



**"Pathways towards Sustainable Sanitation in Africa"**  
Ouagadougou, Burkina Faso, 24-27 September 2008  
**"Sur les Sentiers de l'Assainissement Durable en Afrique"**



**Introduction to the NETSSAF Participatory Planning Approach, a tutorial and guideline for sustainable sanitation planning**

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**Abstract**

NETSSAF "Network for the development of Sustainable Approaches for large scale implementation of Sanitation in Africa" is a Coordination Action sponsored by the European Commission aiming at creation of synergies to support large-scale implementation of sustainable sanitation systems in peri-urban. The NETSSAF consortium has carried out a set of activities laid down in its work plan, including the development of a "NETSSAF Participatory Planning Approach – A tutorial and complementary guideline for sustainable sanitation planning". The tutorial for sustainable sanitation planning is a ready source of information for decision makers and individuals involved in setting up municipal wastewater systems and concepts for management of excreta in communities in West Africa. The guide, offered as CD-Rom and paper based, illustrates a participatory approach to sanitation planning, dealing with the complex stakeholders concerns when deciding and implementing a sanitation system. It takes the user through a seven-steps-approach for participatory planning of sanitation, each of them with preselected questions and answers, case studies, links for further information and tools to facilitate the adoption of participatory sanitation planning in localities in West Africa.

**Keywords**

Participative planning approach, sustainable sanitation, tutorial, guideline

**INTRODUCTION**

The latest developments in international cooperation ideology reflect a shift away from top-down planning to strategic bottom-up processes. The method of planning sanitation systems in communities was traditionally based on highly structured processes with written-in-stone rules and methodologies of top-down planning procedures, mostly directed by donors interests, that did not considered the participation of the people affected. Usually, the priorities, needs, boundaries and conditions of the sanitation programmes and projects were defined by authorities and officials based on their own perceptions of what was needed for the target beneficiaries, meanwhile these last could not express their own interests (NETSSAFa, 2007).

To be able to attain a high sanitation condition in a community, it is essential to select the most suitable sanitation option by involving the end users of the systems in all steps of the planning process. Participation of users is now thought to be a prerequisite for sustainable development. Working with a participatory planning approach improves motivation, learning and self-realisation, feelings of ownership and self-esteem, and the possibility that the identified problems and solutions will truly reflect the felt needs of the stakeholders. User involvement raises awareness and is particularly important to enable an "informed choice", and for the proper operation of on-site systems, as neglecting their needs and preferences can result in the non-use of the system with users reverting



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to open defecation. If users find their systems inconvenient or cumbersome to operate, or if they are not properly informed and trained, they may make private adaptations that cause environmental pollution and pose health risks.

Participatory planning approaches (PPA) are interactive and often visual methods, which encourage and facilitate the participation of individuals in a group learning and action planning process. A PPA generates constructive collaboration among stakeholders who may not be used to working together, often come from different backgrounds, and may have different values and interests.

To date, most participatory approaches applied in sanitation projects have been developed mainly with the densely populated urban areas in mind, meanwhile similar tools for the rural context are still lacking. As these approaches were developed for, or adapted to, programmes dealing with conventional systems of water supply and sanitation, they fail to address issues which are of vital importance in sustainable sanitation programmes, such as the hygienically sound reuse of recyclates from household sewage in agriculture. While lacking the sustainable sanitation specific elements, these participatory tools have in many cases shown a great deal of success in water supply and sanitation programmes. They therefore have a proven track record that should not be neglected. These tools should be adapted wherever possible to the specific needs of sustainable sanitation programmes enabling them to address the philosophy of a closed loop approach to sanitation.

