Planning Water and Sanitation Interventions with the SSWM Toolbox

This article presents the Planning and Process Tools section of the Sustainable Sanitation and Water Management (SSWM) Toolbox and shows how it can be used for a more holistic understanding and application of planning approaches in water and sanitation.

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Abstract

This article presents the Planning and Process Tools section of the Sustainable Sanitation and Water Management (SSWM) Toolbox and shows how it can be used for a more holistic planning and implementation of water and sanitation interventions. The Planning and Process tools section provides the reader with a thorough overview on the most important existing programming and planning frameworks and field-tested approaches, allowing him or her to find and apply the approaches fitting best to his case. At the same time, the Toolbox also describes various tools for each single planning step individually, so they can be mixed and matched together as needed for the intervention. Furthermore, the SSWM Toolbox as a whole supports users to move from the planning process to implementation by linking the Planning and Process section to an equivalent section on Software or Hardware Implementation Tools, thereby contributing to the overall awareness on sustainable sanitation approaches as well as their practical implementation.

Introduction

The world is facing a global water crisis. Worldwide, still more than 1.1 billion people live with inadequate access to safe drinking water and more than 2.5 billion people lack access to improved sanitation. These failures have dramatic consequences for the environment, public health and development and thus seriously undermine progress towards achieving the MDGs. Besides continuing population growth and urbanisation, rapid industrialisation and expanding and intensifying food and goods production are all putting pressure on water resources. Climate change exacerbates the problems. But although water is scarce, it is often used in an unsustainable way: Different stakeholders from households, agriculture or industry generally fulfil their water needs without taking into account the impact on other stakeholders. This lack of coordination leads to an overuse and waste of resources. As proper treatment and reuse of wastewater is not a norm, the contamination of aquatic ecosystems, a lack of nutrients and soil degradation in agriculture as well as negative impacts

Key Messages:

- The Sustainable Sanitation and Water Management (SSWM) Toolbox is to date the most comprehensive open source collection of tools, covering not only planning and process approaches from the water and sanitation sector, but also software and hardware implementation tools. It follows a holistic approach that tries to link sustainable sanitation, water management and agriculture.
- The Planning and Process Tools section of the toolbox helps stakeholders to develop an understanding of the importance of a sound planning process and supports them to implement a participatory planning process in the field of water management and sanitation.
- In order to make the step from planning to implementation, the user finds – in a further section – an array of hardware tools (technologies) and software (behavioural) approaches to implement water management and sanitation interventions more sustainable.
- The toolbox can be used by individual users such as NGO staff, students, planners, or members of development aid organisations – but it is also the basis for courses on sustainable sanitation and water management.
- The toolbox was developed by seecon gmbh, together with a large network of partners from all around the world, many of them members of the Sustainable Sanitation Alliance (SuSanA).

on food security arise.

Sustainable Sanitation and Water Management – SSWM – proposes to combine the notion of integrated water resource management (IWRM) and Sustainable Sanitation as an answer to this global crisis (see Figure 1). The concept of IWRM links water to other vital resources and views the whole water cycle together with human interventions as the basis for sustainable water management. The main objective of sanitation, on the other hand, is to protect and promote human health by providing a clean environment and breaking the cycle of disease. In order to be sustainable, a sanitation system does not only have to be economically viable, socially acceptable, and technically and institutionally appropriate, it should also protect the environment and natural resources. Thus, sanitation is closely linked to both issues of public health and environmental protection, and also to the management of other resources, such as water, nutrients and biofuels.

seecon international gmbh, together with many partners from the Sustainable Sanitation Alliance (SuSanA), as well as partners from the IWRM sector, has recently developed an integrative, local-level capacity development tool taking into consideration this holistic approach (the SSWM approach). The SSWM Toolbox considers the whole water cycle (from source to sea and back), including both the water and the nutrient loop and showing links between both. The Toolbox contains a guided exercise to prioritise and understand one's local problems as well as a large compilation of factsheets on Hardware, Software, or Planning and Process Tools. The Toolbox is open source and available on the web (www.sswm.info) and contains also a comprehensive collection of further readings, links, a library, glossary, ready-made PowerPoints and soon also a train-the-trainers section. The Planning and Process Tools section of the toolbox contains numerous planning frameworks and field-tested approaches, allowing a more holistic planning and implementation of water and sanitation interventions. At the same time, the SSWM Toolbox supports users to move from planning to implementation by linking the Planning and Process Tools section to an equivalent section on Implementation Tools.

