

NETSSAF Participatory planning approach

A guideline for sustainable sanitation planning

NETSSAF Partners



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Foreword

Imagine that one day there is construction work starting in front of your house and you do not know why. You and none of your neighbours have been asked about the plans and now they start construction. Imagine you own a hotel and one day you see that an open wastewater drain is built next to your open air restaurant that you have just opened. No one has discussed the plans with you beforehand.

Proper planning requires stakeholder involvement. Experience shows that starting with a round table or a workshop including all that are directly or indirectly affected helps to find adequate solutions. The great expert who feels to know everything and goes ahead alone is very likely to run into trouble very soon, all those not involved are easily turning into opponents; often, not for what they dislike about the plans but for not being properly informed and given the chance to be heard. It really is crucial to involve all stakeholders and in doubt rather invite one or more, than taking the risk to miss an opinion and/or to create an opponent. This lesson is learnt too often already, no need for more repetition.

Creating demand for sanitation? Why? This is so obvious! Oh no, not for all and we as humans tend to get used to situations if they are constant and common around us. This is why options and possibilities are often more visible to someone with a fresh view from outside the community, the area, the continent. Communicating these observations does often fail as I also know from my own experience, this should be done in a balanced procedure. This manual gives useful information how to be successful.

Evaluation of options can lead to very many possibilities, especially if source separating sanitation systems are included. Proper pre-selection adopted to the situation is crucial for not overwhelming stakeholders. In my own early planning experience I was enthusiastic in a project with my consultancy and tried hard to teach the stakeholders all of the possible options. It ended up in quite lengthy and unproductive discussion - pre-selection is crucial, and presenting with an understanding for what the participants understand.

Working in different parts of the world made me aware that in many places there is an old master plan for sanitation. They are often maybe well met but unrealistic, old fashioned adapted copies from old plans elsewhere. These plans can be quite inhibitive for innovative approaches of sustainable sanitation. A willingness to re-assess the situation including modern reuse oriented sanitation options can be a break

through, creating jobs and more income for the region. This manual intends to give support for such processes. I want to give a warning. Proper operation and maintenance are absolutely crucial for the long term success of sanitation. Creating value through reuse with possibilities of income generation can help to reach this goal. However, proper monitoring and linking income to performance with clear contracts is a key issue. Contracts should not reflect corruption in any form.

Finally some personal remarks. Maybe some of you have nodded to some of the words above and agree to the many good points in this manual. However, I see one major limiting factor especially for many African countries. For me as an European it is stunning to observe how very important the family links seem to be for most Africans. It seems to be common to give a remote family member with little relevant education a job instead of hiring a highly skilled person. This is what I then hear on the other end from several people who studied at my university and who try to avoid returning to Africa where job opportunities are often only open for those with an uncle in the right position. I adore love for the family. Can we get to an understanding that we are all part of one huge family?

You will find great procedures in this manual and I do sincerely hope that this can contribute to improving the living conditions for many people in many countries. May there be peace on our wonderful planet earth!

Hamburg, Germany, Sept. 2008
Univ. Prof. Dr.-Ing. Ralf Otterpohl

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Introduction



STEP 1

Project Start & Launch of the Planning Process

STEP 2

Creation of demand for sustainable sanitation

STEP 3

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How to use this manual

This manual is one of the outputs of the NETSSAF Coordination Action – a project funded by the European Commission, as part of its Sixth Framework Programme (FP6). The general purpose of this venture is to lay out the framework conditions for future large- scale implementation of cost-effective sustainable sanitation systems in sub-Saharan Africa. As part of this overarching objective, the aim of this manual is to provide a step-wise guidance on how to plan and implement such systems in cities (peri-urban settlements) and rural areas of West Africa, based on a framework composed of 7 steps.

This manual, which is presented to the reader as a fact sheet, is intended as an easy reference guide for navigating through the planning steps, and is aimed at planners, engineers, decision-makers (e.g. municipal officials) and medical practitioners concerned with sanitation. The objective is not only to provide them with guidelines on how to carry out sanitation planning but to convince them of the benefits of adopting a participatory approach in the planning process. Key issues related to the large-scale implementation of sustainable sanitation projects are identified and analysed in a manner that uses questions and examples to illustrate the relevance of each issue and possible solutions.

We will like to stress that this manual is not a blueprint for sanitation planning in West Africa, but it is rather a guideline, which should be adapted based on prevailing local situations. These guidelines are based upon the Household-Centred Environmental Sanitation (HCES) approach developed by EAWAG (Swiss Aquatic Research Institute)/SANDEC (Water and Sanitation in Developing Countries) and provide a starting point for those active in the implementation of cost-appropriate water supply sanitation programmes in the developing world.

It is noteworthy that the guidelines are only a quick reference and act as some printed support to the NETSSAF tutorial (available online www.netssaf.net). For more detailed information on a particular step or a specific subject, we refer the user to the tutorial, which provides details and indicates links to the respective documents, examples, case studies and web sites.

We hope the guidelines, strategies, participatory approaches and information offered in this manual will support your work and increase access to sanitation facilities in your community.

