Association (PUSPA).

Source: Final report on WASH accounts, Brazil, 2014:34. Final report on WASH accounts, Ghana, 2014:46. Final report on WASH accounts, Morocco, 2014.

Reflecting financial flows that are by definition repayable in WASH accounts is not straightforward. Repayable financing differs in nature from other financial flows because it does not constitute revenue as such for the sector; it is only a means of bridging the cash flow gap with the requirement for subsequent repayment. Users usually have to absorb the cost of repayable financing through tariffs, unless a subsidy is provided to write off part of the debt. If a large proportion of sector revenue is derived from repayable finance, it shows that the sector is "borrowing" on future revenue. The cost of this borrowing will ultimately need to be covered by tariff increases or increases in transfers.

However, WASH accounts' aim is to show how and to what extent repayable financing is used as an instrument to finance the sector. Hence they are tracked as a distinct financing type. As explained in Section 2.3.3 of the Guidance Document, the objective of the Cash Flow Approach is to track flows of funding to the sector. Loans are therefore reflected in accounts as financing types at the moment they are received or spent by borrowers, although the actual revenue to pay them back is only received later. The repayment of loans and costs of capital should then be recorded as expenditure in the year when the expense occurs.

Due to time differences between the receipt of a loan in the accounts, the timing of the expenditure for which loan funds are disbursed, and the repayment of the loan, it is more than likely that the expenditure and revenue will not balance. The receipt of loans should ideally be recorded in the year when the expenditure is made; since most loans are spent as soon as they are disbursed, in most cases this should not pose too many problems.

This approach varies slightly from the System of Health Accounts, which follows the economic approach of the National Accounts (See Section 2.3.3). The box below indicates how the System of Health Accounts handles the treatment of loans.

Learning from the health sector: Handling of loans in the System of Health Accounts

Loans increase the funds available to a provider or financing agent (equivalent to financing units in the WASH accounts). In the Health Accounts, financing agents are defined as the units that channel finance to the sector by pooling funds from different sources and redistributing them to service providers.

Loans are not included directly in the Health Accounts, because they affect the balance sheet (assets and liabilities) of the financing agent. What does appear in the SHA is the money that the financing agent releases into the health care system. Since most loans are spent as soon as they are disbursed, the distinction matters more for the purposes of attributing the funds to a financing type than for the level of health expenditure.

Loan repayments do not appear in the Health Accounts because they represent a change in assets rather than a current expenditure for health. In effect, they are funds that were already registered in the Health Accounts when the disbursement was spent.

On the other hand, it is appropriate to include interest payments made on outstanding debt as part of health spending, provided that the debt was directly related to the financing agent's health activity. Most accounting systems separate loans and loan repayment from other transactions, so this treatment is not difficult to implement in practice. In systems where such separation is not made, health accountants should be vigilant for budget line items that indicate the infusion of new capital or the repayment of loans or retirement of other debt, and eliminate those entries from the total for the financing agent.

From a policy perspective, it is important to show the effect of new loans or of loan repayments on a given financing agent or class of financing agents. This can be done in an exhibit table. This kind of exhibit can inform policy-makers without detracting from the presentation of the current state of the health care system's ability to deliver care.

Example of an exhibit table showing changes in debt related to the health system

Exhibit X. Changes in the financial position of financing agents	Total	Government	Private
Total national health expenditure			
Less: Net increase in health-related debt			
New loans for health			
From external organizations/entities			
Governments			
Development agencies			
NPISHs*			
Other			
From domestic lenders			
NPISHs*			
Other			
Less repayment of loans			
To external organizations/entities			
Governments			
Development agencies			
NPISHs*			
Other			
To domestic lenders			
NPISHs*			
Other			
Equals: Spending from own resources			
Less: Draws on own assets			
Equals: Spending from own resources			

*Non-profit institutions serving households

MN 4.2. Potential challenges and how to address them

MN 4.2.1 Data availability

In general, availability of data on financing types (and certain financing types in particular) can be an issue. Where this is the case, it is important to be transparent about the issues faced and to represent them graphically. This can serve as a prompt for data providers to produce additional data if possible. The box below summarizes the data availability challenges that arose in Ghana, and the methods used to overcome them.

Box 21. Data availability in Ghana

The table below summarizes the financing types included in and excluded from the Ghana study and the reliability of the data (actual or estimated).

● Data available ● Data partly available plus estimates ● Estimates ● No data collected

Financing types	Availability of data	Data availability challenges	Methods used to overcome these challenges
Tariffs for services provided	●	Data for urban water available only from the national WASH service provider Ghana Water Company Limited (GWCL), and only in aggregates.	
Household expenditure on self-supply	●	Data from 2013/2014 Ghana Living Standards Survey (GLSS) were not available at time of study.	Estimations were made from the 2005/2006 GLSS survey based on average household expenditure.
Domestic public transfers (central government)	● ●	Data from the Ministry of Finance transfers to sector agencies were not obtained, but data on receipts from agencies were available.	
Domestic public transfers (local government)	● ●	Total transfer from the Ministry of Finance to DACF for distribution to MMDAs.	It was estimated that 15% of transfers were for water, sanitation and support services.
International public transfers (grants from public donors or multilaterals)	● ●	Data from development partners available from the Ministry of Finance, but only in aggregates.	
Voluntary contributions transfers	●	Data not available.	
Repayable financing (loans)	● ●	Data from development partners available from the Ministry of Finance, but only in aggregates.	

MN 4.2.2 Allocation of financing types per financing units, WASH uses and services

Allocating financing types to different financing units and services is likely to be problematic. For example, domestic public transfers are not systematically allocated to different types of service, particularly where funding for water and sanitation forms part of overall transfers from central to municipal governments. Records on public transfers do not usually specify the amounts spent on WASH activities, let alone disaggregate them between sub-sectors.

To overcome this challenge, it may be necessary to define financing allocation keys in order to reconstruct the portion of funding flows allocated to WASH services. These allocation keys can differ in precision, depending on the level of information available. One potential method is to estimate the costs relative to different use or different services based on the Cost-based Approach described in Section 2.3 of the Guidance Document and Methodological Note No 5: Estimating the costs of providing the service with a Cost-based Approach, and to use these to derive allocation keys.

Allocating the expenditure figures to classifications is an iterative process. A back and forth approach between the results from the two approaches is required to complete the allocations. The box below presents an illustrative example of how to use allocation keys.

Box 22. Example: How to use allocation keys to allocate spending across categories

Where amounts are not clearly specified, it may be easier to allocate financing types to services and uses through the use of allocation keys, using expenditure data obtained from service providers. The following is a hypothetical example:

The Ministry of Water (MoW) gave a grant to a utility that provides both water and sanitation services. It is not possible to ascertain from MoW records what the grant was used for. The cost-based data collected from the service provider has to be reconciled with this financing flow and used to allocate the MoW funds to sub-sectors. This allocation can be based on real data or on estimates:

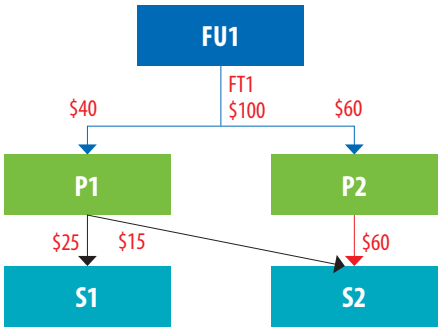
- If the utility holds records on the use of grants received (this is quite unlikely but is assumed for the purpose of this example), the grant can be allocated to sub-sectors based on its actual use.
- If it is not possible to allocate the expenditure of this specific grant to a sub-sector, an estimate can be made. In this case, the same ratio can be applied to the funding received through this grant as that of the total funding allocation of this service provider.

The arrows in the figure below shows what ultimately needs to be done with each financing flow. In this case, a national authority (FU1) provided funding of USD 100 to the sector through two types of service providers (P1 Government providers, and P2 Network corporate providers). It provided USD 40 to P1 and USD 60 to P2. P1 then disbursed USD 25 to water services (S1) and USD 15 to sanitation services (S2). P2 disbursed the entire USD 60 funding on sanitation services. The WASH accounts team would collect two kinds of data:

- From the Financing Type Approach: The allocation of funding from FU1 to P1 and P2 (recorded in WASH accounts Table 7 (PXFU); and
- From the Cost-based Approach: The allocation of funding from P1 and P2 to S1 and S2 (recorded in WASH accounts Table 3 (SxP).

The two sets of information then need to be reconciled to allocate the funding from FU1 to S1and S2 (and recorded in WASH accounts Table 6 (SxFU). Overall, from FU1 funding, USD 25 goes to water services (S1) and USD 75 to sanitation (S2).

Figure 12. Example of a financing flow allocation to categories of providers and services



Financial information per use can be estimated both from the Financing Type and Cost-based Approaches:

- At the level of financing types to know how much of the funding comes from different types of use and users; and
- At the level of expenditure to know how much is spent by service providers for each type of use.

The box below provides detailed guidance on how to estimate both flows according to type of use.