What is the SSWM Toolbox?

The Sustainable Sanitation and Water Management Toolbox is a comprehensive capacity development tool linking up sustainable sanitation, integrated water resource management and agriculture on the local level in order to save and recycle water, regain resources and protect aquatic ecosystems. Figure 1 shows the fields that a sustainable and holistic water management and sanitation approach should take into consideration – namely the whole water (and nutrient) cycle from source to sea and back. Like this, it contributes to water and sanitation related interventions that are economically viable, socially acceptable, technically and institutionally appropriate, and protect the environment and natural resources.

The Toolbox is open-source and available on www.sswm.info. It is divided into six main sections, containing a guided exercise to prioritise and understand one's local problems (Understand your System), a large compilation of factsheets on hardware and software tools and approaches (Implementation Tools), the tools you need to plan for and implement solutions (Planning and Process Tools), plus a section explaining the Concept and one providing Background information – all topped with further readings, links, a library, glossary, ready-made PowerPoints and soon also a Train-the-Trainers section (see also Figure 2).

The Toolbox has been developed with the contribution of many partners form the water and sanitation sector bringing in their complementary expertise regarding planning or implementation; software or hardware aspect. It does not reinvent the wheel, but aims at making available all the existing and valuable material in a comprehensive way (i.e. 'the best of') showing also how the different activities are interlinked, and structuring this material in a way that makes it accessible also for practitioners.