**Objectives of NETSSAF – Work Package 6: Adapted sustainable sanitation management systems**

The NETSSAF Coordination Action "Network for the development of Sustainable Approaches for large scale implementation of Sanitation in Africa" is a project financed by the European Commission under the Sixth Framework Programme, which main aims is to coordinate and integrate the current scientific research, technological innovation and execution activities, creating synergies to support large-scale implementation of sustainable sanitation systems in peri-urban and rural areas, in order to propose feasible solutions for the achievement of the Sanitation Millennium Development Goals in Africa. The diverse activities and tasks are divided into 9 Work Packages (WPs), associated with a key objective to be reached. Among its many objectives (refer to Barreto and Hänel, 2007), the NETSSAF Coordination Action intends to propose and design a set of Participative Multi-stakeholder Sanitation Management Support Tools to accompany the local planners and engineers during the process of sanitation planning in consultation with the people affected, adapted to the different socio-economic conditions prevailing in West Africa. Therefore, a complete Work Package was designed to integrate the knowledge acquired during all the previous Work Packages, incorporating all the results in a CD-Rom and paper based tutorial, which guides the users through the several key aspects, technological and non-technological, required for the planning and implementation of sanitation systems. All outputs mentioned above were result of the joint efforts of the NETSSAF partners, and can be found in the public library available at [www.netssaf.net](http://www.netssaf.net).

**THE 7 STEPS, THE BACKBONE OF THE SUSTAINABLE SANITATION PLANNING APPROACH**

The NETSSAF tutorial and complementary guideline for sustainable sanitation planning presents an introduction to the participatory planning approach, targeting planners of sanitation programmes in west Africa and guiding them on how to facilitate "informed choices" in consultation with users and other stakeholders. The tutorial is focussing on 7 steps for the planning and implementation of sanitation projects and programmes in a community, with emphasis on peri-urban and rural areas, which include (NETSSAFb, 2008):

*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,



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women's groups, farmers' cooperatives, etc. as their involvement will facilitate acceptance of the project and ensures 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-step 1: Initiating workshop

Sub-step 2: Stakeholder analysis

Sub-step 3: Formation of the sanitation planning team

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

Sub-step 5: Planning the sanitation project

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

Sub-step 2: Awareness raising campaigns targeting stakeholders

Sub-step 3: Creation of a suitable supply chain

*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-step 1: Conducting an integral evaluation

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

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

Sub-step 4: Identification of user priorities

Sub-step 5: Identification of external factors



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

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

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

Sub-step 4: Comparison of alternatives

Sub-step 5: Final decision making process

*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-step 1: Planning and designing the infrastructure

Sub-step 2: Community technical capability evaluation

Sub-step 3: Institutional frameworks

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

Sub-step 5: Building a sanitation program master plan

*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-step 1: Initiation and controlling phase

Sub-step 2: Training activities

Sub-step 3: Construction and installation of infrastructure

Sub-step 4: Operation and maintenance

Sub-step 5: Marketing of sanitation products

*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



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

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

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

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

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

## NETSSAF PARTICIPATORY PLANNING APPROACH – A TUTORIAL FOR SUSTAINABLE SANITATION PLANNING

The NETSSAF tutorial for sustainable sanitation planning is a ready source of information for decision makers and individuals involved in setting up municipal wastewater systems and concepts for management of excreta in communities in West Africa, illustrating the NETSSAF participatory approach to sanitation planning, dealing with the complex stakeholder concerns when deciding and implementing a sanitation system.

The tutorial welcomes the user, giving him/her the opportunity of selecting the language and giving a short introduction to the system (see figure 1).