Box 23. Estimating flows per use: Financing types (revenue) and expenditure per type of use

In the Financing Type Approach, when data is not directly available, allocation of financing per type of use can be made through estimates, using the percentage of revenue collected from each type of user, for example according to tariff. This can be calculated from the average revenue by type of use and the number of connections for this category. This approach does require the existence of detailed operational information per type of user and use. Data on self-supply of non-domestic users is unlikely to be available.

In the Cost-based Approach, expenditure for each type of use can be estimated from the percentage of water volume consumed by each category of user.

In Brazil, it was only possible to estimate expenditure per type of use for served domestic use (U1). Data on other types of served use (i.e. non-domestic: industrial, commercial and institutional) was aggregated, and it did not prove possible to obtain the parameters that would enable disaggregation.

In the Financing Type Approach, revenue from served domestic users was estimated using the average revenue per domestic connection and the number of domestic connections.

For the Cost-based Approach, expenditure on served domestic use was estimated using the volume of water consumed by households. It showed that 88% of resources were spent on services in this category. Self-supply represents 2.2% of expenditure. The remaining non-domestic served uses (institutional, industrial, commercial) represents 9.8% of expenditure. Further disaggregation proved impossible. Based on a sample of accounts from service providers, it was estimated that commercial served use represented most of the remaining expenditure.

In Brazil, water resource legislation and management tools do not include the category of self-supply for commercial and industrial uses. These categories are usually monitored by service managers and are not included in public policies. They are monitored only in the context of integrated management of water resources, or in the case of sewage, the environmental policy and environmental management system.

MN 4.2.3 Avoiding double counting and tracking how financial flows are channelled across the sector

It is essential to avoid double counting when using the Financing Type Approach, particularly if resources are channelled through several different financing units. As explained in the Challenge Box in Section 2.2.2, financing can be allocated by an international donor to a national government and then channelled from the national government to local governments before finally being disbursed to a service provider. In that case, it is important not to count the financial flow twice, i.e. at source (at the level of the donor or the national government as the financing unit), and at the point where funds are disbursed to service providers (at the level of the financing unit through which funds are channelled, which in this case would be the local government).

For the purpose of computing overall expenditure in the WASH sector, financial flows should be computed at the level of the financing unit through which they enter the sector. A key principle is that one flow only should be recorded as one "financing type." Donor funding channelled to a local government through the national government, for example, should always be recorded as FT4 International public transfers. This is also why FT1 Tariffs for services provided, is deemed to originate from FU1 Users (i.e. the financing unit that has injected revenue into the sector) rather than from FU5 Network service providers. Applying this rule consistently should ensure that there is no double counting in overall expenditure. This being the case, the only financing injected by FU5 Network service providers, would be reinvested profits or equity investments, and would generally be recorded as FT6 Repayable financing.

However, financial flows also need to be recorded in other ways to enable various key policy questions to be investigated. These would include investigation of what the funds are used for and how they are channelled through the sector. Each financial flow should therefore be "coded" in more detail, to track whether it has been:

- Directly disbursed to service providers
- Channelled through another financing unit
- Received from another financing unit and disbursed to service providers.

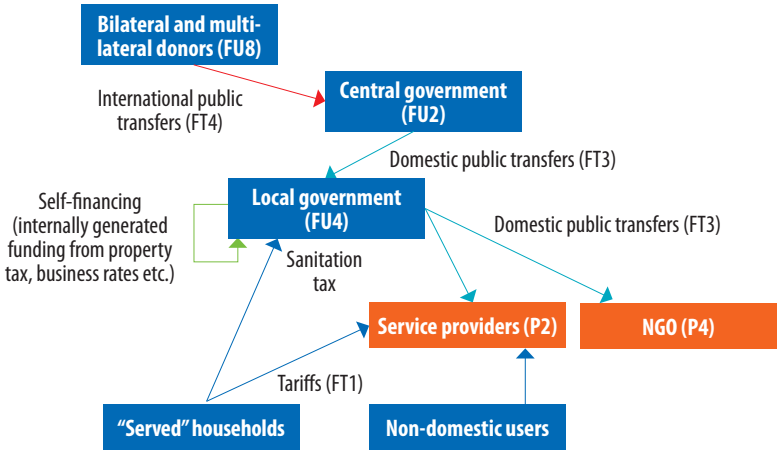
This is an area where the availability of data collection and analysis software would make a significant difference.

Ascertaining what the total expenditure has been spent on would generally be achievable by relying on the Cost-based Approach, rather than the Financing Type Approach. Information on how funds are channelled, on the other hand, will need to be computed from financing type data, and the careful coding of how the financial flow has gone from the financing unit where it entered the system, to the financing unit that made the disbursement decision, and finally to a service provider.

Box 24. Example: How to avoid double counting of financial flows

The situation: A donor provides general budget support to the Ministry of Finance (MoF). These funds are then channelled via the MoF through local governments, which disburse them to service providers. For the purpose of this example, they are disbursed to an NGO to finance hygiene promotion and a non-network corporate service provider for sanitation. The figure below illustrates this situation.

Figure 13. Illustrative example



How can this situation be reflected in the WASH accounts framework?

- The donor, the MoF and the local government are financing units. More specifically, the MoF and the agency are financing units acting as financing channels. The NGO (P4) and the non-network corporate service provider (P2) are the service providers.
- Funds between the donor and MoF would be marked as "channelled". Funds between MoF and the local governments would be marked as "channelled". Funds between the local governments and the service providers would be marked as "received and disbursed".
- The flow is an international public transfer (FT4) because it ultimately originates from an international donor.

What should be presented? Two elements are important:

- The overall picture: Funding is received from international donors as international public transfers.
- The detailed picture: This funding is channelled via the MoF to a local government, which makes the spending decision.

How can results be presented?

- To produce WASH accounts compiled at sector level and show the overall picture:
  - The principle recommended above is applied. Flows are tracked at the level of the financing unit where funds enter the sector. In this case, the funding should be recorded at the level of the donor. The funds would therefore be recorded as FT4 (international public transfers) originating from a FU8 (bilateral and multilateral donor). Yet more information from the level of the local government and service providers is needed to allocate the funds to different types of service provider, services, cost, and use.
  - The tables FTxP and FTxS show that the international transfer from the donor is disbursed to NGOs and corporate service providers for sanitation and hygiene services.
  - The table FUxP shows that bilateral and multilateral donors provide funding to P2s and P4s.
- At a deeper level of analysis, to show the details of financing units channelling the financing, and making the funding decision:
  - It would be useful to provide more detail on the financing and expenditure of the local government. For this financing unit specifically, WASH accounts can show that the international public transfers received from donors are channelled via the MoF. Local governments also have self-funding sources from internally generated resources – for example local taxes.

Answering questions of this kind requires tracking many simultaneous transactions, and cannot realistically be done for all transactions and financing units in the sector. Instead, it is recommended that the WASH accounts team select those financing units for which it is critical to know where funding has originated and through what channels it has been assigned. This policy question is probably most critical for local governments, as it is essential to understand what funding they receive and by what means. A more detailed examination of local government funding might show that it receives international public transfers (FT4) through the national government (FU1) and not directly from the donor (FU8). Box 24 offers solutions for examining specific financing units.

Methodological Note No 5: Estimating the costs of providing services using the Cost-based Approach

Objectives: This note addresses existing cost classifications in the WASH sector that were called on in drawing up the TrackFin classification note. It also provides methodological guidance for estimating the cost of WASH services using the Cost-based Approach. It recommends that at the very least, distinction should be made between capital expenditure and operations and maintenance expenditure, and potentially large capital maintenance expenditure. Support costs for policy and programme development should also be tracked separately if possible, although this may prove difficult at an aggregate level.

MN 5.1. Classifying costs

For the purpose of data comparability across countries, the same cost categories and commonly agreed methodologies should be used to estimate and classify costs.

MN 5.1.1. Existing cost classifications in the WASH sector

At the international level, there are no standard cost classifications used in both urban and rural WASH sectors. In the urban sub-sector, country-level regulators define cost items in a specific way. An example is Ofwat in England and Wales, which has defined cost categories in order to set consistent prices for all water and sewerage companies.

International utility benchmarking exercises, such as IBNET hosted by the World Bank, seek to benchmark operating costs (defined as the unit operational cost per cubic metre of water produced or sold), but do not attempt to benchmark investment costs. As IBNET puts it, "they tend to differ widely from one year to another due to the lumpiness of the investments." As a result, the IBNET toolkit suggests measuring the capital intensity of a utility based on the gross fixed asset value (a fixed asset stocks indicator) per capita served.[1] However, they also state that, "Unfortunately there is often limited information available about asset values and until more emphasis is placed on this item, the values derived must be treated with caution" (see Methodological Note No 6: Estimating fixed asset stocks for more information about how asset values can be derived).

The WASHCost project led by IRC of the Netherlands has defined a cost typology for the rural and peri-urban sector that seeks to capture the entire life cycle cost of investing in WASH services.[2] The cost definitions developed by WASHCost were inspired by the cost categories typically used for urban water and sewerage services, and were extended to the rural water and sanitation sectors.