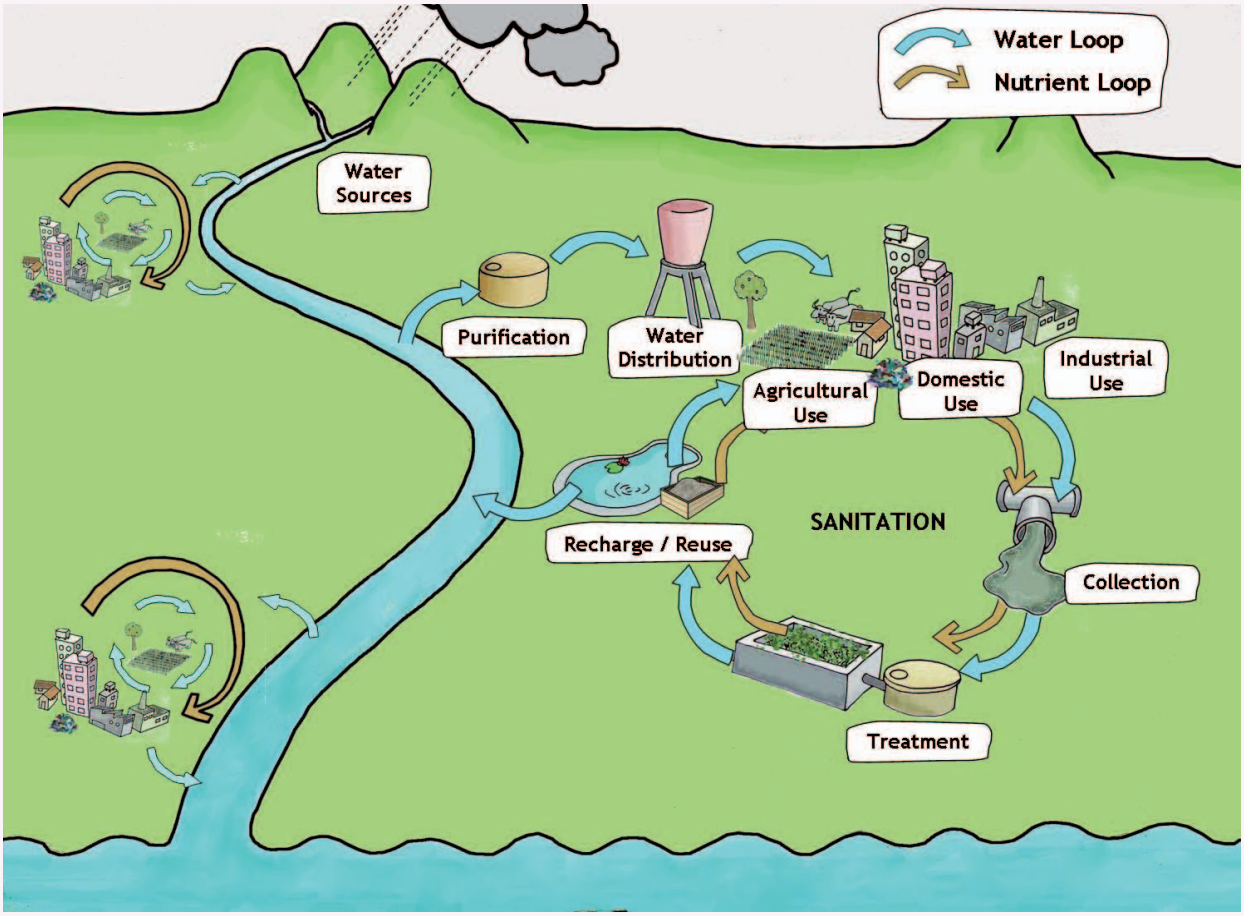

Figure 1: The Sustainable Sanitation and Water Management Loop (seecon, 2010)

Figure 2: The Sustainable Sanitation and Water Management Toolbox (www.sswm.info). contains a guided exercise to prioritise and understand one's local problems, the tools you need to plan for and implement solutions, a large compilation of factsheets on hardware and software tools and approaches, topped with further readings, links, a library, glossary, ready-made PowerPoints and soon also a Train-the-Trainers section.

The Planning and Process Tools of the SSWM Toolbox

There is surely no shortage on innovative solutions to optimise local water management and sanitation systems. However, the tricky part is often how to plan and proceed in implementing those solutions. This is where the Planning and Process Tools of the SSWM Toolbox come into play. The main benefit of the toolbox is its holistic approach: It does not just focus on the planning but on the different steps that are necessary from an idea to a working solution – it first helps to identify local problems, then supports the planning process and then also presents a range of solutions that are apt to improve the specific local situation.

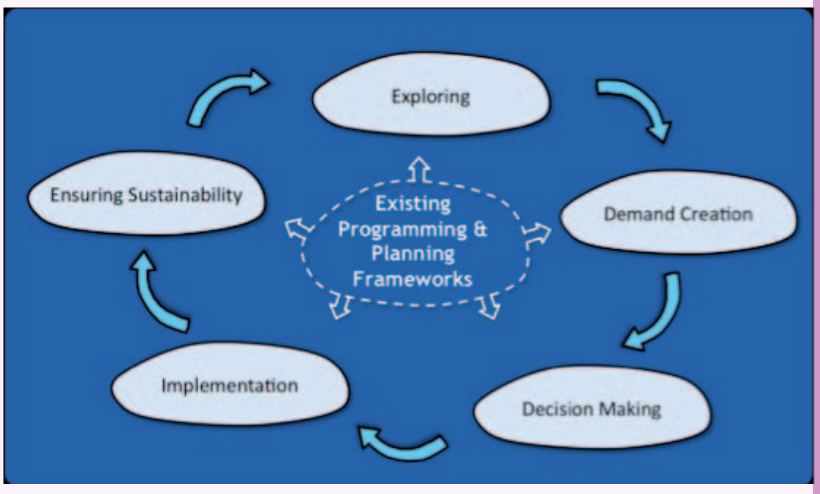

Figure 3: Planning and Process Tools – an Overview (seecon, 2010)

In the Planning and Process Tools section (see the SSWM Toolbox presents two different strategies: On the one hand, ready-to-use planning frameworks and approaches that have been tested and approved over and over again are presented (Existing Programming and Planning Frameworks). On the other hand, different approaches and technologies are presented for each of the five classic planning steps (Exploring, Demand Creation, Decision Making, Implementation and Ensuring Sustainability).
In this sense, the SSWM Toolbox helps users to:

- get an overview on existing planning frameworks and approaches
- combine the individual steps necessary to move from an idea to implementation in an own mix-and-match approach
- complement their knowledge on planning by getting to know alternatives to the commonly used accompanying interventions (Software Tools) or technologies (Hardware Tools)
- understand and practically take responsibility for a planning process in regards to sustainable sanitation or water management.

