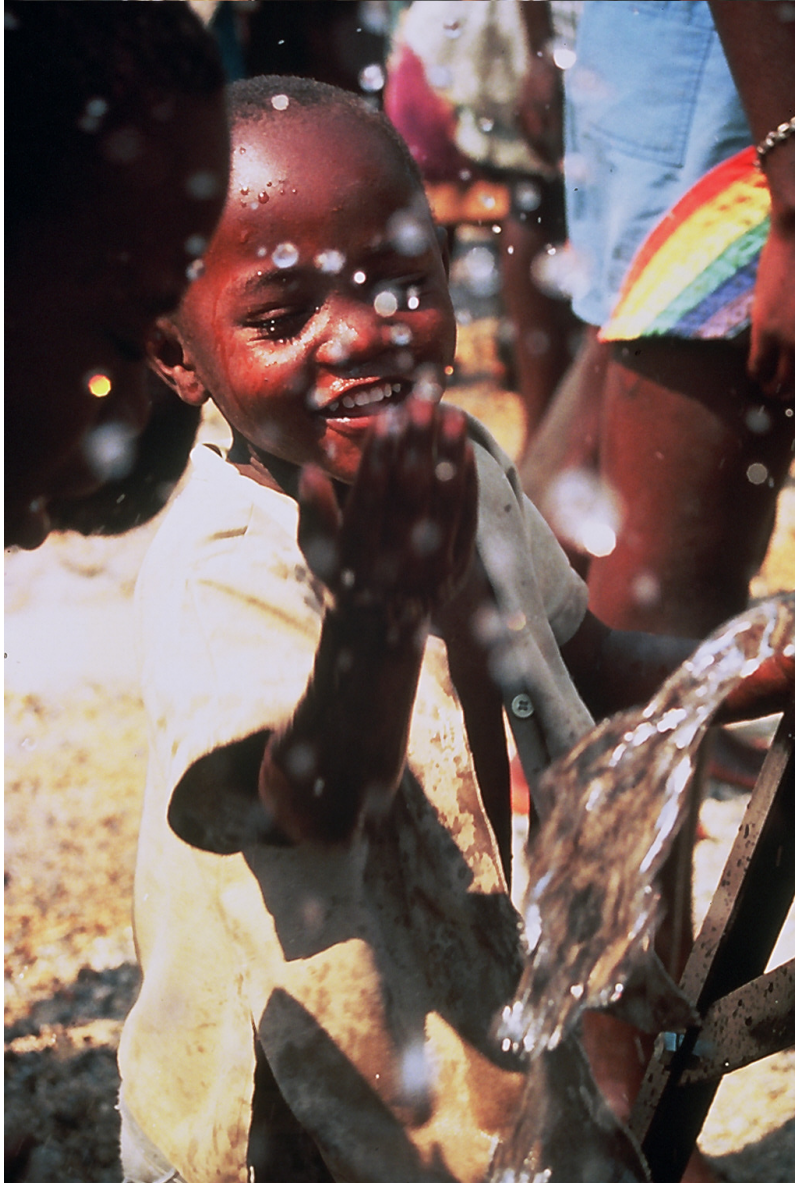


# **SMART INFO**

**A system for Planning, Monitoring,  
Evaluation and Reporting (PMER) for WASH  
organizations**



**Foundation Connect International**



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# 1. Introduction

Connect International is developing an innovative Planning, Monitoring, Evaluation and Reporting (PMER) system (SMART Info), which ensures high quality contextual relevant PMER against the lowest possible cost. This highly user friendly multi language (English, Portuguese, Spanish, French and Swahili) system will be used by both international and local WASH NGO's.

The PMER method is based on the Logical Framework Analysis method (see the Box on the next page). In SMART Info the feature '*product*' is important. '*Products*' are things realized, either directly by the project itself (*output*) or by parties facilitated, capacitated etc. by a project or organization (in which case they can best be typified as *outcome*). Example: products such as a groundwater point with a hand pump, a latrine, a manual or a training course would in LFA terminology be called '*output*' in case they would be realized directly by a project. But these products can also be '*outcome*' in case they result from persons or parties trained, social marketed etc. by a project (e.g. a water point produced and sold by a company that was trained by a project would be called an outcome of the project).

In SMART Info groups of similar products are standardized under '*product types*'. A product type covers products that can all be monitored with the same set of indicators. If a certain product does not fit well enough under any of the distinguished product types, a new product type needs to be formulated and entered into SMART Info.

In SMART Info custom made administrations are made. This is comparable with a financial administration in a financial software package. The software is generic, while the administration is custom made in the generic software to fit entirely to the organization working with it. Within SMART Info also user rights can be formulated. Each user obtains specific rights for access to different parts of the system.

Organizations will have access to own SMART Info databases on the internet. Databases of different organizations can be compiled automatically (after agreement by the involved organizations), enabling meta-analyses and meta evaluations, compiling and/or comparing data and results of different organizations, areas or countries.

An integral part of SMART Info is also a set of generic minimum PMER standards. The introduction of these standards will:

- Ensure that PMER is done properly by involved organizations.
- Enhance the availability and use of proper data and high quality reports, thus enhance learning in organizations.
- Help to avoid that results are claimed by organizations that are not in accordance with reality.
- Enable donors and implementing organizations to grow towards standardized conditions and criteria for project proposals, reporting and communication which will enhance the understanding between organizations in the sector and contribute to better learning, understanding and reduced workloads and costs at all sides.

Where organizations work with both the SMART Info and the minimum PMER standards, additional advantages include:

- Organizational learning will be improved through improved possibilities to compare and exchange results between organizations.
- Donors will be able to obtain high quality information from the organizations they fund and compare their results and data.
- Highly cost-effective audits and internal and external evaluations. In first instance the auditor or evaluator verifies the correctness of the data in the SMART Info database by comparing own observations and measurements of products, outcomes and/or impacts (ad randomly selected from the SMART Info database) with the data about these items in SMART Info. If the findings are that the data are sufficiently correct, the further audit/evaluation can be done almost entirely by analyzing the SMART Info generated reports and the database.

## The Logical Framework Analysis method (LFA)

The LFA method is widely used in the humanitarian aid sector. It is a project oriented method for developing a project. It works as follows:

The project (or program) has a **Goal**. The Goal is something the project hopes to contribute to. A project focusing on for instance improved drinking water for people in twenty villages in one district, could have a Goal like 'Contribute to structural reduction of water related diseases and burdens in Njombe district'. At the Goal level indicators can be formulated (e.g. national statistics about water related diseases at the beginning and at the end of the project period; for a rather small project this is of course of no use as in the national statistics you will not find any difference even if the project has been extremely successful).