This classification identifies typically neglected cost items that are not adequately budgeted for, such as capital maintenance expenditure or expenditure on direct (or indirect) support. For example, the methodology explicitly identifies "software" costs—that is, expenditure on a range of activities required to ensure that such services are delivered effectively.[3] These support activities are extremely broad and varied in scope; they range from the costs of managing the sector at the level of the ministry (staff costs for planning, budgeting, interaction with international donors, monitoring and evaluation, and technical assistance) to the costs of capacity-building or hygiene education activities at the local level.

The distinction between "hardware" costs (investments and associated studies) and "software" costs (associated "soft" support activities) has now become standard in the WASH sector and has been used, for example, in recent analysis of the value for money of DFID WASH investments in rural water (see www.vfm-wash.org for more information).

However, cost classifications of this kind in the rural water sub-sector tend to be used more for project planning and budgeting than for tracking costs at a national level. Indeed, some of the cost categories in the WASHCost classification (such as capital maintenance expenditure, cost of capital or expenditure on direct and indirect

[1] http://www.ib-net.org/en/texts.php?folder_id=117&mat_id=97&L=1&S=3&ss=4
[2] http://www.ircwash.org/washcost
[3] Trémolet, Kolsky & Perez (2010) also explicitly accounted for software costs when deriving the costs of providing on-site sanitation at the household level.

support) are not consistently tracked in most countries at present. Most government or NGO-led programmes do not typically account for support costs associated with capital expenditure separately, or for expenditure on direct or indirect support.

This review of existing cost classifications in the WASH sector clarified the need for a TrackFin classification that could be applied across both urban and rural water sectors, but would remain in alignment with currently available information on costs at national level in most countries. This classification is set out below.

MN 5.1.2. TrackFin classification of costs

The TrackFin classification of costs is presented in Table 12 below. The terms cost and expenditure are used interchangeably in the Guidance Document. Cost is generally used in relation to utilities, while expenditure refers to governments or households.

Table 12. TrackFin classification of costs

Type of costs		Definition
C1	Investment costs including hardware and associated support	Initial capital costs of putting new services in place, including "hardware" such as pipes, toilets, and pumps, and one-off associated "software" costs, such as for detailed design/engineering studies or associated training and consultation.
C2	Operating and maintenance costs	Routine maintenance and operation costs to keep services running (wages, fuel, or any other regular purchases). Operating costs are the recurrent expenditure involved in providing WASH goods and services: labour, fuel, chemicals, materials, and purchases of bulk water. Maintenance costs are the routine expenditure needed to keep systems running at design performance, but does not include major repairs or renewals which are not recognized as recurrent.
C3	Large capital maintenance costs	Occasional large maintenance costs for the renewal, replacement and rehabilitation of a system beyond routine repair and replacement costs. These essential expenditures are required before system failure occurs and need to be planned and budgeted for. If this cost cannot be separated from capital expenditure (C1), it should be included with this category and explicitly identified as such.
C4	Financial costs	This includes capital repayments and the cost of capital, including borrowing costs (interest on the loan) and the cost of equity (dividends if a return is paid to shareholders).
C5	Support costs	Includes expenditure on direct and indirect support: • Direct support includes expenditure on both pre-and post-construction support activities directed to local-level stakeholders, such as training for community or private sector operators, users or user groups. • Indirect support includes the cost of planning and policy-making at government level, including strengthening the skills and capacities of professionals and technicians. These costs have a direct impact on the long-term sustainability of projects.
C6	Taxes	Includes taxes and fiscal contributions levied from service providers, such as: • Taxes on production (corporate tax on profits, property tax, leasing tax for renting fixed assets, taxes for occupation of public grounds or in relation to employees). • Usage charges related to (or earmarked for) the sector such as royalties, levies or duties for the use of water or the discharge of wastewater into water bodies. • Other charges on production levied for earmarked uses, such as social contribution.

This classification distinguishes between capital expenditure (including large maintenance costs) and operating and minor maintenance costs. This information should ideally be collected from each service provider.

MN 5.2. Potential sources of cost data

Potential sources of cost data vary depending on which agencies incur the costs. Table 13 Gathering data on costs of service provision below lists potential sources of cost by type of service provider.

Table 13. Gathering data on costs of service provision

Categories of service providers		Data sources and collection methods
P1	Government agencies	• Public expenditure accounts presented to national parliaments • National budget • Annual budget for each relevant financing unit • Supplementary information if needed to determine cost allocation (such as number of staff per department, or percentage of their time dedicated to a sub-sector)
P2	Network corporate providers	• Service providers' annual financial statements (balance sheet and profit and loss accounts) • Supplementary information to determine cost allocation if needed: – Number of staff per department, percentage of their time dedicated to a given service – Number of customers per service, unit cost of production, average investment cost per type of investment – Investment programme (by category of investment spending) – Activity-based costing reports – Any recent tariff study undertaken to estimate costs of production, historically and going forward
P3	Non-network corporate providers	• Survey of a sample of small independent providers to determine their total production costs
P4	NGOs and community-based organizations	• Annual financial statements • Detailed costing/cost benchmarks for a number of representative projects
P5	Self-provided users	• Household survey • Detailed costing/cost benchmarks for typical household investments

A number of methodological issues relative to the estimation of these costs can be anticipated. Further guidance is provided below.

C1: Investment costs

Annual flows of capital expenditure (and large capital maintenance) can usually be estimated from both the service providers' cash flow statement and balance sheet. The asset base included in the balance sheet evolves from one year to the next on the basis of new investments (also referred to as "gross capital formation" in the System of National Accounts), which would be reflected as an increase in assets and depreciation of existing assets (also referred to as "consumption of fixed capital" in the SNA). Any change in the asset base value would then need to be distributed between C1 and C3 Large capital maintenance, by triangulating this finding with the information obtained from the cash flow statement on C1.

Based on the balance sheet, it is therefore possible to estimate how much the service provider has invested every year. Where different types of service are offered (such as water and sanitation), allocating the costs by service will require data on their recent and planned investment programme. Allocation could be made based on actual investment (particularly if the utility itself has made any such allocations) or by using estimated ratios — for example 40% investment for water, 60% for sanitation — if this is not the case. The aim, over time, is to reflect as much actual allocation as possible. Related support expenditure, if it is a one-off expenditure incurred specifically to support this hardware investment (such as supporting design studies or planning) should be included in the total costs of the investment.

A note of caution: There are a number of reasons why capital investment flows may not be a robust indicator of an actual trend in investment, as discussed in more detail in Methodological Note No 6: Estimating fixed asset stocks. Estimating capital investment flows may therefore need to be complemented by estimation of fixed asset stocks.

C2: Operating and maintenance costs

Operating and minor maintenance costs can be derived from the cash flow statement of service providers.

In the event of joint service provision for water and sanitation, the costs need to be allocated to the different services. If the utility does not already do this based on actual costs, allocation keys should be used. This calls for additional information, including on individual cost factors such as energy, chemicals, and spare parts, and on the number of staff per service.

Using the share of revenue by service as an allocation key is unlikely to be helpful and could introduce distortions. As cross-subsidies between water and sanitation are common, tariff revenues from sanitation may in reality be much lower than the actual costs generated by the services. When applying a Cost-based Approach, it will be necessary to analyse costs to arrive at the true cost of each service. This involves reliance on recent tariff studies or pre-existing information to gain a clear understanding of the relative share of operating costs that can be allocated to different services. Doing this can be time consuming, and may be only possible for a small sample of utilities.

C3: Large capital maintenance cost

Large capital maintenance expenditure is the cost of renewing, replacing, rehabilitating, refurbishing or restoring assets to ensure that services continue at the level of performance that was first delivered. Capital maintenance typically occurs more infrequently than minor maintenance classified under C2, but is considerably more costly. Examples include replacing components; cleaning/re-excavating wells and storage tanks; and rehabilitating network pipes.

Annual expenditure on large capital maintenance can usually be estimated in the same manner as for C1 Investment costs — that is from both the service providers' cash flow statements and balance sheets. In some cash flow statements, service providers may not separately record C3 Large capital maintenance, and C2 Operating and maintenance costs. It will then be necessary to compare annual balance sheets to estimate how the asset base has evolved over time. Any change in value would then need to be distributed between C1 and C3 by triangulating this finding with the information obtained from the cash flow statement in C1.

C4: Financial costs

Financial costs, estimated from financial accounts, typically comprise three main elements:

- Capital repayments, or the principal of the debt associated with capital investment;
- The cost of capital, or the cost of repaying the interest of the debt associated with capital investment. This is the cost of renting the capital and can usually be identified separately in financial accounts; and
- The return on equity capital, paid as dividends to shareholders (or other benefits) in the case of for-profit companies.

Given the potential difficulties in estimating the return on equity capital, and the profit element for not-for-profit companies, the System of Health Accounts uses different approaches as discussed in the box below.

Learning from the health sector: Distinguishing between for-profit and not-for-profit/government service providers

The System of National Accounts (and the System of Health Accounts) make a distinction in evaluating the costs of market and non-market providers. In the case of market (for-profit) providers, the value of the goods and services they produce is estimated in relation to the revenue they receive from the sale of their goods. This is done by compiling information on the total amount paid for the goods and services at the point of consumption. Data that values their output in the country's national accounts may therefore be viewed by these providers as very beneficial.