Planning approaches are normally based on the classic project cycle: Hence, many organisations developed step-by-step participatory programming and planning frameworks or approaches to help finding, selecting, and implementing solutions and ensuring the long-term sustainability of sanitation, water and hygiene interventions. All frameworks and approaches have in common that they follow the idea that all stakeholders concerned should be involved in the whole process. They do not just need to be informed but actively included in the planning, decision making, implementation and follow up process, as this ensures the long-term sustainability of projects and programmes. Though there is no consensus on the number of 'steps' or how they should be named, most approaches cover at least the five steps shown in Figure 3.

Existing Programming and Planning Frameworks

In the Existing Programming and Planning Framework section (Figure 3, centre), the SSWM Toolbox pays tribute to approaches that have shown their practicability in the past. These approaches are shortly presented. Moreover further open source resources or links to further web-based information (e.g. links to the institutions that have developed the approach) can be found so that interested readers can go into details to learn enough to implement an approach on their own.
While all approaches include steps to move from an idea to its actual implementation, some approaches focus more on behavioural change (e.g. PHAST) to initiate a process and achieve a change, and other put more weight on demand creation (e.g. the Community Led Total Sanitation (CLTS) approach). Household Centred Environmental Sanitation (HCES), as another example, guides people through an integrated ten-step multi-sector and multi-actor process for planning environmental sanitation services. Which framework or approach serves best for a specific purpose depends on the local situation, the focus of the user and his/her preferences.

Mix and Match of Participatory Planning and Processe

Many of the existing planning frameworks or approaches use common participatory planning and process tools that are also widely used in other development fields. The most well known of these 'packages' of participatory tools is Participatory Rural Appraisal (PRA), another example is SARAR. These packages differ in how they have been developed (by whom and for what purpose) and, to some extent, in how they have been applied in the field. Nevertheless, their basic steps are normally repeated in one or the other form in any planning approach. Taking this into account, the SSWM Toolbox also presents tools for each of the individual planning steps, grouped into the five sections Exploring, Demand Creation, Decision Making, Implementation and each

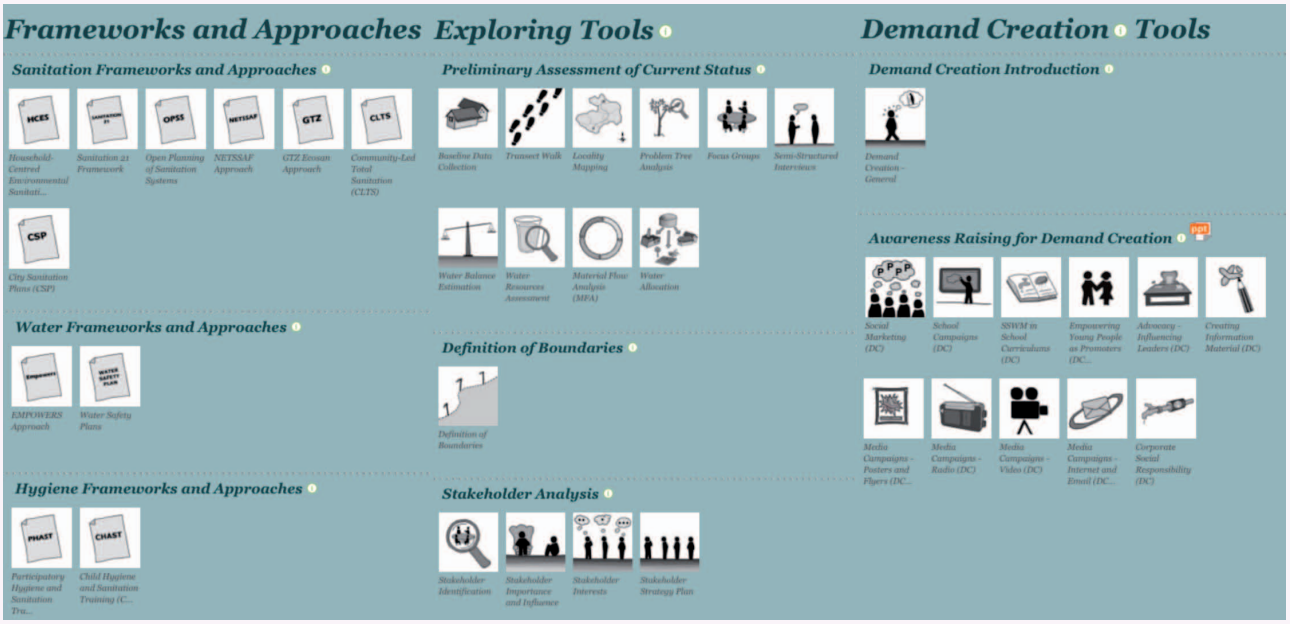

Figure 4: Close-up of three sections of the Planning and Process Tools – the Existing Programming and Planning Framework, the Exploring Tools and the Demand Creation Tools, each comprised of a number of individual tools to support the respective step of the planning process