The project also has an **Objective**. This is something the project hopes to realize. Example: Reduction with 15% of water related diseases and burdens in the involved villages with regard to the baseline situation during the project period. So this is a much more specific statement. Indicators can be attached to this such as for instance the reduction in diarrhea.

Underneath the Objective we find the **Outcomes** of a project. These are changed behaviors of people or things realized through changed use or behaviors by people. For instance a company trained by a project that start because of that the production of Rope pumps and sells them will give an outcome of 'Rope pumps' and people who buy and use the Rope pumps constitute the outcome 'People using groundwater points equipped with Rope pumps'. The outcome 'Rope pump' is considered an **outcome product**. The outcome 'Number of people using a Rope pump' is an indicator of the outcome product 'Groundwater point with Rope pump'. Outcomes are things we hope that will result from our project efforts, but they are closer within our influence sphere than the project Objective. All formulated outcomes should together be likely to realize the Objective.

We also formulate **Expected Results**. These are results we are confident to be able to achieve with the project. Important is that they are formulated in such a way that if each result is achieved it is likely that through that the Outcomes and thus also the Objective will be achieved. Expected Results could for instance be '*Capacitated water product companies*' and '*Final beneficiaries trained and capacitated with regard to knowledge of water related diseases and prevention of these diseases*'.

Per Expected result we formulate **output products**. These are products realized directly by the project. Examples: '*Training courses for the final beneficiaries*', '*Training courses for the companies*', but possibly also '*Credits for companies enabling them to set up a Rope pump production line*' etc. Important for both outcome and output products is that for each product type a number of indicators is formulated for the realized product and that per product these indicators are measured and the data entered in SMART Info. Examples of indicators for a realized product (in this case a groundwater point with Rope pump): maximum yield, The output products under one Expected Result should together realize the Expected Result.

Each product is realized by **activities**. Each product type has its own specific set of standard activities that together realize the product. Per standard activity also indicators are formulated. During a project a % of product activities can be monitored.

## 2. Planning

In an organization's SMART Info administration for each project basic details (code, project name, and other details) as well as the numbers of products planned to be realized per product type during the project are entered. This can be done in different ways: numbers of products per donor, numbers of products per entity (village, VAG, organization, organization department, company, retailer, etc.), and numbers of products per project year.

With a Budget module line budgets are developed for each Expected result of a project, if applicable per country and/or per involved organization. A summarized budget per Expected result per involved key implementing organization is entered in the SMART Info database. The different reports generated by the Budget module are often also used to form the basis of the budgets presented in the project proposal.

Additionally a tool for planning of activities and logistics is being developed in the system. It covers product activities that are laid down in time schedules per project, per department and per organization, in different time settings (per week, per month, per year and with a possibility to zoom in for instance from year planning to weekly planning, etc.).

## PLANNING OF ACTIVITIES AND NUMBERS OF FINALIZED PRODUCTS PER MONTH (LSHI17 – Watsan Njombe – 2 years)

Date: 03/04/2011

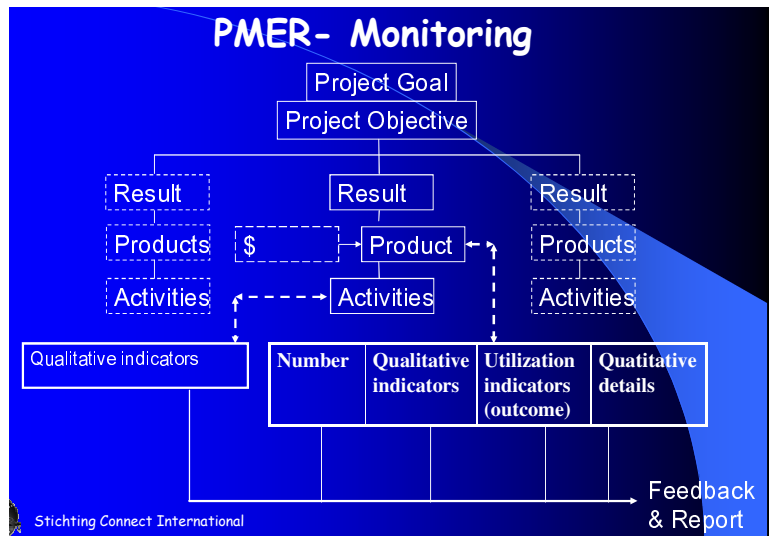
Expected result	Product type	Description of specific products	Total Nrs. of products		Responsible department	mrt-11				apr-11			
			Planned	Finalized up to date		Planning activities	Realized activities	Nr. of products planned to be finalized this month	Nr. of products really finalized this month	Planning activities	Realized activities	Nr. of products planned to be finalized this month	Nr. of products really finalized this month
Project coordination & guidance	Project coordination & guidance quarter	Coordination and guidance	24	1	COMMUNITY DEVELOPMENT	Completion of quarter	Quarter completed	1	1				
Project coordination & guidance	Project proposal	Proposal	1	1	COMMUNITY DEVELOPMENT								
Project coordination & guidance	Contract or MoU with organization	Contract between donor and NGO	1	1	INTERN								
R&D	Manual (or upgrade)	PMER manual	1	0	R&D	Work on chapter 3 Methodology	Work done but chapter not yet completed (effort needed next months on manual to avoid delays)			Continue work on ch 3 plus make start with ch 4			
R&D	Manual (or upgrade)	Rope pump manual	1	0	R&D	Work on framework of the manual	Not done			Work on ch1 plus finalize set up of the manual			
PMER	PMER quarter	PMER quarter	24	1	PMER	Completion of quarter	PMER standards checked and were OK	1	1				
PMER	Project progress report	Final evaluation	1	0	PMER								
PMER	Project progress report	Quarterly progress reports	6	0	PMER					Work on quarterly progress report Jan - March 2011		1	
PMER	Project progress report	Annual reports	2	0	PMER								
Groundwater points	New hand drilled borehole with Rope pump	Baptist and Rota sludge drilled boreholes equipped with Rope pumps	120	7	TECHNICAL	Finalize 8 bh's with RP's this month	Only 2 were finalized	8	2	Finalize 10 bh's with RP's this month		10	
Groundwater points	New hand dug well with Rope pump	Hand dug wells equipped with Rope pumps (commercial and subsidized)	86	22	TECHNICAL	Finalize 7 wells with RP's this month	9 were finalized	7	9	Finalize 8 wells with RP's this month		8	
Groundwater points	Rehabilitated well with Rope pump	Rehabilitated wells equipped with Rope pumps	112	15	TECHNICAL	Finalize 6 rehabilitated wells with RP's	5 were finalized	6	5	Finalize 8 rehabilitated wells with RP's this month		8	

Example of a part of one of the project planning tools in SMART Info. The planning figures and the realized numbers are connected to the reporting part of the system.