Step 1: Project start and launch of the planning process



Step 1 is the official project start and launch of activities related to the planning process. The purpose of this step is to bring together key stakeholders and unite them under a common goal. The initiator of the project (generally the local municipality) opens a dialogue and persuades key stakeholders of the need to plan and take action. These key actors are the chiefs or heads of the community as well as sanitation experts and authorities. It is important to identify and involve all directly or indirectly affected stakeholders such as end-users, members of the community, religious leaders, youth groups, women's groups, farmers' cooperatives, etc. as their involvement will facilitate acceptance of the project and ensure the success of the participatory planning approach.

This phase will define the general problem and formulate the overall goal of the project. It shall also define the project boundaries by identifying the affected stakeholder groups and clarifying the size and location of the project area. A consensus regarding the project goals and boundary conditions should be reached through a series of discussions with key actors and drafted into official documents.

Sub-steps

Sub-step 1: Initiating workshop

During the first step of the planning process, a consensus regarding the project goals and boundary conditions has to be reached through a series of discussions with

the members of the community. An initiating workshop with key stakeholders is a key activity to discuss the vision of the project. Also, agreement has to be reached on the planning framework to be used, assignment of initial roles and responsibilities for the future planning steps, particularly in steps related to demand creation, assessment of existing conditions, and monitoring and evaluation.

Sub-step 2: Stakeholder analysis

An identification of all stakeholders and their positions/designations should be properly carried out. These stakeholders, described as the people who directly or indirectly affect or are affected by the sanitation situation within the particular community or zone. Stakeholders are affected directly at the household or community levels, as well as those linked commercially or institutionally to sanitation services. Stakeholders are classified as primary, secondary or tertiary, depending on how they affect or are affected by the sanitation situation. Further analysis will however need to be done in order to identify the key stakeholders who will have the most influence in the successful implementation of the project as well as play an active role in the planning process.

Sub-step 3: Formation of the sanitation planning team

This sanitation team should be made up of the facilitator of the project, sanitation experts, and representatives from the identified key stakeholder groups, as well as the agen-

cy responsible for sanitation within the locality. It is necessary to involve the existing local structures that have the mandate to implement sanitation, if any. The roles of the members of this sanitation planning team vary and could include:

- ✔ The facilitator
- ✔ Sanitation and agriculture experts
- ✔ Representatives of key stakeholders
- ✔ Health workers
- ✔ Local activists / NGOs / FOBs / CBOs

Sub-step 4: Development of a communication strategy amongst the various stakeholders

Appropriate communication mechanisms and channels to be used to transfer information and materials, as well as to guarantee the meaningful participation of all members of the sanitation planning team have to be identified. Issues to be addressed during this stage include:

- ✔ Available options of communication channels
- ✔ Desired role to be played by each member in information transfer
- ✔ Proposal to improve knowledge transfer

Sub-step 5: Planning the sanitation project

This phase includes:

- ✔ Development of a memorandum of understanding (MoU): Members of the sanitation team should be assigned different activities and leaders should be selected. The MoU is a written document that is an outcome from the efforts of the other sub-steps. This will lead to a smooth running and proper coordination of the project, as each member will be responsible for different tasks and activities, thus ensuring active participation of all.
- ✔ Creation of a preliminary financial plan: This is with regards to all the costs that might or will be incurred while carrying out the activities related to the project

Expected outcomes

- ✔ Definition of the general problem and formulation of the overall goal of the project.
- ✔ Definition of the project boundaries by identification of the affected stakeholder groups and clarification of the size and location of the project area.
- ✔ Consensus regarding the sanitation project, planning and implementation principles in the concerned area.
- ✔ Consensus on participants' involvement, partnerships, roles and responsibilities.
- ✔ Agreement on planning approach, further tasks and activities (including a preliminary financial plan).

Method of stakeholder analysis

1. Identification and listing the stakeholders. During a brainstorming with the initiators of the project, a large list of possible stakeholders should be prepared. This should be as specific as possible, avoiding naming a stakeholder such as 'the government' or 'managers'. Refer to the tutorial for an example of a list of stakeholder.
2. Classification of the stakeholders (i.e. key, primary, secondary and tertiary). Refer to the tutorial for an example of a classification of stakeholders.
3. Identification of their interests in the project (perceptions, expectations, benefits, resources offered, etc.). Refer to the tutorial to download a tool for identification of end-users's interests.
4. Construction of a table to analyse the relationship between different stakeholders. This should be done according to their relative importance.
5. Development of a stakeholder participation matrix. In this final stage, potential roles and responsibilities are assigned to different stakeholders (through an event, such as a participatory workshop).

Methods of developing effective communication strategies

1. Ensure that the initiator or project leader is the main conduit for internal communications and encourage staff to communicate with this leader
2. Ensure that people have the time and mechanisms to communicate effectively
3. Develop a meeting culture and practice that promotes effective communication
4. Encourage effective cross-team work

Products

- ✔ Initiating workshop.
- ✔ Memorandum of Understanding (MoU), as documentation of an official consensus with community representatives, as well as other stakeholder groups.
- ✔ Official project document, outlining the local problem, defining the overall goal and the main objectives of the project.
- ✔ Official and generally accepted decisions about the planning area and its boundaries.
- ✔ Document describing the roles and responsibilities of each stakeholder.
- ✔ Work plan, financial plan and time schedule.
- ✔ Communication strategy within the sanitation team and information dissemination strategy within the project area.