In the case of non-market (non-profit or government) providers, the value is estimated in relation to the cost of production, as these goods and services are not necessarily sold at a price that reflects the true cost of production. Costs are typically calculated as actual expenditure on inputs such as staff remuneration (including all benefits) and supplies. This includes budgetary expenditures on salaries, supplies, and other inputs. It may also include goods and services — such as free electricity — provided to those facilities by other government agencies

C5: Support or software costs

Support, or software costs can be collected at the aggregate level, for example the expenditure of the Ministry of Water or other sector institutions. Specific service providers may also incur these costs as part of a specific programme.

Expenditure on indirect support, such as for policy development, sector planning, budgeting, and related issues, can be estimated at the national level. Information on these costs may be obtainable directly from the National Accounts, which contain categories on support services to the water and sanitation sector (see Table 1, which contains the recommended classification of WASH services).

In the case of support costs directly related to the provision of a particular service, it may be difficult to disaggregate them from other types of investment and operating costs classified under C1, C2 and C3. If recurrent in nature, they are likely to be included in either C2 Operating and maintenance costs, or if they are one-off costs incurred through a specific capital investment project, in C1 Investment costs. In the longer term, further development of expenditure reporting systems may facilitate the separation of support costs for specific investments and programmes, and enable them to be tracked as a separate cost category, or at least a subset of C5.

Support costs might also be elicited from NGOs and other entities (including government) that support service delivery, or at the level of providers that use NGOs for this purpose. These costs are typically hard to track, however. In the case of NGOs, gaining access to their consolidated costs can be difficult, and they seldom separate hardware and support or 'software' costs. The best approach would therefore be to make estimations on the basis of a representative sample of NGOs, and for a representative number of programmes.

C6: Taxes

As defined by the SNA (SNA, 2008:143), taxes are compulsory, unrequited payments, in cash or in kind, made by economic agents to government units.[1]

There are two types of taxes:

1. Taxes on products (D21): These are taxes on goods and services resulting from their production, sale, transfer, leasing or delivery, and payable per unit of the product. These taxes can include:
   - Value added tax (VAT)
   - Taxes and duties on imports excluding VAT
   - Export taxes
   - Taxes on products, excluding VAT.

2. Other taxes on production (D29): These are taxes paid for the ownership or use of land, buildings or other assets, as well as on labour employed in the production process. See box below for more details.

[1] They are described as unrequited because the government provides nothing in return to the economic agent making the payment, although governments may use the funds raised in taxes to provide goods or services to other units, either to the community as a whole or individually.

Box 25. Other taxes on production in SNA

Other taxes on production exclude those incurred as a result of engaging in production. They exclude tax on the profit or other income received by the enterprise, and are payable regardless of its profitability. They may be payable on land, fixed assets, or labour employed in the production process, or on certain activities or transactions.

Other taxes on production can include the following:

a. Taxes on payroll or workforce;
b. Recurrent taxes on land, buildings or other structures: These are payable regularly, usually each year, for the use or ownership of land, buildings or other structures utilized by enterprises in production, whether owned or rented (GFSM2001, 1131; OECD, 4100);
c. Business and professional licences: Taxes paid by enterprises for a licence to carry out a particular business or profession, such as taxi and casino licences. In certain circumstances, licences to use a natural resource are treated not as a tax, but as the sale of an asset. If, as a condition for granting a licence, the government carries out checks on the suitability or safety of the business premises, on the reliability, or safety, of the equipment employed, on the professional competence of the staff employed, or on the quality or standard of goods or services produced, the payments are not unrequited and should be treated as payments for services rendered, unless the amounts charged for the licences are out of all proportion to the costs of the checks carried out by governments (GFSM2001, 11452; OECD, 5210);
d. Taxes on the use of fixed assets or other activities: Taxes levied periodically on the use of vehicles, ships, aircraft or other machinery or equipment used by enterprises for purposes of production, whether such assets are owned or rented. These taxes are often described as licences, and are usually fixed amounts that do not depend on the actual rate of usage (GFSM2001, 11451-11452 and 5.5.3; OECD, 5200);
e. Stamp taxes;
f. Taxes on pollution: Taxes levied on the emission or discharge into the environment of noxious gases, liquids or other harmful substances. They do not include payments made for the collection and disposal of waste or noxious substances by public authorities, which constitute intermediate consumption of enterprises (GFSM2001, 11452; OECD, 5200); and
g. Taxes on international transactions.

Source: SNA 2088:148 Section 7.97.

The System of Health Accounts tracks taxes in a similar manner, as discussed in the box below. A second category, "Other items of spending" has been added to include charges that fall outside taxes on production and products.

Learning from the health sector: Tracking taxes

The System of Health Accounts Manual focuses on the final consumption of health care goods and services, with valuation at purchasers' prices (i.e. including taxes on products). The aggregate current health expenditure combines in a single figure the monetary value of the final consumption of all health care goods and services by residents of a given country during a given period.

In SHA 2011, taxes paid by service providers are included in the factors of provision classification. Taxes are included in FP.5 Other items of spending on inputs. This item includes all financial costs, such as interest payments on loans, taxes and so on. It includes:

- FP.5.1 Taxes: Following the SNA definition, taxes are compulsory, unrequited payments, in cash or in kind, made by economic agents to government units. They are described as unrequited because the government provides nothing in return to the economic agent making the payment, although governments may use the funds raised in taxes to provide goods or services to other units, either collectively to the community as a whole or individually.
- Item FP.5.1: Taxes comprise taxes on production and taxes on products. As the name implies, taxes on products are payable per unit of product. The tax may be a flat amount, depending on the physical quantity of the product, or it may be a percentage of the value at which the product is sold.
- FP.5.2 Other items of spending: Other spending items include all transactions related to items not classified elsewhere. Transactions recorded here include property expenses, fines and penalties imposed by government, interest rates and costs for the use of loans, and non-life insurance premiums and claims.

A major difference with the WASH sector is that charges (or royalties) must also be included. Numerous taxes are paid on WASH goods and services, varying between countries. The main kinds of tax collected are: a) from end-users on the sale of WASH goods and services, and b) from service providers. The first is classed as a financing type in WASH accounts and included in the tariff paid. Only the second should be included in the cost classification; these are recorded as a cost for WASH service providers in the Cost-based Approach.

It is assumed that taxes on intermediary consumption (taxes on products) would already be included in other expenditure categories. Pilot testing of the methodology demonstrated that it is impossible to disentangle taxes on products from the main expenditure (see box on Brazil below).

Taxes tracked should therefore include:

- Taxes paid by service providers on production:
  - Corporate taxes (corporate tax on profits, property tax, leasing tax for renting fixed assets, taxes for occupation of public grounds, taxes on compensation of employees)
  - Earmarked taxes paid by service providers. An example would be a tax for collecting water or a pollution tax for discharging wastewater into the environment. These are paid to the state or public institutions and used for specific purposes, including social contributions.
- Other usage charges paid by service providers:
  - Charges for abstraction of water or discharge of wastewater paid to the state or public authority for the management of water resources. The licence fee depends on the volume of water collected. It is passed on to users on the basis of the volume of water consumed. Earmarked taxes and fees are often passed onto end-users as a separate item on their bills.

The box below gives an example from Brazil, showing the importance of tracking different types of tax as they can represent a significant cost for the sector.

Box 26. Example from Brazil: The importance of tracking taxes

In Brazil, the current tax policy greatly affects the cost of WASH services, so it is crucial to include taxes when calculating the total cost of services. Services are taxed according to the legal nature of the provider rather than the nature of the service. The cost of services are therefore not affected in the same way for all providers, which in turn affects user tariffs. This approach does not take into account that WASH is a public service and should be accessible to all. Taxes levied should therefore be included in the analysis to observe their effect on prices and equity, and to compare them to domestic public transfers. This will increase understanding of the net inflow of public subsidies to the sector.

WASH services are taxed when provided under concession by private companies, directly by public corporations, or by joint ventures between states and municipalities. These companies serve about 80% of users in the country and taxes can account for up to 15% of the cost of WASH services. Taxes include charges levied directly from end-users on the cost of services and paid to the government, as well as taxes on profit. This revenue is largely channelled to the federal government. The federal government then redistributes it to public services (including WASH) in the form of domestic public transfers (grants).

The main finding was that in the period 2010–2012, taxes paid to the government by WASH service providers represented on average 4.8% of the total expenditure on WASH services, compared to domestic public transfers, which represented 7% of the total financing revenue to the sector. This shows that the net inflow of public subsidies is actually lower than it seems. It did, however, increase between 2010 and 2012 as domestic public transfers to the sector rose with Brazilian National Plan for Basic Sanitation (Plansab).

Methodological Note No 6: Estimating fixed asset stocks

Objectives: This note indicates why it is important to estimate fixed asset stocks for the sector in parallel with estimating financial flows. It shows how this facilitates linkages with existing accounting conventions such the System of National Accounts. It highlights potential methodological challenges and suggests ways of addressing them.

MN 6.1. Why is it important to estimate fixed asset stocks?