### 3. Monitoring

Monitoring through the SMART Info methodology means obtaining information regarding 'product activities' and 'finalized products', registering this information and reacting on the information immediately if needed.

In case a new product type is identified which is not yet included in SMART Info, it is entered in the system, including so-called *QUA* (Quality, Utilization and Amounts) *indicators* (with Amounts being divided in Numeric and Measurement indicators) for the finalized products and qualitative indicators for the activities that realize the products belonging to this new product type.



Schematic overview of the monitoring part of SMART Info.

Indicators for standard product types that we distinguish have been developed and extensively field tested together with our partner organizations (sometimes even over a number of years and in different countries). During the monitoring actions by different stakeholders these indicators are measured and registered in monitoring forms. The data in these forms are later entered in SMART Info. Also the numbers of realized products are determined, e.g. monthly or quarterly, and entered in SMART Info.

SMART Info contains *minimum monitoring standards* for: (a) the frequency of monitoring (for QUA monitoring of activities and of finalized products and for numbers monitoring of products realized), (b) the minimum number of QUA indicators for each indicator type per product type (the higher the value of a product the more often it needs to be monitored and the more indicators need to be included), (c) judgment of the overall quality, utilization and progress in numbers and finance.

*Monitoring actions* are mostly executed by experienced staff of the involved organizations. They are trained, supervised and monitored for this purpose by their management and where needed or desired by other involved parties.

Monitoring data are entered in monitoring forms, including QUA details of the product or activity monitored, plus standard data, such as the name of the product type, the unique code or name of the product, location (GPS data, linked to Google Earth), date, producer(s), location name, etc. The monitoring forms also have space for textual explanations and qualitative monitoring. Also pictures are to be taken or film to be made where applicable (e.g. each realized water point needs to be photographed). The monitoring forms contain short texts per indicator explaining what the monitor needs to do in case he/she monitors the situation regarding the indicator not to be in order (this function will later be expanded when PDA data entry is introduced).

For many products also beneficiaries or other intermediate target groups do (parts) of the monitoring. Beneficiaries will for instance monitor some QUA aspects of several products realized in their vicinity. This enhances that beneficiaries are critical towards the support delivered to them, control QUA aspects, take measures immediately if needed, and take the lead in and have ownership over the activities at their level.

Order	Question_English Question_KiSwahili	AnswerType	Currently In Use
3	What is the current amount available mentioned in the bank book? kiasi cha fedha kilichopo katika kitabu cha bank	Number Yes/No & Remark Good/Bad & Remark Very Good/Good/Bad/Very Bad	<input checked="" type="checkbox"/>
4	What is the current amount available mentioned in the cash book? kiasi cha fedha kilichopo katika leja (fedha ambazo haziaenda bank.)	Text & Remark Number & Remark SmartCode	<input checked="" type="checkbox"/>
5	How many loans are currently outstanding? Kiasi cha mikopo kilichokwisha tolewa.	Number SmartCode	<input checked="" type="checkbox"/>
6	What is the total amount of the money that needs to be paid back? Ni kiasi gani cha fedha ambachokinatakiwa kirudishwe?/fiumla va fedha ukiiumlisha na zile zililoliwa	Number SmartCode	<input checked="" type="checkbox"/>
7	Check at least 4 randomly selected receipts. Could you find all them in the cash or bank book? chukua shaghalabaghala stakabadhi nne na uangalie kama stakabadhi hizo zimeandikwa pia kwenye kitabu cha	Yes/No SmartCode	<input checked="" type="checkbox"/>
8	Check the physical cash and compare it as mentioned in the cash book.	Very Good/Good/Bad/Very	<input checked="" type="checkbox"/>

Example of a part of the tool for developing indicators and monitoring forms (in English and Kiswahili) in SMART Info

Monitoring methods depend on the characteristics of the product types. Some examples:

- **Product type: credits provided by micro finance institutes (MFI's).** The numbers of credits provided and QUA details of these credits are monitored by these institutes as part of their standard bookkeeping procedures (registering provided credits, including a number of details, repayments. The MFI's can, if they wish and choose to do so, share this information on a monthly or quarterly basis with their donors, including scores on different qualitative and utilization aspects (QUA indicators).
- **Product type: training course for leaders of village self help groups.** Numbers of participants are registered by the trainers. The quality aspects are observed and scored in monitoring forms by NGO staff joining the training course and observing the sessions and the trainers. The level of satisfaction among participants is determined at the end of the training course by the participants who fill in an evaluation sheet. All data are registered by trained NGO staff in PMER monitoring forms of which the information is entered straight in SMART Info of the NGO.
- **Product type: hand drilled borehole with Rope pump.** During implementation, the drilling team is visited sometimes by a fieldworker. The fieldworker has a monitoring form with questions (the activity indicators) and observes and sometimes measures activities and inputs by the drilling team (e.g. he may measure the wall thickness of the bore lining PVC pipe used, to control whether the pipe is of the correct strength and quality, and observe whether the team registers the ground layers found during drilling). The finalized groundwater points are each visited by a fieldworker during which this person measures and observes a number of characteristics of the finalized product (e.g. the maximum yield, whether there are cracks in the concrete of the platform, whether there is a drainage channel, the depth of the borehole, etc.).
- **Product type: PMER quarter.** At the end of each quarter the NGO management controls whether during the quarter the PMER minimum standards have been fulfilled for the project. This is reported by the PMER software itself.

## 4. Evaluation

A what we call 'normative' survey module has been developed for the evaluation part of SMART Info. In this module different topics can be entered with per topic a maximum of 5 questions relevant to the topic. For each question four standard answers are formulated which always go from an answer that represents a very bad situation (score 1) to an answer that represents a very good situation (score 4) with regard to the question, with always the division between a situation which is just not good enough to a situation which is just good enough between score 2 and score 3. There is also a score 5 for 'no answer'.

Due to its set up this tool is highly flexible and can be used for any kind of 'normative survey'. Normative surveys are surveys that distinguish or signal to what extent the situation concerning topics and specific questions are good or not good.