section are often similar and complementary, and can be mixed and matched together for

any planning step. For each of these five sections, there is a concrete 'tools collection', as shown for the three sections Framework and Approaches, Exploring Tools and Demand Creation Tools (see Figure 4).

Exploring Tools

Starting any project or process, it is crucial to begin with an analysis of the situation. The tools presented in the Exploring section (see Figure 4) help to identify the current situation. The questions to be answered in this phase are: How is the current status? Which stakeholders are involved? Which problems exist? Which boundaries are there? In short, the tools in this phase summarise all relevant activities at the beginning of a planning process to allow for a smooth and deliberate start.

Demand Creation Tools

If there is no demand, many approaches (e.g. CLTS) propagate the creation of demand in the first place, so that the request for solutions comes from the people, not the implementing agencies. It is important that the concerned people really want a project or process, so that there is not just a short-term, but a long-term acceptance and success. The tools (see Figure 4) presented in the Demand Creation part show how to stimulate interest in and positive notions (e.g. via advocacy work, media and school campaigns, or social marketing) towards new approaches or technologies. It shows how to create demand in general and it indicates which awareness raising tools can be applied for this purpose.

Decision Making Tools

Decision making is a very important part of any process: In order that proposed solutions are the ones desired by the actual users, all involved stakeholders should be able to have a say in decision making. This ensures that the proposed solution gets the support it needs during implementation, and that the project is actually successfully used after termination. The Decision Making Tools (see Figure 4) help managing the participation of different stakeholders at different steps: from gathering ideas, analysing the situation together with the local population, to taking decisions and planning further actions together with the stakeholders.

Implementation Support Tools

The implementation of any project or programme again takes place in different steps, each of which requires different skills: This part of the Planning and Process Tools offers support carrying out these activities (e.g. writing concepts and proposals, financing and implementation in the field) and makes sure crucial aspects (such as a sound financing mechanism) are taken into account.

Tools to Ensure Sustainability

The activities to ensure that programmes and projects will be sustainable in the long-term are often forgotten. This is unfortunate, because time and funds invested should not reach only a short-term outcome. That is why the Sustainable Sanitation and Water Management Toolbox includes a section on crucial tools to ensure sustainability: ongoing participatory monitoring and evaluation, operation and maintenance and ongoing follow-up and support.

Link from Planning & Process Tools to Implementation Tools

As described above, the Planning and Process section of the SSWM Toolbox offers the opportunity to choose the best available tool for each stage of a project or programme cycle. But this is not all the Toolbox can offer you. Planning is just one side of the coin; or, said differently, we must know what we plan for! The SSWM Toolbox is designed in such a way that it provides support for both sides, planning and implementation. While the Planning and Process Tools section helps, as the name says, in the planning an implementation process, the Implementation Tools section actually shows countless tangible options – both technologies (Hardware) and behavioural interventions (Software) – to actually make water management and sanitation more sustainable. Both sections are closely interlinked (user of the Process and Planning Tool section can find short-cut links to related implementation topics and vice versa), making sure that planners keep in mind the different hardware options, and that technicians also think of how to plan the actual intervention sustainably.