There are several limitations to tracking financial flows, as set out below:

- Tracking investment flows can potentially generate misleading results, as they typically vary from year to year. For example, if a country is building a large asset at national scale, such as a dam or a pipeline, capturing the nominal value of that investment for each year the asset is under construction would show up as an investment peak followed by much lower investment levels. At global level, this may be interpreted as the country having "deprioritized" investment once this large asset has been built. In reality, the asset would be producing benefits so investment needs are subsequently lower.
- Capturing the entire value of an investment in a given year does not allow for differences in the lifespan of investments to be reflected. Following the example given above, reflecting the entire value of a new asset with an anticipated lifespan of approximately 50 years only in the year of initial investment fails to capture the benefits that this asset delivers over a long period.
- Some significant investments, such as FT2: User expenditure on self-supply, may be difficult to track where no data is available on annual investment flows for this type of expenditure. Information may, however, be available on service coverage at different points in time. This information is likely to come from periodic household surveys rather than annual investment flows.

To complement the tracking of investment flows, it can be useful to estimate the value of existing fixed asset stocks and track how it evolves over time. This has numerous advantages:

- It permits all sources of investment to be tracked on a comparable basis, thereby overcoming the problem of insufficient data on annual capital investment flows for significant investors, such as household investment in on-site sanitation. This approach was taken by the World Bank-led Africa Infrastructure Country Diagnostic report (AICD) for estimating current investment in the sector (Banerjee & Morella, 2011). Using this approach, it was found that households are the most significant investors in the WASH sector in sub-Saharan Africa.
- It allows the consideration of asset performance. It would be possible, for example, at a subsequent stage of methodological development, to exclude the value of non-functional assets, which can be significant. Estimates indicate that up to 40% of manual hand-pumps in sub-Saharan Africa are non-functional at any given time (Sutton, 2005).
- It can provide a sounder basis for estimating future costs, in particular the costs of attaining the SDGs. For example, the WHO global costing exercise first produced in 2004 and updated in 2012 is currently based on a relatively crude estimate of the total asset stocks (Hutton, 2012). This combines JMP coverage figures with the best available estimates of unit costs, based on the service ladder. Taking the value of this asset stock, a ratio is applied to derive projected operation and maintenance costs. Good unit cost values are not, however, always available at the national level so these estimates would be strengthened through more reliable estimates for asset stocks.
- It is in line with the United Nations System of National Accounts, the standard methodology used by governments to compile and track information on economic activity. According to the UN Statistics Division, National Statistics Offices (NSOs) in each country should already be compiling information on asset stocks for all economic activities, including for water and sanitation. The total value of fixed assets is defined as "stocks of fixed assets" in SNA 2008, and evolves over time in line with gross fixed capital formation.

Table 14 below summarizes the SNA definitions that can be used or referred to in WASH accounts.

Table 14. Terminology used in SNAs to evaluate changes in fixed asset stocks

Definition	
Consumption of fixed capital	Cost of the decline in value of the producer's stock of fixed assets as a result of physical deterioration, foreseen obsolescence or normal or accidental damage in the accounting period. It corresponds to "depreciation" in business management terminology. It should reflect the use of capital as a *factor of production*. It includes the use of buildings, equipment and other capital goods such as vehicles. It excludes rentals paid on the use of equipment or buildings, and fees, commissions, royalties, etc. payable under licensing arrangements, which are included as the purchase of services.
Gross fixed capital formation	Total value of the fixed assets that service providers have acquired during the accounting period (less the value of the disposal of these assets) and that are used repeatedly or continuously for more than one year in the production of services and goods. This corresponds to investments made in that year.
Opening stocks of fixed assets	Value of fixed assets at the start of the period (usually an accounting year).
Closing stocks of fixed assets	Closing stocks = opening stocks + *gross fixed capital formation* – *consumption of fixed capital* + other changes in volume of asset + holding gains/losses on assets Where: • Other changes in the volume of the asset are those not due to transactions, such as changes in classification, discoveries, and natural disasters; and • Holding gains/losses on assets are the changes in the price of assets.

Source: System of National Accounts (2008).

MN 6.2. Potential methodological challenges with this approach and ways to overcome them

This methodology has not been explicitly adopted in previous exercises seeking to track financial flows to the WASH sector. This is doubtless because there are a number of methodological difficulties in adopting the Fixed Asset Stock Approach, which require further consideration. These include the following:

- For a number of reasons, existing information on fixed assets is often very poor in the WASH sector. Few entities have developed a comprehensive and reliable asset register. Ownership of assets is frequently unclear, and there is frequent confusion over who has paid for them and who effectively owns them. If this methodology were widely adopted, however, it could provide added incentives to WASH service providers to improve asset registries and create a useful tool for improved asset management.
- Existing information may not always distinguish between water and wastewater. Some utilities currently split the valuation of their assets between water and wastewater, but this is by no means universal. Again, the adoption of a more systematic approach to valuing fixed asset stocks could provide incentives for utilities to split the values of water and wastewater in their balance sheets.
- Most importantly, to obtain comparable fixed asset stock values, it would be necessary to agree on a common methodology for valuing assets across the sector. There are a number of existing methodologies for valuing assets, but these can produce very different values, especially if the asset base combines assets that have been built at different times. Alternative methodologies for valuing fixed asset stocks are presented in the box below. Different service providers may use different rules, even within the same country.

Box 27. Alternative methodologies for valuing fixed asset stocks

Valuing assets at their current book value (or as they are recorded in the service providers' balance sheet): This is likely to be the simplest method for asset valuation, at least initially, as the values can be taken directly from companies' balance sheets. The book value is based on the original expenditure less any depreciation incurred since the asset was purchased, plus any capital maintenance expenditure incurred. Applying this method can lead to distortions, however, as different service providers may use different conventions for valuing assets in their balance sheets. Some may value assets at their historical cost (adjusted for depreciation and in some cases for inflation), while others may adjust the value based on their replacement value.

Valuing assets at their historical cost: This methodology estimates the cost at the time the asset was built, adjusted for depreciation and inflation. In the case of many utilities, water and sewerage assets were acquired a long time ago, although they are still delivering benefits. Their historical value would therefore be very low, although they continue to provide services. Other utilities might opt to update the value of assets in their books.

Valuing assets at their replacement value, also referred to as the Modern Equivalent Asset (MEA) value: This approach identifies the cost of replacing the given asset by its modern equivalent at today's cost, i.e. investing in an asset equipped with the latest technology but providing the same level of service. This provides figures closer to actual values, but conducting this kind of "revaluation" exercise can be complicated, costly and time-consuming. It is therefore seldom undertaken unless there is a clear motivation for doing so, such as the introduction of private sector participation which would call for valuing the asset base before contracting it out.

Asset valuation methods vary from one country to another. Ofwat (2005) compared methods for valuing capital bases in six different countries while comparing their regulatory systems as a whole. In England and Wales, values for capital employed are based on a value estimated at the time of privatization in 1989, adjusted for subsequent depreciation and new investment. Companies also report MEA values: The estimated cost of assets of equivalent productive capability to satisfy their remaining service potential, less accumulated current cost depreciation. Australian companies report current replacement costs in a similar way to companies in England and Wales.

Source: (Ofwat, 2005), "*International comparison of water and sewerage service*"

The System of National Accounts (2008) also formulates recommendations for valuing assets and reflecting them in balance sheets. These can serve as a useful reference, while bearing in mind the following points of caution:

- Information on the initial investment in a particular asset should be obtained: To successfully track financing types to the sector, it is important to identify the actor(s) that financed the initial construction. In the case of water utilities, for example, investment funds may come from internally generated revenue, government subsidies or international transfers.
- For investment by households, a number of assumptions should be formulated: Deriving the value of the fixed asset stock in which households have invested over time can be done based on the number of existing facilities multiplied by the unit cost of these facilities, minus government subsidies.[1] Given the typical lack of information about when the investments were made, this is equivalent to valuing household assets based on the MEA approach. For consistency, it might be preferable to use the MEA approach for all other asset types as well, although this could be difficult to achieve if the method has not previously been applied.

The box below shows how this method was applied in Brazil.

[1] An additional complication is that in national accounts, households are not considered to be "investors"; instead, they purchase consumer durables (which would be classified as investments if purchased by an establishment). For households, the consumer durable is recorded as consumed the moment it is purchased. It is therefore important to record the purchase of consumer durables by households and estimate the lifetime of the equipment. The treatment of these household investments will need to be discussed and agreed with statistics experts and with the System of National Accounts.

Box 28. Example from Brazil: Estimating fixed asset stocks of service provides and households

Estimating fixed asset stocks in Brazil was possible thanks to the aggregation of financial information on asset investments from service providers in the National Sanitation Information System (SNIS). Significant work was still required on the data, which were drawn from a range of different service providers and presented in different formats. Nor were asset stocks valued in the same way.

Due to differences in methods, it was only possible to estimate the stock of fixed assets for formal service providers. This information is recorded in their balance sheets, which are available in SNIS for corporate private service providers only, and not for public service providers, local authorities or public organizations. SNIS records the asset value at depreciated historical prices. These values were used to estimate the asset stock of all formal providers at their historical value, which was then adjusted with the sectoral price index to adjust for annual inflation. This was done by calculating an average unit fixed asset stock per connection and per household. The total stock was calculated as Total Assets (-) Current Assets (-) Long-Term Assets.