Organizations can use the survey module to develop their own specific survey without the need to program anything. An organization using the module only needs to develop the topics, the questions per topic and the standard answers per question and enter these in the system.

The module automatically generates different survey reports with regard to average scores and percentages of scores of 2 or lower per question and per topic.

Surveys are ideally conducted several times per project, for instance at the beginning, somewhere during the middle of the period and at the end of the project, so that trends can be determined.

Organizations that use the same topics but different questions and/or different standard answers can still compare the reports of the survey tool between the organizations at topic level. During CI's TAZAMO program, that reached 1 million poor people in rural areas in Tanzania, Zambia and Mozambique, more than 10.000 household surveys have been executed with this tool. The example below shows the questions and standard answers formulated for one topic within this household survey.

27	Knowledge regarding malaria and diarrhoea	Score 1 - very poor	Score 2 - poor	Score 3 - reasonable	Score 4 - good	Score 5 - No answer
27.1	How can one prevent malaria?	Does not know or answers referring to local beliefs, witchery etc. that are harmful	Answer refers to beliefs, witchery practises etc. that are in itself not harmful but don't help to prevent malaria	Mentions one or two effective methods, e.g. use bed nets, spray the walls, cover the body with long sleeves by nightfall, take preventive drugs, drain water pools.	Mentions three or more effective methods from the list.	No answer
27.2	How can one treat malaria?	Does not know or answers referring to local beliefs, witchery etc. that are harmful	Answer refers to beliefs, witchery practises etc. that are in itself not harmful but don't help to treat malaria	Some proper answers like go to health centre-clinic, give malaria drugs.	All or most proper answers, incl. go to health centre-clinic, give malaria drugs, get rest.	No answer
27.3	How can one prevent diarrhoea?	Does not know or answers referring to local beliefs, witchery etc. that are harmful	Answer refers to beliefs, witchery practises etc. that are in itself not harmful but don't help to prevent diarrhoea	Some proper answers like wash hands, drink clean water, etc.	All or most proper answers, e.g. wash hands, drink clean water, eat well prepared food, use a proper and clean toilet, etc.	No answer
27.4	How can one treat diarrhoea?	Does not know or answers referring to local beliefs, witchery etc. that are harmful	Answer refers to beliefs, witchery practises etc. that are in itself not harmful but don't help to treat diarrhoea	Some proper answers like go to health centre-clinic, give ORS (solution of salt in water), get medicine from the clinic, etc.	All or most proper answers incl. go to health centre-clinic, give ORS (solution of salt in water), get medicine from the clinic, etc.	No answer

*An example of one topic and its questions and standard answers formulated in the PMER Survey module, used by several partners of Connect International in their programs.*

Beside the data and reports from this Survey module, also the achieved numbers of products realized, their quality and utilization, the amount details involved per product type, the involved costs and other aspects need to be evaluated. This can be done with SMART Info's monitoring reports during for instance weekly (e.g. by NGO's departments), monthly (e.g. by the management of NGO's) and quarterly (at management and Board levels) assessments of such reports. Also mid-term and final evaluations will use both the data and reports from the Survey, the Planning and the Monitoring modules of SMART Info.

## 5. Reporting

SMART Info produces reports for different users, from beneficiaries, fieldworkers, local managers, local authorities etc. to international managers and donors. The reports show reality from different angles, providing overviews over the program and its results in different ways. This enables different users to learn easily, quickly and intensively from the reports most suitable to their needs, to decide timely about improvements / adaptations required, to execute proper daily management of their organizations, and to develop aggregated (e.g. accountability) reports for different stakeholders, such as donors, beneficiaries, authorities and multi stakeholders platforms in districts.

The different reports can be used in for instance weekly staff team meetings of implementing NGO's, weekly and monthly management meetings of NGO's, monthly assessments by the NGO's and or parties involved in capacitating them, desk officers of donor agencies (using the reports to follow progress of projects and advice the own management on new funding installments for the involved implementing NGO), internal and external evaluators, researchers, and so on.

In Annexes 1 and 2 examples of different PMER reports are provided, including how in SMART Infos users can select their own report format, structure and contents.

## Annex 1 Examples of SMART Info Monitoring reports

Basic explanations valid for all reports:

- In SMART Info one can select monitoring and evaluation reports.
- 'N.S.' means 'No selection'.
- In all reports a **red** color = not good, **orange** = in between and **green** = good.
- How the colors are determined is explained in our SMART Info manual (chapter on minimum PMER standards).
- The numbers in the reports represent:
  - average scores (in %, where 0% means that all scores were 0, meaning very bad, 100% means that all scores were 1, meaning very good, and all other figures between 0 and 100 represent the average of all 0 and 1 scores in the database regarding the items in the selected report type), or
  - numbers (e.g. numbers of realized products during the reporting period, or average numbers or amounts, such as for example the average number of users of realized boreholes with Rope pumps).

### A1.1 Monitoring report selection

If 'monitoring reports' is selected the user subsequently has to make a selection in each of the following three menus to obtain the specific report desired:

Choose specific items for which to make specific selections	Choose the item type for the Y-axis (you can choose one item)	Choose the item type for the X-axis (you can choose one item)
Period	Project	Indicator code
Project	Organization	Indicator group
Organization	Product type	Numbers realized per quarter
Product type	Organization department	Numbers realized per year
Organization department	Country	Nrs. planned vs. realized/quarter
Country	District	Numbers planned vs. realized/year
District	Sub district	
Sub district	Location	
Location	Monitor	
Monitor	Client	
Client	Product responsible	
Product responsible	Producer	
Producer	Donor	
Donor	Expected result	
	Original data entries (if selected no X-axis selection can be made)	

Here under a similar selection menu as currently already used in SMART Info:

## A1.2 Examples of Monitoring Table reports

<b>Period</b>	N.S.												
<b>Projects</b>	PTMSHI – TAZAMO Tanzania												
<b>Organizations</b>	N.S.												
<b>Product types</b>	Hand drilled borehole with Rope pump, New well with Rope pump, Simple improved pit latrine												
<b>Organization departments</b>	N.S.												
<b>Countries</b>	Tanzania												
<b>Districts</b>	N.S.												
<b>Sub districts</b>	N.S.												
<b>Locations</b>	N.S.												
<b>Monitors</b>	N.S.												
<b>Clients</b>	N.S.												
<b>Product responsables</b>	N.S.												
<b>Producers</b>	N.S.												
<b>Donors</b>	N.S.												
<b>Y-axis</b>	Product type												
<b>X-axis</b>	Indicator group												
Indicator group / Product type	% critical	Product quality (%)	Product utilization (%)	Activities quality (%)	Planned nr. to date	Realized nr. to date	Nr. in QUA to date	Budget to date	Expenditure to date	% realization	% exp.	% real. vs exp.	
Hand drilled borehole with Rope pump	0	81	93	71	400	273	56	280.000	223.450	68	80	86	
New well with Rope pump	6	69	91	84	55	68	65	16.500	16.300	124	99	125	
Simple improved pit latrine	0	80	84	63	67	121	45	1.340	1.780	181	133	136	