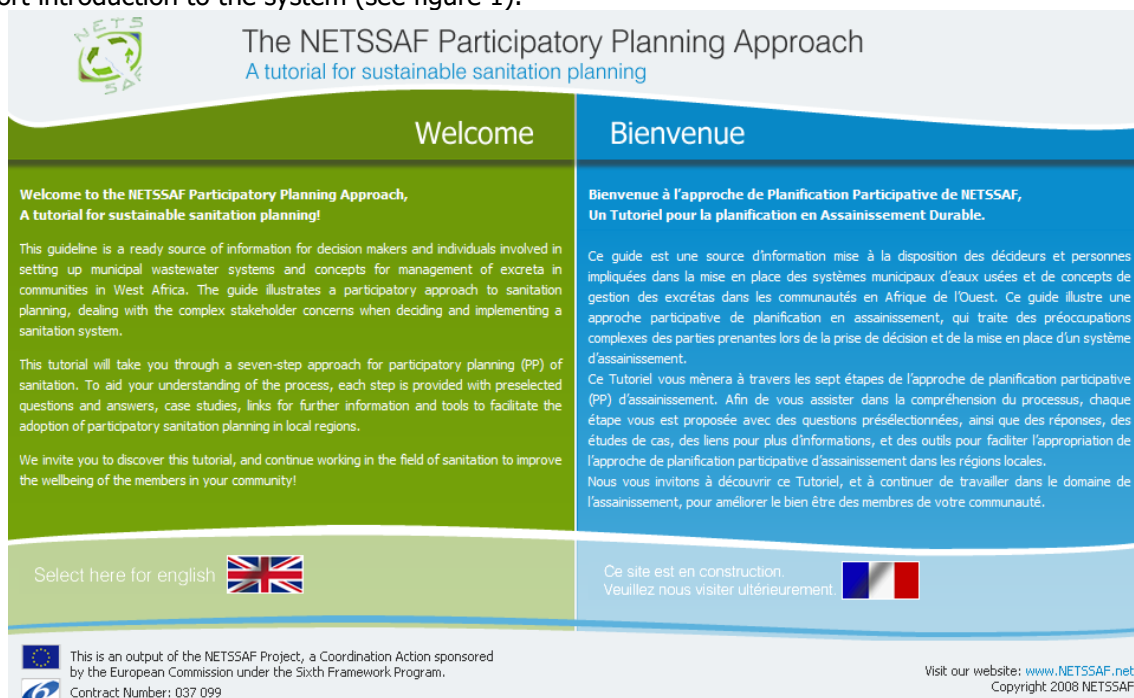


Figure 1: Print screen of the welcome page of the tutorial

A following screen gives the user clear instructions of how to use the program, indicating as well short descriptions of the different steps (see figure 2). The 7 steps that make up the process of planning sustainable sanitation are shown in different screens (see figure 3). The user will be able to click in



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each of the steps to review them separately, or he/she could go in order by clicking in the next slide. Each step is comprised of the following elements: introduction, timing, sub-steps, expected outcomes and results. In order to support the implementation of each step, a set of tools and methodologies is available to facilitate the actual carrying out of the proposed activities. All these documents are found throughout the sub-steps, and can also be accessed at the end of each step in the section "Files to download".

The screenshot shows the title "The NETSSAF Participatory Planning Approach: A tutorial for sustainable sanitation planning". A navigation bar at the top lists steps from STEP 1 to STEP 7, with "For all steps" at the end. On the left is a "Complementary information" sidebar with links like "Welcome / Bienvenue", "How to use this tutorial", "Table of contents", "Sustainable Sanitation", "Planning sustainable sanitation", "Participative planning approach", "Glossary", "References", "Acknowledgements", and "Corporate information". A "Next >>" button is below the sidebar. The main content area is titled "How to use this tutorial" and contains introductory text about the manual's purpose and the 7-step process. Below the text is a diagram of the 7 steps: Step 1 (Project start & launch), Step 2 (Creation of demand), Step 3 (Description of settlement conditions), Step 4 (Identification of feasible sanitation concepts), Step 5 (Consolidation and Finalisation of Implementation Plans), Step 6 (Implementation), and Step 7 (Participatory monitoring and evaluation). A callout box on the right says "Please choose a step to get more information". At the bottom left of the diagram area is a "How do I start?" icon. The footer contains copyright information for 2008 NETSSAF, the project's funding by the European Commission, and logos for the EU and NETSSAF.

Figure 2: Print screen of the section "How to use this tutorial"

A set of pre-defined questions and study cases is also prepared as illustration modules. The section "Further information" is a compilation of valuable literature which will complement the user's learning of the project/programme cycle of implementing sanitation in a community.