An additional challenge was that in 1995, asset valuation changed from a method based on the historical value of assets to one based on the acquisition value of assets. The current average book value of assets acquired after 1995 therefore had to be estimated using their acquisition value. Only one state-owned company (SABESP) in São Paulo that turned public very recently re-evaluated its assets using their replacement values. This methodology could be applied to other service providers in the future, as it gives a more accurate value of asset stocks.

The stock of fixed assets for self-provided households was calculated based on estimated unit costs of equipment per household (septic tanks, water tanks and wells) and the reported number of self-supplied households from the population census. However, it was not possible to estimate asset stocks of water resource management infrastructure for municipalities whose information is not held in the SNIS. These omissions may represent around 5% of existing total asset stocks.

In conclusion, given the methodological difficulties entailed in estimating fixed asset stocks, the WASH accounts team will need to test the feasibility of alternative methods and the potential errors or biases in doing so. Countries that undertake the exercise of valuing asset stocks should state clearly which method has been used, and whether it has been consistently applied across service providers or asset types. It may be possible to do so only on a sample basis. Valuing fixed asset stocks may be more complex when first attempted, as the initial value of the asset base needs to be determined, but will become comparatively easier for subsequent iterations. It will require the identification of existing assets, and their value, for each service provider. This will also help to define reference values for other types of cost such as operating costs and capital maintenance costs. These can be estimated as a percentage of asset values if no other reliable estimate can be gathered at a reasonable cost.

A further step in the refinement of the methodology could be to adopt a full Fixed Asset Stock Approach for the sector, tracking not only assets but also liabilities (i.e. the loans that have been provided to finance such assets) in order to derive a value for the net fixed asset stock. This is recommended by the International Monetary Fund (2001) in its *Government Finance Statistics Manual*.[1]

[1] (International Monetary Fund Statistics Department, 2001) available at: https://www.imf.org/external/pubs/ft/gfs/manual/pdf/all.pdf

Methodological Note No 7: WASH accounts tables and indicators

Objectives: This note sets out the tables used to prepare WASH accounts. A summary list of all tables is presented in Step 3 of the Guidance Document. Preparing these tables enables a full picture of WASH sector financing to be created for policy use. This Methodological Note contains the structure of the tables together with an explanation of each, and the list of indicators that can be derived from them.

MN 7.1 How are the WASH accounts tables constructed?

WASH accounts tables display information on the consumption, production and financing activities of a country's WASH sector. Reporting the data and estimates in a uniform way, using standard tables, facilitates comparison across countries.

The rows and columns of WASH accounts are based on the classifications presented elsewhere in this methodology, including:

- Table 1 – TrackFin classification of WASH goods and services;
- Table 2 – Definitions: Uses of WASH services, WASH sector actors and financing types; and
- Table 12 – TrackFin classification of costs.

In addition, some of the proposed tables include a breakdown by region or service areas, some are included in the table below. This summarizes all classification types (and labels) used in WASH accounts.

Table 15. Classifications used in WASH accounts

Classifications	Definition
WASH services (S)	WASH services and products provided by WASH service providers and consumed by users. See Table 1 for more on classification.
Uses of WASH services (U)	Type of use of WASH goods and services. See Table 2.
WASH service providers (P)	Actors engaged in the production and delivery of WASH goods and services. See Table 2.
Financing units (FU)	Institutional entities that provide or mobilize funding to the sector to pay for WASH services. They may allocate funds directly to service providers or channel them through intermediary institutions. See Table 2.
Financing types (FT)	The sources of funding prior to distribution through financing entities. See Table 2.
Costs (C)	Type of cost (or expenditure type) borne by service providers for the provision of WASH services. See Table 12.
Service areas (A)	Areas where WASH services are provided and consumed (urban, rural or central).
Geographic regions (R)	Regions where WASH services are provided and consumed. Geographic nominations will vary from one country to another.

WASH accounts tables are constructed to track the financial flows between these dimensions. The classifications can be applied to individual costs, producing expenditure tables for a single dimension (such as by type of WASH use, service providers, or financing type). Additional information can be gained from cross-classification involving two or more dimensions. Many combinations of two or three-dimensional tables can be created. The choice of tables depends on their relevance to the country, and the feasibility of creating them. A selection of two-dimensional tables is presented here.

Recommended common WASH accounts tables

Additional explanation of each proposed WASH accounts table, and the information they generate, is provided below. For ease of reference and to facilitate comparison, each table is assigned a number and a code indicating the type of information it contains. The convention used is that the headings refer first to the row classification, and then to the column classification. For example, Table WA 1 (SxA) presenting the allocation of expenditure by main WASH service (S) and service area (A) is referred to as the SxA table, with WASH services (S) appearing in rows and service area (A) in columns.

Table WA 1 (SxA) – WASH expenditure by main WASH service and service area: This table shows total expenditure on each main type of WASH service by service area as defined by the country. According to country-specific policy needs, countries can decide to develop also an SxR table for WASH expenditure by main WASH service and country-defined geographic region.

Table 16. WA 1 (SxA) – WASH expenditure by main WASH service and service area

		Areas			
		A1 Urban	A2 Rural	A3 Central	Total
S1	Water supply services				
S2	Sanitation services				
S3	Support services to the WASH sector				
S4	Water resource management related to water and sanitation services				
S5	Hygiene services				
	Total				

Table WA 2 (SxU) – WASH expenditure by type of service and use: This table shows financing units' expenditure on the various types of WASH service and use. This table provides a summary presentation of the demand for WASH services in the country, identifying who is consuming what type of service. This is done by type of use rather than by type of users.

Table 17. WA 2 (SxU) – WASH expenditure by type of WASH use and service

		WASH uses (U)				
		U1	U2	U3	U4	
Main WASH services (millions of currency units)		Served domestic use	Self-provided domestic use	Served non-domestic use	Self-provided non-domestic use	Total
S1	Water supply services					
S2	Sanitation services					
S3	Support services to the WASH sector					
S4	Water resource management related to water and sanitation services					
S5	Hygiene services					
	Total					

Table WA 3 (SxP) – WASH expenditure by type of service and provider: This table shows service providers' expenditure on different types of WASH service. It clarifies "Who provides what?" It also provides a summary presentation of the WASH supply market in the country, identifying who the providers are, and how spending to the sector is channelled through different providers. It displays the relative importance of each type of provider on the market.

Table 18. WA 3 (SxP) – WASH expenditure by type of WASH provider and service

		WASH providers					
		P1	P2	P3	P4	P5	
Main WASH services (millions of currency units)		Government agencies	Network corporate providers	Non-network corporate providers	NGOs and community-based organizations	Self-provided users	**Total**
S1	Water supply services						
S2	Sanitation services						
S3	Support services to the WASH sector						
S4	Water resource management related to water and sanitation services						
S5	Hygiene services						
	Total						

Table WA 4 (PxFT) – WASH expenditure by type of provider and financing type: It addresses the question, "Where does the money come from?" presenting the different sources of revenue by financing type for each service provider. It allows resource flows within the WASH sector to be followed, via the columns displaying the funding origin to the rows displaying its recipients and users. The table also shows the relative importance of each type of revenue stream in financing each type of provider's activities, and in the sector overall

Table 19. WA 4 (PxFT) – WASH expenditure by financing type and WASH provider

		Financing types						
		FT1	FT2	FT3	FT4	FT5	FT6	
WASH providers (millions of currency units)		Tariffs for services provided	User expenditure on self-supply	Domestic public transfers	International public transfers	Voluntary contributions	Repayable financing	**Total**
P1	Government agencies							
P2	Network corporate providers							
P3	Non-network corporate providers							
P4	NGOs and community-based organizations							
P5	Self-provided users							
	Total							

Table WA 5 (SxFT) – WASH expenditure by service type and financing type: This table shows the financing path to the provision of WASH services. It addresses the question, "Who finances what?" presenting the different sources of revenue (financing types) for each service. Resource flows to the WASH sector can be followed from the columns displaying the origin of the funds to the rows displaying the activities on which they are spent.

Table 20. WA 5 (SxFT) – WASH expenditure by type of financing and type of WASH service

		Financing types						
		FT1	FT2	FT3	FT4	FT5	FT6	
Main WASH services (millions of currency units)		Tariffs for services provided	User expenditure on self-supply	Domestic public transfers	International public transfers	Voluntary contributions	Repayable financing	**Total**
S1	Water supply services							
S2	Sanitation services							
S3	Support services to the WASH sector							
S4	Water resource management related to water and sanitation services							
S5	Hygiene services							
	Total							

Table WA 6 (SxFU) – WASH expenditure by service and financing unit: This table shows how much is spent by each financing unit on which service. It describes how overall financing units allocate their resources. It addresses the question, "Who funds what?"