<b>Period</b>	2009 Q1 – 2010 Q1												
<b>Projects</b>	PTMSHI – TAZAMO Tanzania												
<b>Organizations</b>	N.S.												
<b>Product types</b>	Hand drilled borehole with Rope pump, New well with Rope pump, Simple improved pit latrine												
<b>Organization departments</b>	N.S.												
<b>Countries</b>	Tanzania												
<b>Districts</b>	N.S.												
<b>Sub districts</b>	N.S.												
<b>Locations</b>	N.S.												
<b>Monitors</b>	N.S.												
<b>Clients</b>	N.S.												
<b>Product responsables</b>	N.S.												
<b>Producers</b>	N.S.												
<b>Donors</b>	N.S.												
<b>Y-axis</b>	Product type												
<b>X-axis</b>	Numbers of products realized vs. planning per quarter												
Quarter / Product type	2009 Q1 plan	2009 Q1 Real.	2009 Q2 plan	2009 Q2 Real.	2009 Q3 plan	2009 Q3 Real.	2009 Q4 plan	2009 Q4 Real.	2010 Q1 plan	2010 Q1 Real.	Total nr. planned over period	Total nr. realized over period	
Hand drilled borehole with Rope pump	5	3	7	9	2	2	8	7	3	6	25	27	
New well with Rope pump	3	1	3	5	2	3	8	3	3	5	19	17	
Simple improved pit latrine	17	12	25	15	23	22	24	12	24	24	113	85	

<b>Period</b>	2010 Q1 – 2010 Q4											
<b>Projects</b>	PTMSHI – TAZAMO Tanzania											
<b>Organizations</b>	N.S.											
<b>Product types</b>	Hand drilled borehole with Rope pump											
<b>Organization departments</b>	N.S.											
<b>Countries</b>	Tanzania											
<b>Districts</b>	N.S.											
<b>Sub districts</b>	N.S.											
<b>Locations</b>	Manhapuane, Marenga, Mualege, Muripotana- José, Muripotana-Kucune, Naculue Reno, Namanhunhu											
<b>Monitors</b>	N.S.											
<b>Clients</b>	N.S.											
<b>Product responsables</b>	N.S.											
<b>Producers</b>	N.S.											
<b>Donors</b>	N.S.											
<b>Y-axis</b>	Location											
<b>X-axis</b>	Indicator group											
<b>Indicator group</b>	<b>% critical</b>	<b>Product quality (%)</b>	<b>Product utilization (%)</b>	<b>Activities quality (%)</b>	<b>Planned nr. to date</b>	<b>Realized nr. to date</b>	<b>Nr. in QUA to date</b>	<b>Budget to date</b>	<b>Expenditure to date</b>	<b>% realization</b>	<b>% exp.</b>	<b>% real. vs exp.</b>
<b>Location</b>												
Manhapuane	7	65	63	No data	12	13	5	No data	No data	108	No data	No data
Marenga	1	88	91	No data	2	3	3	No data	No data	150	No data	No data
Mualege	11	56	84	No data	7	3	3	No data	No data	43	No data	No data
Muripotana-José	0	93	88	No data	3	3	2	No data	No data	100	No data	No data
Muripotana-Kucune	0	91	55	95	11	7	4	No data	No data	64	No data	No data
Naculue Reno	1	92	67	93	13	11	8	No data	No data	85	No data	No data
Namanhunhu	3	87	94	No data	9	6	5	No data	No data	67	No data	No data

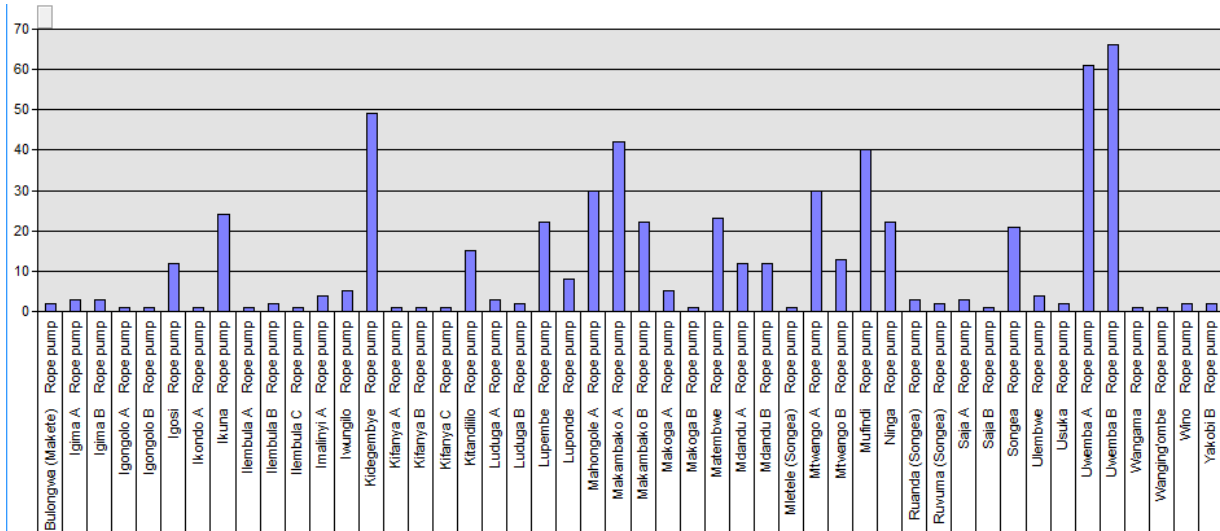
<b>Period</b>	2009 Q1 – 2011 Q2										
<b>Projects</b>	PTMSHI – TAZAMO Tanzania										
<b>Organizations</b>	N.S.										
<b>Product types</b>	Hand drilled borehole with Rope pump, New well with Rope pump										
<b>Organization departments</b>	N.S.										
<b>Countries</b>	Tanzania										
<b>Districts</b>	N.S.										
<b>Sub districts</b>	N.S.										
<b>Locations</b>	N.S.										
<b>Monitors</b>	N.S.										
<b>Clients</b>	N.S.										
<b>Product responsables</b>	N.S.										
<b>Producers</b>	SEC Group, KBA Group, Uvinjo Group, Vicoba										
<b>Donors</b>	N.S.										
<b>Y-axis</b>	Producer										
<b>X-axis</b>	Numbers of products realized per quarter										
<b>Quarter</b>	<b>2009 Q1</b>	<b>2009 Q2</b>	<b>2009 Q3</b>	<b>2009 Q4</b>	<b>2010 Q1</b>	<b>2010 Q2</b>	<b>2010 Q3</b>	<b>2010 Q4</b>	<b>2011 Q1</b>	<b>2011 Q2</b>	<b>Total nr. realized over period</b>
<b>Producer</b>											
SEC Group	12	13	4	9	5	5	8	2	10	3	71
KBA Group	8	4	0	5	5	5	8	2	9	5	51
Uvinjo Group	9	3	0	6	6	0	8	4	8	6	50
Vicoba	15	18	25	10	8	8	8	5	8	5	110