Step 2: Creation of demand for sustainable sanitation



Even when there is impetus for sanitation improvement among the municipal authorities, the level of demand within the general population may be much lower. Since sanitation requires intervention at both household and community levels, raising the demand for such services from individuals is of paramount importance for the project's success. Therefore, this step focuses on creating demand for sanitation services, by raising awareness through dissemination and information campaigns aimed at create behavioural change among members of the community.

Demand for sanitation is created when end-users have motivation, opportunity and ability to purchase sanitation technology which suits their needs. The promotion of sanitation and hygiene is most effective if seen and designed from a holistic point of view. It implies creating and exchanging knowledge in three areas:

1. enabling environment including (...),
2. social attitudes and software (e.g. hygiene education, behavioural change), and
3. technologies and hardware (e.g. different types of sanitation systems, operation and maintenance procedures, resource reuse opportunities).

Only a joint promotion of all three areas of sanitation is needed to obtain the maximum health and socio-economic benefits.

Demand creation is an on-going activity throughout the planning and implementation processes and beyond.

Sub-steps

Sub-step 1: Identification of the different drivers of sanitation in the different levels of the community

In order to create demand for sustainable sanitation within any locality or community, it is necessary to identify what the community members actually desire, as well as to identify what aspects of sustainable sanitation will be of most interest to them. Once these drivers of sanitation are identified, they will be used to convince the community to adopt sustainable sanitations

Sub-step 2: Awareness raising campaigns targeting stakeholders

This is the step where demand for sanitation is created, and this has to be achieved through awareness building. Awareness raising is a strategy to bring different stakeholders in the process of planning and implementing sanitation, in order to incorporate those actors who are usually left outside the decision-making process. Awareness raising should focus on sanitation promotion and hygiene education and should take the form of dissemination and information campaigns aimed at positively influencing attitudes, behaviours and beliefs. An effective awareness-raising campaign strategy will employ a variety of different communication approaches and techniques to ensure that the central message is received and understood by a diverse audience. These awareness raising campaigns demand time and financing, therefore, there should be

adequate support for planning, promoting and performing these activities. Such support will include fund raising, monitoring and networking.

Sub-step 3: Creation of a suitable supply chain

Stimulating the demand for sustainable sanitation will put a high pressure on the supply side of components, such as toilets, pipes, latrines, as well as qualified service providers. Thus, there is a need to organise a suitable supply chain, identifying companies and suppliers that could cover the demand. Local authorities and the Chamber of Commerce and Industry should be capable to provide information about who offers the needed services, materials and equipments.

Expected outcomes

- Increased awareness about the linkages between sanitation, hygiene, improved living conditions, personal health and agricultural use (soil productivity improvement, crop production).
- Improved standard of knowledge of the social, ecological and economic advantages of sustainable sanitation systems in the local context.
- Increased demand for sanitation infrastructure and services amongst the local population.
- Awareness raising activities carried out. These may include workshops, distribution of flyers, school competitions, etc.
- Active participation of members of the community in the decision making process.

Products

- Strategic plan of an awareness raising program on sustainable sanitation in the community.
- Established learning alliances for sharing and spreading sanitation information.
- Well defined sanitation supply chain.
- Material which shall support the various awareness raising activities (e.g. posters, flyers, radio commercials).

Methods for identifying sanitation drivers

- Workshops: selected members of the community should be invited to workshops where they will be asked about their needs and priorities regarding sanitation and related issues such a health and hygiene, food security, etc..
- School essays: school children can be asked to write short essays to what extent they and their parents could benefit from proper sanitation as well as clean environment.
- House-to-House visits: paying visits to homes within the community could prove helpful as families could be asked about their expectations towards sanitation.
- Community meetings/durbars to discuss sanitation conditions, problems, solutions, etc.

Examples of awareness raising activities

- Workshops: members of the community are invited to workshops where they learn about the importance of and need for proper sanitation, as well as create a desire for proper sanitation systems.
- Community activities, such as games or competition for children, could be organised to present and discuss issues on sanitation.
- A popular event would be to launch the project by an official (Minister, Major, Parliamentary, etc.).
- Essay competitions could be organised in schools where students are invited to write about the need for proper sanitation.
- Posters containing information on sanitation could be placed in town centres, railway and markets.
- Distribution of flyers.
- Photo exhibitions highlighting good and bad sanitation practices.
- Promotion in local radio stations with talkshows (call-ins) and other publicity.
- Promotion among the private sector (private companies) to sponsor events.
- Lobbying with religious and socio-cultural leaders.