Partners of the SSWM Toolbox

In the past, several organisations have realised the need for a more holistic capacity development support tool, which not only links up sustainable sanitation to water management (i.e. private users with the political level and the agriculture sector to the water or industry sector), but combines technologies and software approaches, and brings together people from all these fields at every step of a project cycle. Several of those organisations have been unified under the aegis of seecon international in order to compile the state-of-the-art know-how, experiences and expertise in the field of Sustainable Sanitation and Water Management all together in a Toolbox. To get them working, seecon international has benefited of the joint membership of many of them in the Sustainable Sanitation Alliance (SuSanA), showing both the importance and the 'raison d'être' of such an overarching organisation. But also the dedication of others have made the development of the SSWM Toolbox possible – for instance Sourabh Padhke, former architect, schoolteacher and well known activist for sustainable systems in the sector, who has designed all the appealing icons. The following partners have contributed to the SSWM Toolbox: Swiss Agency for Development and Cooperation (SDC); German Agency for International Cooperation (GIZ); Capacity Building for Integrated Water Resources Management (Cap-Net); Swiss Federal Institute for Aquatic Science and Technology, Department for Sanitation in Developing Countries (Sandec); Ecosan Services Foundation (ESF); Environment and Public Health Organisation (ENPHO); Global Water Partnership (GWP); International Water Association (IWA); Indian Water Works Association (IWWA); Sarar Transformación (Mexico); Stockholm Environment Institute (SEI), Ecological Sanitation Research Programme (EcoSanRes); Sustainable Sanitation Alliance (SuSanA); Norwegian University of Life Sciences (UMB); United Nations Development Programme (UNDP); Water Supply and Sanitation Collaborative Council (WSSCC); Xavier University, Philippines.

How to use the SSWM Toolbox

The entire SSWM Toolbox is open source and can thus be used by any water or sanitation practitioner. It helps decision makers, NGOs, engineers or planners in becoming active in upgrading their own sanitation and water management system by making existing knowledge available to them in a structured and accessible format. Users are supported in developing an understanding the importance of a sound planning process and aided to induce a participatory planning process in the field of water management and sanitation. In order to make the step from planning to implementation, a further section covers an array of hardware tools (technologies) and software (behavioural) approaches.

Moreover, the Toolbox can also be used as a comprehensive information pool for students and as a ready-made training tool for international organisations and all those working within the water sector. A user manual can be found on the website, but still the toolbox is easy to handle so users can just start clicking through the different sections and learning (more) about sustainable sanitation and water management. The Planning and Process Tools section in specific helps users to get an overview of existing planning frameworks and approaches and to understand each approach as a set of specific steps that can be combined to meet the requirements of a specific situation.

In addition to this toolbox, there are regular training courses that build on the SSWM Toolbox. Until now, they have been run in cooperation between Ecosan Services Foundation (ESF), India, the Environment and Public Health Organisation (ENPHO), Nepal, Xavier University, the Philippines, and seecon international gmbh, Switzerland (see Figure 5). They enable participants to fully exploit the benefits of the SSWM Toolbox, develop a thorough understanding of Sustainable Sanitation and Water Management, and to build a strong network of partnering organisations working in the same field.

The last SSWM course was jointly held by ENPHO, ESF and seecon in Nagarkot, close to Kathmandu, Nepal (see Figure 5). As mainly all such training sessions, it was organised in three main modules. The first module (Basic Training) focused on the concept of linking water management, sanitation and agriculture and the awareness on non-technical and technical options in making water management and sanitation more sustainable. In the second module (Expert Training), participants applied the theoretical knowledge from the first module to a 'business plan' for an own Sustainable Sanitation and Water Management intervention. The third module (Training-of-Trainers Workshop) addresses mainly those who want to become active in spreading the information on SSWM as a master trainer or organiser of SSWM or related trainings.

Figure 5: Participants of the SSWM Expert Course in Nagarkot, Nepal (Barreto-Dillon, 2010)

Conclusion

The SSWM toolbox is an integrated capacity development support tool, which links up sustainable sanitation, agriculture and water management and people with a technical background with others working on the behaviour to make a change (software interventions). It contains a guided exercise to prioritise and understand one's local problems, the tools you need to plan for and implement solutions, a large compilation of factsheets on hardware and software tools and approaches – topped with further readings, links, a library, glossary, ready-made PowerPoints and soon also a Train-the-Trainers section. The whole Toolbox is open-source and for free. As it is easy to handle and very comprehensive, everyone interested in sustainable sanitation and water management can use it (see Figure 2).

The Planning and Process section of the SSWM Toolbox is based on existing proven and tested frameworks and approaches. Moreover, it offers deeper information for each of the five main steps of project planning (exploring, demand creation, decision making, implementation and ensuring sustainability). Therefore, the Toolbox helps water and sanitation practitioners in improving the water and sanitation system they find in their specific location: Combining various frameworks and approaches as well as different approaches for individual planning steps, it is the first tool to give such a comprehensive overview and understanding of planning processes in water and sanitation, enabling each and every user to find the solution fitting best to his or her case.

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