<b>Period</b>	N.S.																								
<b>Projects</b>	PTMSHI – TAZAMO Tanzania																								
<b>Organizations</b>	N.S.																								
<b>Product types</b>	Hand drilled borehole with Rope pump																								
<b>Organization departments</b>	N.S.																								
<b>Countries</b>	Tanzania																								
<b>Districts</b>	N.S.																								
<b>Sub districts</b>	N.S.																								
<b>Locations</b>	Manhapuane, Marenga, Mualege, Muripotana- José																								
<b>Monitors</b>	N.S.																								
<b>Clients</b>	N.S.																								
<b>Product responsables</b>	N.S.																								
<b>Producers</b>	N.S.																								
<b>Donors</b>	N.S.																								
<b>Y-axis</b>	Location																								
<b>X-axis</b>	Indicator code (with the figures in the colored cells presenting the average scores expressed as %, and the other figures averages of amounts measured)																								
<b>Indicator code</b>	PQCI1	PQCI2	PQCI3	PUCI1	PUCI2	PUCI3	PQI1	PQI2	PQI3	PQI4	PQI5	PQI6	PQI7	PQI8	PQI9	PQI10	PUI1	PUI2	PUI3	PMI1	PMI2	PMI3	PNI1	PNI2	PNI3
<b>Location</b>																									
Manhapuane	93	100	100	100	100	100	88	64	33	88	77	92	97	84	45	88	95	95	99	185	27	22	54	10	0
Marenga	97	100	100	100	99	100	83	90	63	96	88	87	83	82	67	88	81	90	93	290	34	27	50	8	0
Mualege	100	100	94	100	100	100	90	93	67	90	88	80	95	96	71	94	99	92	90	210	24	20	28	5	250
Muripotana-José	87	100	100	100	100	100	67	88	56	78	81	77	69	66	51	80	84	90	91	220	23	19	35	7	150

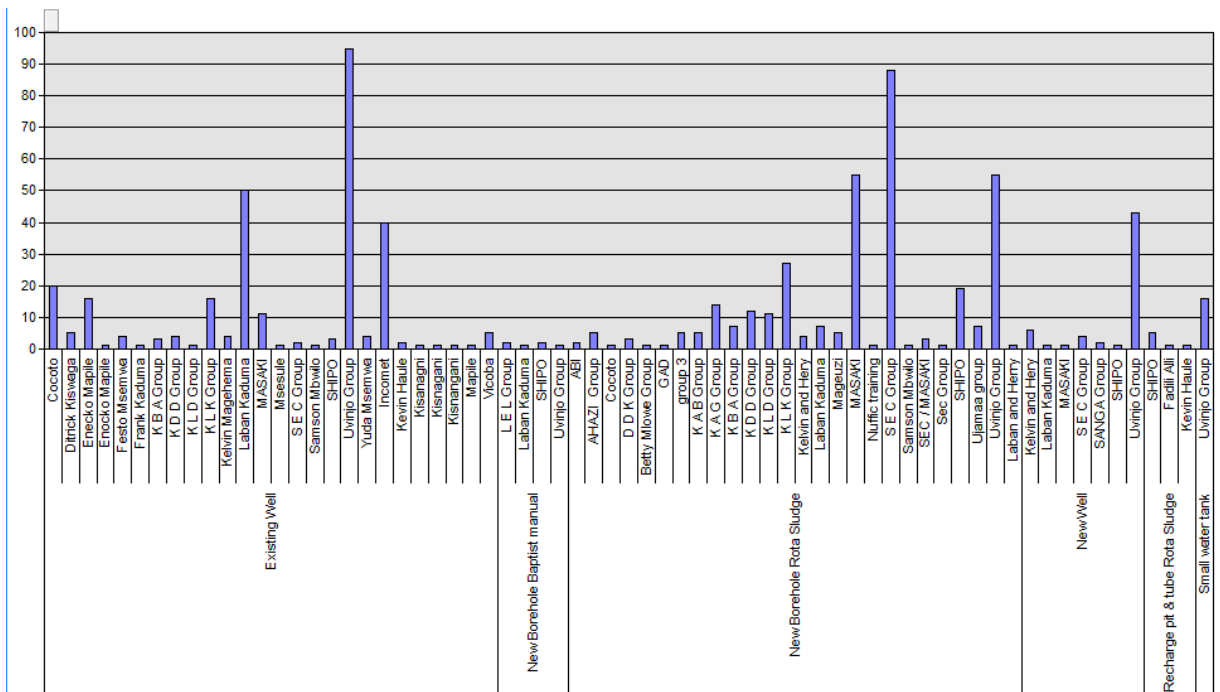
*In the above type of report the indicator codes cover the indicator codes for all selected products types realized in each location. So, if for instance the product types hand drilled borehole with Rope pump, simple improved latrine and fuel efficient stove would have been selected, and in the community of Manhapuane 5 boreholes with Rope pumps and 10 simple improved latrines as well as 70 fuel efficient stoves would have been realized (and their QUA data monitored and entered in SMART Info), the figures for the QUA indicators for this location would represent the average scores (expressed as a %) of these products. In the above example however, only one product type (Hand drilled borehole with Rope pump) has been selected. Therefore the figures in the report represent the averages (as a % of quality or utilization scores in the coloured cells, and numbers and amounts in the none coloured cells) for each indicator for the hand drilled boreholes with Rope pump in each location of which the QUA details have been entered in SMART Info.*