Step 3: Description of settlement conditions, with assessment of existing sanitation situation and user priorities



The purpose of this step in the planning procedure is to collect the background information necessary to determine the requirements for a sanitation system from both technical and user perspectives. That information provides the technical and non-technical details required for system designing, as well as identifying and prioritising community needs related to sanitation. This step is performed through a comprehensive, participatory assessment of local settlement conditions, the current level of services and users' attitudes towards sanitation across the domains of the project area.

The goal of this step is not only to facilitate participatory decision-making later on in the planning process, but also to enable future designs to meet user needs and address the operation and maintenance challenges of day-to-day service delivery. The information collected during this step will be used to identify what is available and what is missing in terms of sanitation, as well as detailed information about the priorities of the users. This will be fed into the next step of identifying the feasible sanitation options and concepts.

Sub-steps

Sub-step 1: Conducting an integral evaluation

A variety of tools exist for participatory information gathering and creating dialogue about important community issues. Tools such as Participatory Rural Appraisal (PRA)

and Participatory Analysis for Community Action (PACA) aim to identify community problems and to plan solutions with the active participation of the community members. These tools can be useful entry points for assessing the existing situation and can easily be built into the processes started in steps 1 and 2

Sub-step 2: Gathering of technical information on the existing systems

This should be gathered through an analysis that seeks to understand the status of the various flow-streams in each domain. The main goal is to collect information regarding the area's sanitation systems (if existing) and their level of integration in the settlement structure. Technical requirements for the proposed system will depend on a thorough assessment of information regarding excreta and solid waste disposal practices, water availability, stormwater drainage, and fertilization/crop production practices in the area.

The technical information on the existing system should cover issues such as:

- Inventory of existing household level sanitation technologies, hygiene practices, and their perceived benefits
- Description of the conditions of the existing sanitation system components and operation & maintenance procedures carried out

Sub-step 3: Identifying the socio-economic situation of the settlement

The system requirements will also depend on the social and economic situation of the settlement. In designing feasible sanitation systems it is necessary to understand how user perceptions of sanitation, their hygiene practices, economic possibilities, as well as the existing institutional framework will affect decision making. In determining requirements for management and operation of the system it is also of interest to reveal the stakeholders' capacities (e.g. know-how, skills, manpower, equipment, financial resources). The sanitation planning team will collect information through stakeholder workshops, field studies and report on issues such as:

- Description of local physical conditions (e.g. population size, density, etc)
- Assessment of the community's resources, literacy and education level, land ownership, farming practices, and occupations

Sub-step 4: Identification of user priorities

Sanitation system introduced to the community must have the acceptance of the users and be in line with the users' priorities. Users' priorities may depend on a number of factors such as:

- existing sanitation practises and traditions
- knowledge about alternatives
- cultural and religious beliefs
- household income vs. cost of system
- farming practices

Based on a community participatory approach, a set of techniques which could focus on group discussions, neighbourhood social mapping, transect walks and household/school hygiene self surveys, could be applied to collect information regarding user priorities in order to compile a preliminary list of requirements for a sanitation system. This will be used in Step 4 in identifying feasible sanitation solutions.

Sub-step 5: Identification of external factors

In addition, the assessment must look beyond sanitation issues to identify the external factors that drive decision making in the community and understand how they can be accounted for during the planning process. External factors include:

- Local conditions (temperature, humidity, rainfall and its variation, evapotranspiration)
- Soil/ground conditions (type of soils, infiltration capacity, geology, topography)
- Water related characteristics (flooding, source of water, availability of water, groundwater (risk for contamination))

Suggested tools for conducting an integral evaluation

- Conduct workshops with the users, farmers (potential resource re-users), authorities and the service providers, to identify the existing situation and desired functions of the sanitation system
- Assessment of community's capacity (public and private sector's) to participate and implement actions
- Holistic analysis of the available resource base: human resources, institutional capacity, technical capacity, financial resources, legal framework, land-ownership arrangements
- Situational analysis of regional and national issues such as political structure and stability, government policies, and foreign aid that can impact civil improvement projects (war, drought, disease, international debt, inflation, etc.)
- Use of participatory assessment tools, e.g.: semi-structured interviews, key-informant interviews, transect walks, observations, household surveys, community mapping, etc.

- Institutional factors (legal framework (both on local and national level), decision making power at local level)

Expected outcomes

- Detailed information about the sanitation situation and the settlement status of the project area.
- Knowledge about the population's priority concerns, perspectives on sanitation, and expectations from the project.
- Preliminary list of the requirements for a sanitation system in the settlement which will be used in Step 4 for the identification of feasible sanitation systems.

Products

- Assessment of detailed and valuable information on the area's sanitation situation, including current sanitation systems, service providers, possible linkages to fertilization/crop production, technical and environmental constraints.
- Compiled detailed data on the technical, economic, health and environmental conditions in the project area.
- Documentation of the desired functions of the sanitation system and services as identified by the users, authorities and service providers.

Step 4: Identification of feasible sanitation concepts and services



The overall objective of this step is to reach a decision about suitable sanitation system(s), considering technical and non-technical issues of sanitation systems and technologies, as well as the outcomes of Step 3, thus creating a list of the potential feasible sanitation concepts. This step includes the process of identifying the feasible systems, evaluating and piloting potential options, comparing alternatives, and finally selecting the most appropriate sanitation systems through a participatory decision-making process.