Table 21. WA 6 (SxFU) – WASH expenditure by financing unit and WASH service

		Financing units										
		FU1	FU2	FU3	FU4	FU5	FU6	FU7	FU8	FU9	FU10	
Main WASH services (millions of currency units)		Users	National authorities	Regional authorities	Local authorities	Network corporate providers	Non-network corporate providers	Economic and quality regulators	Bilateral and multilateral donors	NGOs and community-based organizations	Banks and financial institutions	**Total**
S1	Water supply services											
S2	Sanitation services											
S3	Support services to the WASH sector											
S4	Water resource management related to water and sanitation services											
S5	Hygiene services											
Total												

Table WA 7 (PxFU) – WASH expenditure by provider and financing unit: This table shows how much is spent by each financing unit on which type of service provider. It highlights the financing path to the provision of WASH services. It addresses the question, “Who funds who?”

Table 22. WA 7 (PxFU) – WASH expenditure by WASH provider and financing unit

		Financing units										
		FU1	FU2	FU3	FU4	FU5	FU6	FU7	FU8	FU9	FU10	
WASH providers (millions of currency units)		Users	National authorities	Regional authorities	Local authorities	Network corporate providers	Non-network corporate providers	Economic and quality regulators	Bilateral and multilateral donors	NGOs and community-based organizations	Banks and financial institutions	**Total**
P1	Government agencies											
P2	Network corporate providers											
P3	Non-network corporate providers											
P4	NGOs and community-based organizations											
P5	Self-provided users											
Total												

Table 23. WA 8 (FTxFU) – WASH expenditure by financing type and financing unit

Financing types (millions of currency units)		Financing units										
		FU1	FU2	FU3	FU4	FU5	FU6	FU7	FU8	FU9	FU10	
		Users	National authorities	Regional authorities	Local authorities	Network corporate providers	Non-network corporate providers	Economic and quality regulators	Bilateral and multilateral donors	NGOs and community-based organizations	Banks and financial institutions	**Total**
FT1	Tariffs for services provided											
FT2	User expenditure on self-supply											
FT3	Domestic public transfers											
FT4	International public transfers											
FT5	Voluntary contributions											
FT6	Repayable financing											
	Total											

Table WA 8 (FTxFU) – WASH expenditure by financing type and financing unit: This table shows the types of financing through which overall financing units allocate resources to the sector.

Table WA 9 (CxP) – WASH expenditure by type of cost and WASH provider: This table shows how different types of provider allocate resources to cover different types of cost. It answers the question, "What types of cost are funded and by whom?"

Table 24. WA 9 (CxP) – WASH expenditure by type of cost and WASH provider

		WASH providers					
		P1	P2	P3	P4	P5	
Cost type (millions of currency units)		Government agencies	Network corporate providers	Non-network corporate providers	NGOs and community-based organizations	Self-provided users	**Total**
C1	Investment costs including hardware and associated support						
C2	Operating and maintenance costs						
C3	Large capital maintenance costs						
C4	Financial costs						
C5	Support costs						
C6	Taxes						
	Total						

Table WA 10 (CxS) – WASH expenditure by type of cost and WASH service: This table shows the type of cost on which resources are spent to provide each WASH service.

Table 25. WA 10 (CxS) – WASH expenditure by type of cost and WASH service

		Main WASH services					
		S1	S2	S3	S4	S5	
Cost type (millions of currency units)		Water supply services	Sanitation services	Support services to the WASH sector	Water resource management related to water and sanitation services	Hygiene services	**Total**
C1	Investment costs including hardware and associated support						
C2	Operating and maintenance costs						
C3	Large capital maintenance costs						
C4	Financial costs						
C5	Support costs						
C6	Taxes						
	Total						

Table WA 11 (ASxP) – Asset stocks by type of WASH provider: This table presents the stock of assets for each type of provider. This permits the evaluation of asset stocks for the sector as a whole, reflecting what has been invested over time by each type of service provider (including household self-service).

Table 26. WA 11 (ASxP) – Fixed asset stocks by type of WASH provider

		WASH providers					
		P1	P2	P3	P4	P5	
Asset stocks (millions of currency units)		Government agencies	Network corporate providers	Non-network corporate providers	NGOs and community-based organizations	Self-provided users	**Total**
AS1	Closing stocks of fixed assets						
	Total						

MN 7.2 What are WASH accounts indicators?

WASH accounts indicators are key figures on sector expenditure derived directly from the WASH accounts tables. These indicators are directed principally to national policy-makers, but also serve to facilitate international reporting.

Due to difficulties in comparing national currency units, the use of ratios is recommended where possible (such as the ratio of WASH spending to GDP), in order to avoid the distorting impact of currency exchange rates. However, some indicators, such as total expenditure on the WASH sector at the national level, and total expenditure on WASH per capita, can be presented in currency units. The conversion from local currency into international dollars using current exchange rates or a PPP exchange rate needs to be considered and documented.

Table 27 below presents the main indicators that can be elaborated in response to a country's policy questions.

Benchmarking and presenting indicators in context

Certain indicators would benefit from comparison with actual levels of GDP. For example, a figure showing the percentage of WASH sector expenditure as a percentage of GDP does not provide an indication of the relative size of GDP from one country to the next. It is therefore preferable to chart the percentage of WASH expenditure on the x-axis and show GDP per capita on the y-axis. This shows whether there is any form of GDP impact on WASH sector spending.

Table 27. WASH accounts indicators

Table (T)	Indicator (I) that can be derived
Table WA 1 (SxA) – WASH expenditure by service and service area	Total expenditure on the WASH sector at the national level Total expenditure on WASH in the country as share of GDP Total expenditure on WASH per capita Total expenditure on WASH as a percentage of total public spending Total expenditure on urban and on rural drinking-water as a percentage of total WASH expenditure Total expenditure on urban and on rural sanitation as a percentage of total WASH expenditure
Table WA 2 (SxU) – WASH expenditure by type of service and use	Total expenditure per type of service use
Table WA 3 (SxP) – WASH expenditure by type of service and provider	Total expenditure per type of WASH service Total expenditure per type of WASH provider
Table WA 4 (PxFT) – WASH expenditure by type of provider and financing type	Total expenditure per type of financing type
Table WA 5 (SxFT) – WASH expenditure by type of service and financing type	Total domestic public transfer expenditure and as a percentage of total WASH financing Total international public transfers expenditure and as a percentage of total WASH financing Total user expenditure as a percentage of total WASH financing
Table WA 6 (SxFU) – WASH expenditure by service and financing unit Table WA 7 (PxFU) – WASH expenditure by provider and financing unit Table WA 8 (FTxFU) – WASH expenditure by financing type and financing unit	Total expenditure channelled through regional and local authorities as a percentage of WASH public expenditure
Table WA 9 (CxP) – WASH expenditure by type of cost and provider Table WA 10 (CxS) – WASH expenditure by type of cost and main service	Total investment cost as a percentage of total WASH expenditure Total operating and maintenance cost as a percentage of total WASH expenditure Total large capital maintenance cost as a percentage of total WASH expenditure Investment cost as a percentage of total water supply expenditure Operating and maintenance cost as a percentage of total water expenditure Large capital maintenance cost as a percentage of total water expenditure Investment cost as a percentage of total sanitation expenditure Operating and maintenance cost as a percentage of total sanitation expenditure Large capital maintenance as a percentage of total sanitation expenditure
Table WA 11 (ASxP) – Fixed asset stocks by type of WASH provider	Total WASH fixed asset stocks per capita

Annex A. Glossary

Note that terms in *italics* are defined elsewhere in the glossary.

Bond	A method of borrowing used by private companies, governments or municipalities consisting of the issue of fixed interest securities, repayable by a specified date. Certain government bonds have no fixed redemption date, and can be sold at their prevailing market price.
Closing stocks of fixed assets	Closing stocks = opening stocks + *gross fixed capital formation* – *consumption of fixed capital* + other changes in volume of asset + holding gains/losses on assets Where: Other changes in the volume of the asset are those that are not due to transactions, such as changes in classification, discoveries and natural disasters. Holding gains/losses on assets are the changes in the price of assets (SNA 2008).
Commercial loan	A loan extended by commercial banks or development finance agencies at commercial rates, i.e. interest rates that reflect market conditions.
Compensation of human resources (employees and self-employed professional remuneration)	Total remuneration paid by an enterprise to an employee in return for work performed during the accounting period. It includes wages and salaries and all forms of social benefits, payments for overtime or night work, bonuses, allowances, as well as the value of in-kind payments such as the provision of uniforms for medical staff. This category also includes the remuneration of non-salaried self-employed professionals (SNA 2008).
Concessionary loan (or 'soft loan')	A loan provided on concessionary lending terms, which may include a lower interest rate than the market rate, a longer repayment period or a grace period.
Consumption of fixed capital	Cost of the decline in value of the producer's stock of fixed assets as a result of physical deterioration, foreseen obsolescence or normal or accidental damage in the accounting period. It corresponds to "depreciation" in business management terminology. It should reflect the use of capital as a *factor of production.* It includes the use of buildings, equipment and other capital goods such as vehicles. It excludes the rentals paid on the use of equipment or buildings, and fees, commissions, royalties, etc., payable under licensing arrangements, which are included as the purchase of services (SNA 2008).
Domestic public transfers	Public transfers from government agencies (central or local government) to WASH actors. These are often subsidies that come from taxes or other sources of government revenue. This category includes only grants and excludes concessionary loans, which are included in FT6.
Equity investments	A form of finance in which investors take an 'equity stake', meaning that they purchase shares in an entity. This enables them to share the risk of that entity (through fluctuations in the share price) in return for the prospect of sharing its profits (through dividend payments). The higher the investment risk, the higher the expected level of return.