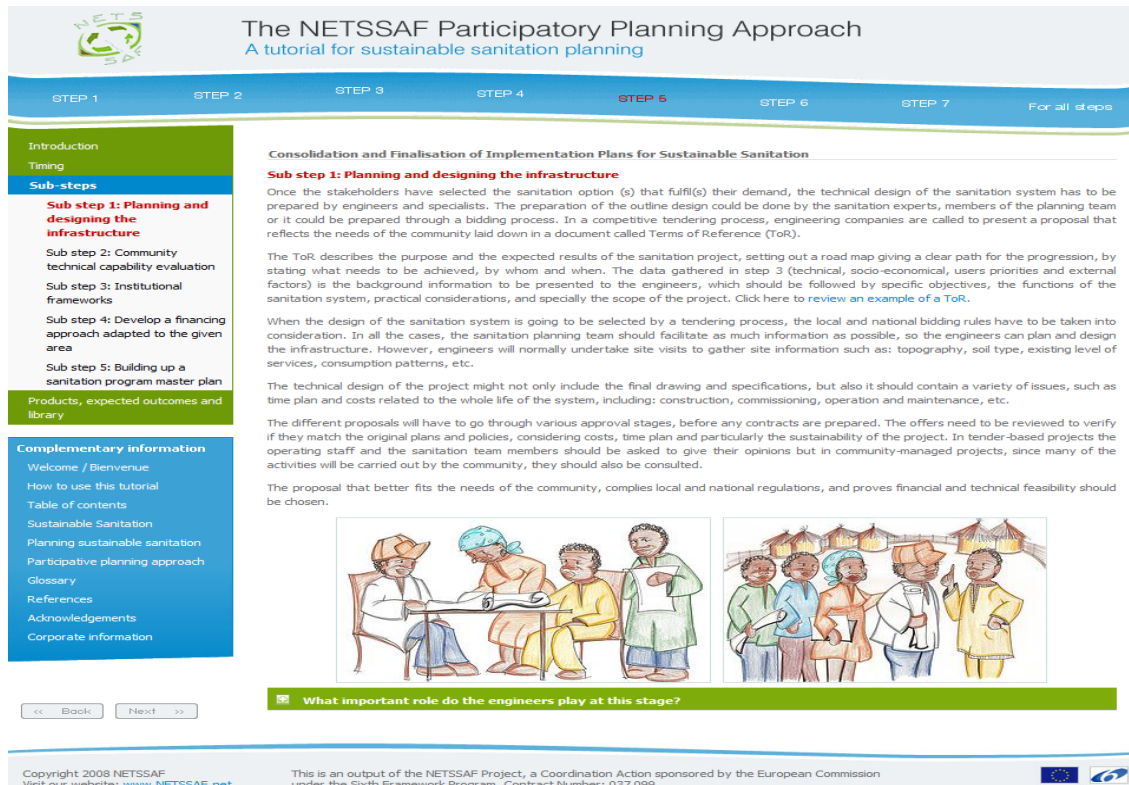


Figure 3: Print screen of the STEP 5, sub-step 1

To be used as reference, the tutorial also contains a section called "For all steps" in which the following components can be observed (see Figure 4):

-Validation of key actors and their roles.

-Technical and non-technical requirements, including sourcing, designing, management and logistics, implementation, O&M, transformation and sanitation of products, logistics for distribution and application, stakeholders, financial, economic, environmental and health, political and policy, training, education and dissemination aspects.

-Differentiating between peri-urban and rural.