Sub-steps

Sub-step 1: Understanding and shortening the list of possible options

A sanitation system considers all components required for the adequate management of human wastes: the users of the system, the collection on household level, transport, treatment, and management of end products (human excreta and solid waste, greywater,). Each system represents a configuration of different technology components that carry out different processes on specific waste flows and have particular management, operation and maintenance conditions. In one project area it is likely that the local conditions require a combination of several sanitation systems in order to fit the framework conditions and meet the demand.

Sub-step 2: First participatory analysis (technical and demand factors)

After the expert pre-selection and evaluation of sanitation options, a participatory decision making process can be started. A full-day workshop to explain the pre-selected options offers a good opportunity to kick-off the community participatory process. The goal of the workshop is to bring together reflections, concerns and priorities of community with a goal of agreeing on desirable systems. There is always the possibility that such an agreement is not achieved during the first workshop, but based on the feedback gathered, the options can be refined, adjusted, and re-designed to suit the user priorities and experiences. This iterative process has to continue until a consensus is reached.

Sub-step 3: Systems exposure (piloting and construction of units)

The objective of this sub-step is to create awareness on pre-selected options and give stakeholders the opportunity to obtain "real-life" experience, thereby potentially enhancing demand. The following two approaches can be envisaged:

- Constructing and setting up good-practice demonstrations
- Conduct study tours to existing facilities and respective interactions with existing users

The goal is to enable the stakeholder group to make an informed choice on their sanitation system components, by building on their own experiences with various sanitation schemes. By giving stakeholders time to use, operate, maintain, discuss and reflect on the options provided in the setting of their own home, they will be more able to contextualise the systems and propose creative, site-specific adaptations, which can then be integrated in the final designs.

Sub-step 4: Comparison of alternatives

Another participative workshop with the community will be needed to collect and analyse the experiences on the exposure sub-step. The goal of this workshop is to bring together the reflections of the members of the community regarding the demonstration units and the visited show cases, thus gathering feedback on the users' perspectives and understanding of the systems. It is also essential that the engineers and planners involved are willing to listen to suggestions, integrate innovative proposals, work around

local barriers, and generally be flexible to a process that will not be short or clearly defined. The pre-selected, from a planner's point of view appropriate, options have to be adapted, based on the information gained from sub-step 3. These revised options will be required in sub-step 5.

Sub-step 5: Final decision making process

Based on the information gathered during the previous sub-steps, a revised set of system alternatives is created and presented to decision-makers at a final workshop. At this point, the sanitation planning team should come with cost estimation and the availability of construction material, tools, skilled labour and other essential components for the construction works. The target of this workshop should be to conduct a participatory decision-making process integrating all stakeholder groups with the intention to reach an agreement on the option considered most appropriate. The process is iterated until a mutually acceptable system is agreed upon by experts (in terms of the technical robustness) and stakeholders (in terms of usability and affordability).

Expected outcomes

- Pre-selected feasible sanitation systems and technologies by sanitation experts and planning team.
- Pre selection presented to stakeholders.
- Selection attributes, criteria and their priorities for a qualitative evaluation are revised.
- Selection of sanitation units (incl. locations) required for exposure step.
- Participatory decision making processes conducted, targeting agreement on most appropriate system.
- Stakeholders are aware of the variety of possible concepts and have the possibility to test and use some of the optional system components.

Products

- Description of sanitation system options.
- Tailor made assessment criteria to evaluate the options given conditions.
- Evaluation matrix of sanitation options by experts. First short list of options to present to stakeholders.
- Community workshop to discuss pre-selected sanitation systems.
- Conduction of exposure steps by construction, operation and maintenance of various demonstration units or visits to already existing treatment plants.
- Community workshop to gather users' opinion from the exposure step.
- Agreement on chosen sanitation system.
- Document outlining the final decision of sanitation system and service concept.

Elements of a sanitation system

1. Products: Urine, faeces, excreta, blackwater (i.e. toilet water), greywater (spent water from all non-toilet fixtures such as bathrooms, laundry area, kitchen, etc.), faecal sludge and beigewater (i.e. anal cleansing water) are the products of sanitation systems. They have classically been known as a "waste", however the sustainable sanitation approach considers the option of reusing the water, the nutrients and energy present in the human excreta.
2. Processes: A process step can contain, transform, or transport products to another process or a final point of use or disposal. The processes include: User Interface, On-site Collection, Storage & Treatment on-site, Transport, Treatment off-site, Reuse and/or Disposal.
3. Flowstreams: This describes the path that the product takes as it moves from the point of generation to the point of disposal: from 'cradle to grave'. It could be described as the lifecycle of the product as it passes through the various process steps, which transform and transfer the product to its ultimate release into the environment. Different flowstreams are those which contain blackwater, greywater, faecal sludge, urine, excreta, faeces, etc.