<b>Period</b>	2010 Q1 – 2010 Q4																								
<b>Projects</b>	N.S.																								
<b>Organizations</b>	SHIPO																								
<b>Product types</b>	Hand drilled borehole with Rope pump, New well with Rope pump, Rehabilitated well with Rope pump																								
<b>Organization departments</b>	N.S.																								
<b>Countries</b>	Tanzania																								
<b>Districts</b>	N.S.																								
<b>Sub districts</b>	N.S.																								
<b>Locations</b>	Manhapuane, Marenga, Mualege, Muripotana- José, Muripotana-Kucune, Naculue Reno																								
<b>Monitors</b>	N.S.																								
<b>Clients</b>	N.S.																								
<b>Product responsables</b>	N.S.																								
<b>Producers</b>	N.S.																								
<b>Donors</b>	N.S.																								
<b>Y-axis</b>	Product type																								
<b>X-axis</b>	Indicator code (with the figures in the colored cells presenting the average scores expressed as %, and the other figures averages of amounts measured)																								
<b>Indicator code</b>	PQCI1	PQCI2	PQCI3	PUCI1	PUCI2	PUCI3	PQI1	PQI2	PQI3	PQI4	PQI5	PQI6	PQI7	PQI8	PQI9	PQI10	PUI1	PUI2	PUI3	PMI1	PMI2	PMI3	PNI1	PNI2	PNI3
<b>Product type</b>																									
Hand drilled borehole with Rope pump	100	100	97	100	100	99	84	90	67	86	88	92	71	84	65	88	94	92	98	225	25	21	57	11	50
New well with Rope pump	99	91	100	100	96	100	77	92	77	92	88	87	81	81	80	88	77	90	65	230	25	20	68	12	150
Rehabilitated well with Rope pump	98	100	93	100	100	100	92	93	91	77	88	80	92	86	54	91	95	91	90	200	29	22	80	14	90

## A1.3 Examples of Monitoring Graph reports

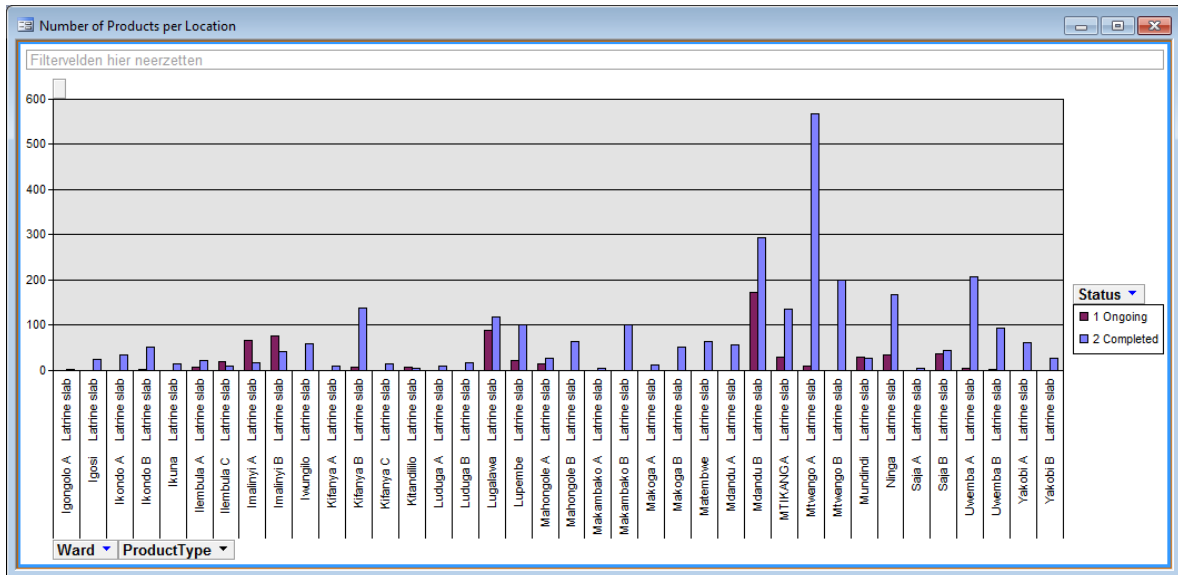


Numbers of finalized Pumps per sub-district (Ward)



Numbers of groundwater point with Rope pump installations per implementer





Numbers of latrines per location (village)

## A1.4 Examples of other types of Monitoring reports

Pump ID: 3927	Sub-Village: Njodzo (Nyumbanitu, Igima B)	Donor: ? Vopak ?
Paper File No 563	Request date 16-jul-10	Status Pump Completed, water
Borehole No Nyumbanitu/12	Depth (m) 13	Gps X Gps Y Site Amount: 50.000 Msigwa
Pump No 01100629	Installation date 23-sep-10	Installed by Uvinjo Group
Care taker name Yotham Msigwa	Care take phone numb 0758035761	Pump producer/Welder Kisangani
Monitor This:	All year water Yes	No of people using 8
	Remarks: Only 60 liters / day. We suggested to dig deeper	Garden size (mxm) 0
Borehole(s):	Started: 22-sep-10, Type:Existing well, Existing well, Team: Uvinjo Group, Depth: 13, Status: Completed, water, Hole_ID:737	
Pump Test(s):	Test date: 28-sep-10, Water Level: 13 [m], Discharge: 561 [Liters/Hour], Tested for: 1 [Hour], Recovery time: [Minutes], Quality: . Test remarks:. PumpTest_ID:659	
	Test date: 27-dec-10, Water Level: 12 [m], Discharge: 60 [Liters/Hour], Tested for: 1 [Hour], Recovery time:360 [Minutes], Quality: Good. Test remarks:. PumpTest_ID:678	



## Annex 2 Examples of SMART Info Evaluation reports

### A2.1 Evaluation report selection

If 'evaluation reports' is selected the user first chooses the type of evaluation report (currently there are two)

Choose the type of evaluation report (you can choose one item)	
	Household survey report
	Organization scan report

For the selected evaluation report type a specific menu appears. For instance for the type 'Household survey report' the user can choose from the following menus:

Choose specific items for which to make selections (per chosen item one can make a specific selection)	Choose the item type for the Y-axis (you can choose one item)	Choose the item type for the X-axis (you can choose one item)
Period	Topic questions	Trends
District	Topics	Numbers
Sub-district		Percentages
Location		
Sex person interviewed		
Age group person interviewed		
Phase (start, middle, end)		
Household size		
Tribe		
Religion		
Household composition		
Education level highest educated in family		
Education level person interviewed		
Season		
Organization		
Project		

In the first menu, for each selected item one can make a further selection. For instance if 'Period' is selected subsequently one can select the period covered by the report.