Factors of production	Factor inputs used by providers to produce the goods and services consumed or the activities conducted in the system. Included are: the costs of production (*intermediary consumption* + *gross valued added* + *Compensation of human resources* + Other taxes less subsidies on production + *Consumption of fixed capital*); *Gross fixed capital formation; and* Changes in the stock of assets. (SNA 2008).
Financing	Act of providing *funding.*
Financing types	Financial flows that circulate between financing units and service providers, characterized by their origin and nature.
Financing units	Institutional entities that provide funding to the sector. They mobilize funding to pay service providers for WASH services. They may allocate funds directly to service providers or channel them through other financing units.
Funding	Monetary value of the funds provided to support a given activity.
Grant	A form of development aid without repayment obligations. Grants might be untied or carry explicit or implied political and commercial obligations. Grants are usually provided by IFIs, governments, foundations and specific funds with different policies, procedures and technical products. A grant can be blended with other kinds of finance to produce a suitable financing package for a particular project.
Gross Domestic Product	GDP derives from the concept of value added. Gross value added is the difference between output and intermediate consumption. GDP is the sum of gross value added of all resident producer units plus that part (possibly the total) of taxes on products, less subsidies on products, that is not included in the valuation of output. GDP is also equal to the sum of the final use of goods and services (all uses except intermediate consumption) measured at purchasers' prices, less the value of imports of goods and services. Finally, GDP is also equal to the sum of primary incomes distributed by resident producer units (SNA 2008).
Gross fixed capital formation	Total value of the fixed assets that service providers have acquired during the accounting period (less the value of the disposal of assets) and that are used repeatedly or continuously for more than one year in the production of services and goods (SNA 2008).
Gross valued added	Gross value added = output – *intermediate consumption.* Gross value added is a measure of the contribution to GDP made by an individual producer, industry or sector. It is the value of output less the value of the goods and services, excluding fixed assets, consumed as inputs by a process of production (*intermediate consumption*). Once the value added has been generated, it can be decomposed in the primary factors for generation of income, according to the following formula: (Gross) value added = (gross) operating surplus + *compensation of employees* + *taxes* – *subsidies* (SNA 2008).

Guarantees	A contract by a third party (C) to underwrite a financial commitment entered into by two parties (A and B). Guarantees can be used by national governments to reduce the risks of borrowing and bond issues by their sub-sovereign bodies, and by international agencies to increase the creditworthiness of developing country institutions and support specific projects within them.
Intermediate consumption (materials and services used)	Total value of goods and services used for the provision of goods and services (not produced in-house) bought in from other providers and other industries of the economy. All the materials and services are to be fully consumed during the production activity period (SNA 2008).
International public transfers	Voluntary donations (or grants) from public donors and multilateral agencies that come from other countries. Concessionary loans are excluded from this category and entirely included in FT6 – Repayable financing.
Microfinance institutions	Refers to schemes for extending credit, savings, insurance, money transfers and other financial products to small business, farmers and other low-income borrowers who cannot get access to normal bank loans.
Net value added	Net value added = *Gross valued added – consumption of fixed capital* = output – *intermediate consumption – consumption of fixed capital* Net value added is obtained from *Gross value added* less the *Consumption of fixed capital* that occurs when the reduction in the value of the fixed assets used in production during the accounting period results from physical deterioration, normal obsolescence or normal accidental damage (SNA 2008).
Official Development Assistance (ODA)	*Grants* or *loans* to countries and territories on the DAC List of ODA Recipients (developing countries) and to multilateral agencies. They may: (a) be undertaken by the official sector; (b) have promotion of economic development and welfare as the main objective; (c) provide concessional financial terms (if a loan), having a grant element of at least 25%. The OECD DAC database at present only tracks ODA flows from OECD member countries but is looking to develop coverage of other non-OECD donors.
Operating and maintenance expenditure	Routine maintenance and operation costs to keep services running (e.g. wages, fuel or any other regular purchases). Operating expenditures is the recurrent (regular, ongoing) spending to provide WASH goods and services: labour, fuel, chemicals, materials, and purchases of any bulk water. Maintenance expenditure is the routine expenditure needed to keep systems running at design performance, but does not include major repairs or renewals not recognized as recurrent (WASHCost).
Repayable financing	Sources of finance from private or public sources and that ultimately have to be repaid, such as loans (including concessionary loans and guarantees), equity investments or other financial instruments such as bonds. This includes concessionary repayable financing and non-concessionary repayable financing.
Service providers	Actors engaged in the production and delivery of WASH services, including government institutions that provide support.

Subsidies	A subsidy is a *grant* given generally by the government to economic actors in various forms, such as a cash transfer, a tax reduction or inputs at lower prices (such as free land). A subsidy can be given to economic actors as an incentive to deliver goods and/or services that benefit society. A subsidy can also be provided to households below the poverty line to enable them to access basic goods and services. Subsidies are sometimes provided to support utility infrastructure projects and may include 'hardware subsidies' (to reduce the initial capital investment costs), 'operating subsidies' (to cover losses incurred during service operation) or 'software subsidies' (to cover the software costs associated with the infrastructure development, such as for project preparation, capacity building and training). A hidden form of public subsidy may consist of making an equity investment with no expectation of repayment or a return.
Support or software costs	Cost of software activities associated with infrastructure development, such as project preparation, capacity building, training, community mobilization and behavioural change activities. Includes expenditure on direct and indirect support. Expenditure on direct support (ExpDS) includes expenditure on both pre- and post-construction support activities directed to local-level stakeholders (for example, training for community or private sector operators, users or user groups). Expenditure on indirect support (ExpIDS) includes the cost of planning and policy-making at the governmental level, including strengthening the skills and capacities of professionals and technicians. These costs have a direct impact on the long-term sustainability of projects.
Tariffs (in the OECD 3T typology)	Funds contributed by users of WASH services for obtaining the services. In the OECD 3T typology, tariffs include two types of funding: • *Tariffs for services provided; and* • Households' out-of-pocket expenditure on self-supply. The WASH accounts terminology proposes to separate these two types of funds to avoid confusion.
Tariffs for services provided (in WASH accounts)	Payments made by users (domestic and non-domestic) to service providers for access to and use of the service.
Taxes	Includes taxes and fiscal contributions levied from service providers: • Taxes on production (corporate tax on profits, property tax, leasing tax ("taxe professionelle") for renting fixed assets, taxes for occupation of public grounds, or for the remuneration of employees. • Usage charge related to (or earmarked for) the sector such as the payment of royalties, levies or duties for the use of water, or the discharge of wastewater into water bodies. • Other charges on production levied for earmarked uses, such as social contribution.
Taxes (in the OECD 3T typology)	Funds originating from domestic taxes that are channelled to the sector via transfers from all levels of government – national, regional or local. Such funds would typically be provided as *subsidies* for capital investment or operations. "Hidden" forms of subsidy may include tax rebates, *concessionary loans* (i.e. at a subsidised interest rate) or subsidised services (such as subsidised electricity).

Transfers (in the OECD 3T typology	Funds from international donors and international charitable foundations (including NGOs, decentralized cooperation or local civil society organizations) that typically come from other countries. These funds can be contributed either in the form of *grants, concessionary loans* (i.e. through the grant element included in a concessionary loan, in the form of a subsidised interest rate or a grace period) or *guarantees*. The WASH accounts terminology proposes to separate *international public transfers* and *voluntary transfers* to avoid confusion.
User expenditure on self-supply	Funding provided by users to invest in or provide the service themselves. Self-provided users pay an initial investment up-front (in a well, a private water production system, or a private latrine) for access to the service and then cover operating and maintenance costs themselves. This can be in form of cash, material or time, but only cash payments are included in WASH accounts. This category can be further disaggregated into several sub-categories, such as FT2.1 Domestic user expenditure on self-supply, or FT2.2 Non-domestic user expenditure on self-supply.
Voluntary contributions	Voluntary donations (or grants) from international and national non-governmental donors including from charitable foundations, non-governmental organizations (NGOs), civil society organizations and individuals (remittances). Concessionary loans are excluded from this category and are entirely included in FT6 Repayable financing.

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Relevant websites

IBNET: https://www.ib-net.org/

National Health Accounts: http://www.who.int/nha/en/

SEEA-Water: http://unstats.un.org/unsd/envaccounting/seeaw/

SNIS (Brazil): http://www.snis.gov.br/

UN Statistics Division – International classifications registry: http://unstats.un.org/unsd/cr/registry/regct.asp?Lg=1

VFM-WASH: www.vfm-wash.org

WASH Cost: http://www.ircwash.org/washcost

Notes

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For more information:

http://www.who.int/water_sanitation_health/glaas/trackfin/en/
Contact: glaas@who.int

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