How to gain the opinions of the stakeholders

1. Surveys and/or questionnaires can be used to obtain personal, potentially private information from a large number of people during a guided session or from private household visits.
2. Pocket voting is a simple technique to use for a limited number of questions- e.g. which of three options do people prefer. Stakeholders are given a number of chips (stickers, paper squares, etc.) and allowed to put them into the 'pocket' which they like best.
3. Focus group discussions are a good way to break down large groups into smaller more manageable groups with more unified ideas: different groups could include women, religious leaders, children, farmers, etc.
4. Well-moderated public meetings where people are allowed to stand and speak are good where there is an opportunity for everyone to be heard, and where there is good leadership and moderation to prevent anyone from dominating or disrespecting the views of others.

Step 5: Consolidation and finalisation of implementation plans for sustainable sanitation



Having identified the feasible sanitation systems, the stage is set to prepare a master action plan for implementing the systems. Thus, the focus of this step is the development of a plan where (preferably) the sanitation planning can be integrated in the overall planning for the area (solid waste, etc). The master plan will take into consideration the financial, technical, institutional and human resources needed to achieve the interventions. Therefore, the objective of this step is to describe how to organise and deliver these four areas in an integrated way. The master plan should lay out clearly defined activities and specific calendars. It must be developed in close cooperation with the entity/body responsible for the sanitation implementation, with strong support from the stakeholders. In addition, the master plan has to suggest a management system for directing the implementation process and procedure for monitoring and evaluation of the process.

Sub-steps

Sub-step 1: Planning and designing the infrastructure

Once the stakeholders have selected the sanitation option(s) that fulfil(s) their demand, the technical design of the sanitation system has to be prepared by engineers and specialists. The preparation of the design could be done by the sanitation experts, members of the planning team or it could be prepared through a bidding process. In a competitive tendering process, engineering companies are called to present a proposal that reflects the needs of

the community laid down in a document called Terms of Reference (ToR). The ToR describes the purpose and the expected results of the sanitation project, setting out a road map and stating what needs to be achieved, by whom and when. The data gathered in step 3 (technical, socio-economical, users priorities and external factors) is the background information to be presented to the engineers, which should be followed by specific objectives, the desired functions of the sanitation system, practical considerations, and the scope of the project

Sub-step 2: Community technical capability evaluation

In case of community-managed projects, the actual construction, operation and maintenance of the sanitation units will be carried out by members of the village. Therefore, the sanitation planning team, particularly the engineers and sanitation experts, need to evaluate the human resources available in the project area to identify potential manpower. Furthermore, such an assessment will help to identify the training needs of the members of the community, helping to design the capacity building strategy. A community workshop will assist identifying the existing technical capacity for construction and maintenance activities, and ensure the appropriate participation of different stakeholders.

Sub-step 3: Institutional frameworks

In this sub-step, the importance of institutional support in sustainable sanitation is outlined and stressed. The goal

of institutional support is to develop incentive structures to induce the participation of key players at all stages. The institutional arrangements will include definition of the roles of local governments, beneficiaries, private sector enterprises, non-formal institutions, NGOs, CBOs, FBOs, government departments, and development partners (external support agencies), ensuring that women groups and beneficiaries are included in the implementation plan. The authorities will play an important role of providing institutional framework/support for the long term sustainability of the systems.

Sub-step 4: Developing a financing approach adapted to the given area

A sustainable expansion of sanitation coverage can only be achieved if potential users have the financial capacity and willingness to pay for the new facilities and cover their subsequent operation and maintenance. Experts agree that with the right financing and institutional arrangements services can be provided at affordable costs. Therefore, this step will propose ways of mobilising resources and developing financing approaches that make the most of the resources. Many financing approaches exist, but the choice of specific financing mechanisms will depend on the local context. One commonly used approach is the cost-sharing model that encourages users to contribute (according to their ability & willingness to pay) for the services that they have chosen as best meeting their needs. The challenge for this model is to identify appropriate cost-sharing arrangements for different neighbourhoods in a peri-urban or rural community.

Sub-step 5: Building a sanitation program master plan

Once the previous sub-steps have been completed, the sanitation planning team needs to bring together the financial, institutional, technical and human resources decisions and approaches into one master plan. This final document should provide a comprehensive vision for the implementation of the project in an integrated approach. The master plan must be adopted by the government and should be integrated into the development policies of the region. The master plan has to be revised and updated on regular basis, reflecting the progress in the various activities and a resulting change of the local conditions. At least all three years the master plan has to be updated thoroughly.

Expected outcomes

- Sanitation experts and other key-stakeholders have a clear understanding of the requirements for implementation.
- The technical capacities of members of the community are assessed as well as the training needs.

Challenges in developing an institutional framework

The term "institutional framework" refers to a set of formal organisational structures, rules and informal norms for service provision. The key principles informing the institutional vision are as follows (adapted from DWAF 2008):

- the need for a clear definition of roles and responsibilities;
- the separation of regulatory and operational responsibilities;
- local government is responsible for ensuring water & sanitation services provision;
- flexibility in terms of scale and type of water & sanitation services provider;
- the private sector and civil society have a role to play;
- management must take place at the appropriate level;
- building on existing capacity;
- the need for transformation and policies sensitive to gender differences.