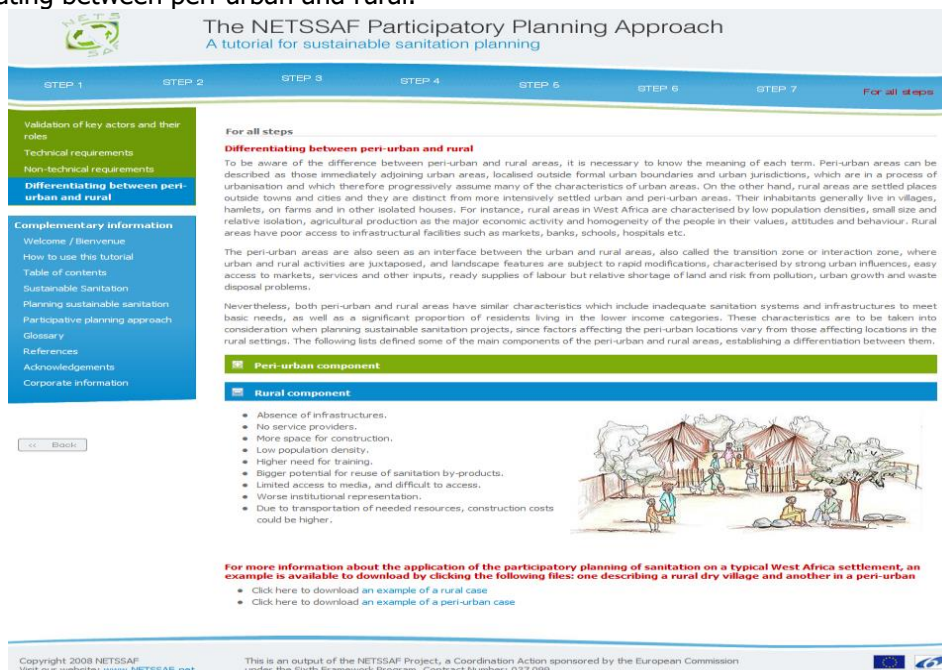


Figure 4: Print screen of the section "For all steps", differentiating between peri-urban and rural



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Finally, the system also includes a full menu with complementary information related to sustainable sanitation, planning sustainable sanitation and participatory planning approach, as well as a glossary, references, acknowledgements and corporate information.

## NETSSAF PARTICIPATORY PLANNING APPROACH – THE COMPLEMENTARY GUIDELINE

In order to offer the users an easy reference guide for navigating through the planning steps, available even when there are not computers or electricity, a condensed version of the NETSSAF participatory planning approach is presented in a guideline (see figure 5). This manual, which is presented to the reader as a fact sheet, 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.

The backbone of the tutorial was used to define the contents of the booklet, which include a foreword by Prof. Ralf Otterpohl, TUHH, an introduction with instructions of how to use the manual, and each of the 7 steps with a presentation, the sub-steps, expected outcomes and products, as well as boxes with complementary information taken from the interactive contents of the computer tutorial.

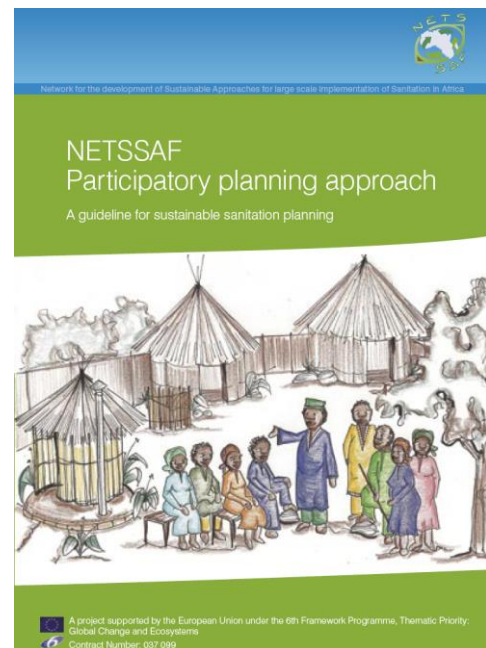


Figure 5: Cover page of the NETSSAF complementary manual

## CONCLUSION

NETSSAF has been conceived as a means to contribute to the improvement of the sanitation situation in West Africa, and to strive to decrease the risk of missing the sanitation MDG target. Facilitating the process through the production, validation, distribution and dissemination of local adapted key tools, such the NETSSAF Participatory Planning Approach, is the answer of the consortium to the need of West Africa. However, it is important to stress that the tutorial and manual are not a blueprint for sanitation planning in West Africa, but it is rather a guideline, which should be adapted based on prevailing local situations. There is no doubt that innumerable efforts are still needed to provide access to sanitation in rural and urban areas in Africa, however it has been demonstrated based on the NETSSAF experience, the great potential to strengthen the implementation efforts through the international cooperation of key actors in a multidisciplinary approach.

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