Strategic measures for reducing the cost of sanitation services

1. Choose an affordable technology
2. Select an appropriate level of service
3. Select design standards in the light of the local situation
4. Improve management efficiency.

- The roles of the different stakeholders during the implementation stage are defined.
- Financing model is developed.
- Technical, financial, manpower requirements and institutional aspects of the sanitation program are clearly defined.

Products

- Terms of reference (ToR).
- Technical design of the project including drawings and specifications.
- Workshop to identify the technical capability of the community.
- Institutional framework.
- Master plan of the sanitation program including technical, financial, institutional and human resources issues, as well as elements related to operation and maintenance and sustainability of the project.

Step 6: Implementation



The members of the sanitation planning team are still the project leaders in this step; however, sanitation experts and engineers will be the persons in charge during the technical implementation. The project can either be implemented through a formal construction contract or a voluntary community approach. In the first case, a tender will be needed for the construction of the sanitation systems. Other procurement strategies could be a design and build scheme, or a build, own, operate and transfer conception (BOOT). When formal contracts are used, there is the risk of leaving out the social framework and the needs of the users. Therefore it is necessary to involve the community during the implementation step, in order to create ownership of the sanitation system. Independently of the procurement strategy to be selected, the implementation phase is divided into the initiation and controlling phase, capacity building, construction of units, and operation and maintenance. In sanitation programs where the reuse of the sanitation products is foreseen, an entire marketing sub-step is needed to position the products in the market.

Sub-steps

Sub-step 1: Initiation and controlling phase

The implementation process requires adaptive and flexible project management through continued feed-back via a controlling system, which includes monitoring and evaluation. Therefore, it is useful to develop practical management guideline for implementation based on the sanitation master plan, which should include M&E activities necessary for the required adjustments and fine-tuning during the implementation process. In turn, this implies a need to make on-going adjustments in budgeting, timelines and design to ensure that the project is implemented as per the schedule, and as planned. It is important to recognise that implementation takes time and external constraints should be factored in (i.e. seasonality in availability of community engagement / resources).

Sub-step 2: Training activities

Training activities will target technicians, masons, users and other service providers. These activities aim at building the required capacities for the implementation. In West Africa, authorities not only wield considerable influence over the populations but control most of the communication channels and have a good mastery of the local set up and customs. Unfortunately, their limited knowledge on sanitation related issues often presents a barrier for the promotion and implementation of sustainable sanitation options. Therefore, in order to change their vision of sanitation awareness can be created and strengthened in authorities through information, education and training. Communication will be undertaken for awareness raising and community mobilisation. To achieve this, a clear strategy, within the continuous step 2, should be established in the frame of the capacity building plan, including all ways and means available locally, e.g.:

- ✔ Television, radio
- ✔ Workshops
- ✔ Theatre pieces, film/DVD projection
- ✔ Door-to-door interviews / information
- ✔ Distribution of flyers / Posters or information posting

Sub-step 3: Construction and installation of infrastructure

A practical implementation plan should be prepared by the sanitation planning team to define real time schedule of delivery of services such as:

- ✔ when the purchase of materials is completed,
- ✔ when the excavation is finished,
- ✔ when the structures of the buildings are constructed,
- ✔ when the commissioning is expected.

Sub-step 4: Operation and maintenance

Operation and maintenance starts once facilities are in place. However, they need to be taken into account from the beginning in order to achieve the maximum benefit of the system. Successful O&M require following an "owner's manual" prepared by the contractor and engineer at the onset of the planning process. This should spell out a schedule and procedures for maintenance and should also include methods to carry out tasks such as bookkeeping, paying employees, collecting bills (utility management), inspection, refurbishments, replacement of parts, etc. Therefore, it is important to come with an integral framework for operation and maintenance. As part of sub step 6.2, training should be available for operators, who should be trained before the community takes over the system.

Sub-step 5: Marketing of sanitation products

The products of sustainable sanitation systems have proven to be great fertilizers and soil conditioners, however the application in agricultural land is not always feasible in every country because of economical, institutional or even legal aspect. Furthermore, in many cultures the use of human excreta is still a taboo and surrounded by many fears. Therefore, a powerful marketing campaign of sanitation products would be essential to ensure the sustainability of the system that includes reuse of sanitation products.

Expected outcomes

- ✔ The requisite knowledge and skills for implementation at all levels (institutional, household, enterprises, etc.) developed
- ✔ Sanitation infrastructure constructed, installed and in operation.
- ✔ SME & cooperative able to install, maintain and repair as well as commercialise recycles (i.e. compost and urine) as natural fertiliser to the agricultural sector.
- ✔ A new marketing strategy to promote income and job creation through local SMEs (provision of required sanitation wares and services) developed.
- ✔ More professionalised construction sector providing new products in sanitation in place.

Products

- ✔ Films, posters, brochures for information, and awareness raising.
- ✔ Manual and modules for capacity development.
- ✔ Kits for workshops.
- ✔ Guideline for construction of sustainable sanitation systems.
- ✔ Alignment of support systems for O&M and M&E.
- ✔ User's manual for O&M.
- ✔ Document on the standardization of the sanitation facilities.
- ✔ Guidelines/posters for the use of the sanitation facilities.
- ✔ Guidelines/posters for the re-use of sanitation by-products.
- ✔ Map of the locality with installed sanitation facilities.
- ✔ Survey/questionnaire for assessing impact of the project implemented.

Step 7: Participatory monitoring and evaluation



In this step, a strategic and measurable framework for defining expected results, at all stages of the project, will be developed. This is called monitoring and involves a routine gathering of information on all aspects of the project by regular observation and recording of project activities to check how they are progressing. The information gathered is used in making decisions for improving project performance based on a comparison of goals and objectives of the sanitation program. As monitoring is an integral part of the project - from start to finish - , it must take place during all the stage of the project cycle.

Evaluation is the process of making value judgments on what the project has achieved in relation to its planned activities and overall objectives. It involves the use of indicators which are qualitative and quantitative criteria, for assessing the results. The project planners and implementers have to identify and agree on such monitoring indicators for each activity. The indicators should be pertinent, explicit and objectively verifiable. Their role is to show the extent to which the activities related to every objective have been achieved. There are four main types of monitoring indicators: input, output, outcome and impact indicators. Refer to the tutorial for the definitions and examples of these indicators.

Sub-steps

Sub-step 1: Planning monitoring and evaluation: integrating monitoring into all stages of the project cycle

A sanitation project aims to improve the sanitation situation of a particular community within a given time frame. This is achieved through a number of stages, each involving a series of activities that require investments in terms of time, money, human and material resources. Worthy of note are the planning, implementation and evaluation stages, in which monitoring should be integrated.

- The planning phase: monitoring should be integrated into all phases of the planning process beginning from the situation analysis, problem identification, definition of the goal, formulation of strategies, designing a work plan to budgeting. Planning should indicate what should be monitored, how monitoring should be carried out and who should monitor. The monitoring activities should be shown on the work plan. The plan

for monitoring should be agreed upon by the stakeholders at the beginning of the project.

- The implementation phase: All the planned activities are put into action at this stage. Monitoring is important here to ensure that the activities are implemented as scheduled.
- The evaluation phase: Evaluation provides a picture of the extent to which the intended objectives of the activities have been achieved. Evaluation should be done before, during and after implementation.

Sub-step 2: Levels of monitoring: community, district, national and donor levels

Monitoring should be carried out at all levels with a mechanism of giving feedback to all people at each level.

- Monitoring at community level: The purpose of monitoring at this level is to improve the implementation and management of the project. It involves monitoring performance in relation to turning the inputs into outputs. There are three main objectives for monitoring at the community level: (i) ensuring that the projects are implemented on time, (ii) that they are of good quality and (iii) that the project inputs are well utilised.
- Monitoring at divisional/district level: The community monitoring team should provide a feedback on the monitoring activities to the divisional or district authorities who should monitor the outcome of the project. The authorities should also monitor the strength, capacity and power of the target community to stimulate its own development. The objectives at this level include: supporting the improvement in project performance and measuring the applicability of the way the project was designed in relation to community strengthening.
- Monitoring at national and donor levels: The purpose for monitoring at these levels is to ensure that the project design is appropriate and the desired outputs are being realised. A key question to be answered is whether the project inputs are well utilised. Thus, the main objectives are to ensure that inputs are effectively and efficiently utilised and draw lessons from the project intervention for future projects in the community and beyond.

Sub-step 3: Management information: how to manage information generated by monitoring

Management information is the data needed to make decisions for improving the performance of the project. The information is also important to implement participatory planning, implementation, monitoring and evaluation. This level involves:

- determining the information needed,
- collecting and analysing the information,

- using the information, and
- disseminating it.

The information should be shared between the different stages including other interested stakeholders, NGOs, CBOs, FBOs and interest institutions.

Sub-step 4: Monitoring and reporting: how to report the observations and analyses

One of the main activities involved in project monitoring is reporting of the observations. The report should provide information about the project activities and their results. All key stakeholders at every stage of the project cycle have different reporting roles. The reports should be based purely on observations made during monitoring along with reviewing the reports of engineers and sanitation specialists.

Sub-step 5: Evaluation: how to make value judgments after monitoring

Evaluation is the process of making value judgement of the project's achievement in relation to the planned activities and overall objectives. Thus, reject evaluation activities help in obtaining a picture to which extent the intended objectives of the activities and the project have been achieved. It allows lessons to be drawn from the project implementation experience and used for the planning of other projects in the same community and beyond. By evaluating the project, constraints that hinder the project from attaining its objectives are identified, allowing for solutions to be sought and implemented. Evaluation should be integrated into the project plan before, during and after implementation.

Relationship between monitoring, planning and implementation

- Planning describes ways which implementation and monitoring should be done;
- Implementation and monitoring are guided by the project work plan; and
- Monitoring provides information for project planning and implementation.

Expected outcomes

- Consensus building and creation of a sense of project ownership in the local community.
- Course correction of project objectives through consultation process and learning through doing.

Products

- PM&E indicator set
- Periodic M&E reports on outcomes in relation to objectives

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