For the evaluation report type 'Organization scan report' the user can choose from the following menus:

Choose specific items for which to make selections (per chosen item one can make a specific selection)	Choose the item type for the Y-axis (you can choose one item)	Choose the item type for the X-axis (you can choose one item)
Organization	Topic questions	Trends
Project	Topics	Numbers
Country		Percentages
District		
Sub-district		
Location		
Period		

In the first menu, for each selected item one can make a further selection. For instance if 'Period' is selected subsequently one can select the period covered by the report.

## A2.2 Examples of Evaluation summary reports

Topic nr.	Topic	Scores for all households together									Trend Before - During			Trend During - After			Trend Before - After		
		3502			2090			954			Av.	%<=2	% no answer	Av.	%<=2	% no answer	Av.	%<=2	% no answer
		Before			During			After											
		Av.	%<=2	% no answer	Av.	%<=2	% no answer	Av.	%<=2	% no answer									
1	Toilet facilities	2,3	61,1	2,2	2,6	49,5	2,1	2,4	59,7	0,3	10,9	-19,0	-5,2	-8,1	20,6	-84,8	2,0	-2,3	-85,6
2	Toilet use	3,3	19,3	4,1	3,4	16,5	5,0				2,0	-14,2	22,2						
3	Drinking water sources - rainy season	2,9	34,9	1,4	3,2	22,7	1,5				8,4	-35,1	9,2						
4	Drinking water sources – dry season	2,7	43,4	1,7	3,0	29,9	0,9	3,3	14,6	0,6	9,6	-31,0	-50,1	10,5	-51,2	-32,7	21,1	-66,3	-66,4
6	Drinking water storage capacity	1,7	85,7	1,7	2,3	62,6	0,7	2,4	53,5	0,7	38,9	-26,9	-61,5	6,0	-14,5	9,4	47,2	-37,5	-57,9
7	Drinking water use	2,6	42,2	2,3	2,8	30,3	1,2	2,6	35,5	0,8	9,0	-28,3	-45,9	-6,9	17,1	-32,2	1,5	-16,0	-63,3
9	Waste	2,3	49,0	1,1	2,7	34,2	0,8	2,7	31,6	0,3	16,1	-30,3	-25,1	1,5	-7,5	-61,3	17,9	-35,5	-71,0
10	Hand wash and personal hygiene	3,1	30,0	1,7	3,2	24,0	1,9	3,1	23,7	1,6	4,7	-20,0	12,7	-3,3	-1,1	-18,8	1,3	-20,9	-8,5
11	Malaria	2,9	38,2	9,7	3,0	34,7	10,4	3,3	23,2	13,2	2,0	-9,2	7,2	10,3	-33,2	26,2	12,5	-39,3	35,3
12	Malaria prevention	1,5	81,8	2,8	1,8	72,3	5,1	2,7	37,0	6,7	18,2	-11,6	81,3	47,9	-48,9	31,8	74,7	-54,8	138,9
13	Diarrhoea	3,2	28,7	10,5	3,4	22,7	12,8	3,6	13,5	15,1	4,4	-21,0	22,2	6,0	-40,6	17,9	10,7	-53,1	44,0
14	Cough or lung problems	2,9	35,0	10,0	3,1	29,2	12,9	3,2	22,3	13,2	4,5	-16,7	29,7	4,5	-23,7	2,3	9,2	-36,4	32,7
15	Other diseases and infections	3,2	23,2	9,4	3,2	21,2	12,0				0,5	-8,8	28,7						
16	Malnutrition in under five children	2,7	38,3	48,6	3,3	13,7	36,1	3,7	7,6	33,4	23,4	-64,2	-25,9	9,9	-44,3	-7,5	35,6	-80,1	-31,4
21	Mortality in <5 children	3,8	7,8	9,1	3,9	5,0	13,2	3,9	5,3	17,3	1,7	-35,2	45,9	-0,6	5,4	30,6	1,1	-31,7	90,6
24	Use of health facilities	3,0	18,8	0,7	3,1	15,2	1,1	2,9	16,7	0,9	4,6	-19,0	64,4	-5,9	10,0	-13,0	-1,6	-10,9	43,0
25	Knowledge malaria and diarrhoea	3,1	10,1	4,6	3,2	7,5	3,3	3,2	4,8	2,0	4,9	-25,8	-27,3	-0,9	-36,5	-39,4	4,0	-52,9	-56,0
26	Social health	3,3	16,7	3,3	3,4	13,4	3,7	3,0	16,1	1,2	2,3	-19,8	11,3	-11,4	20,2	-68,4	-9,4	-3,6	-64,8
27	Gardening	2,1	64,7	17,3	2,5	50,7	23,6	2,3	55,8	26,7	14,7	-21,7	35,9	-5,5	10,1	13,2	8,4	-13,8	53,9
30	Belongings and economic aspects	1,9	70,3	4,3	2,1	59,8	4,6	2,4	43,0	1,6	8,8	-14,8	6,8	14,0	-28,1	-64,2	24,0	-38,8	-61,8
31	Female income	1,9	69,9	3,8	2,3	50,7	4,5	2,5	41,8	4,7	21,7	-27,5	18,4	4,9	-17,6	3,6	27,7	-40,3	22,7
32	The house	2,3	47,2	1,3	2,7	36,8	2,2	3,0	20,1	4,7	12,9	-22,0	75,7	13,8	-45,4	110,0	28,5	-57,4	269,0
33	Kitchen	2,2	56,9	1,3	2,5	41,3	1,8	2,6	37,3	0,6	15,0	-27,4	39,1	2,9	-9,8	-68,9	18,3	-34,5	-56,7
34	House hygiene	2,8	40,0	12,9	3,0	30,4	9,8	3,1	15,3	2,0	7,1	-24,0	-24,5	3,4	-49,6	-79,5	10,8	-61,7	-84,5
	<b>Totals</b>	<b>2,8</b>	<b>38,7</b>	<b>8,2</b>	<b>3,0</b>	<b>30,6</b>	<b>9,1</b>	<b>3,0</b>	<b>26,3</b>	<b>9,9</b>	<b>6,7</b>	<b>-20,9</b>	<b>10,6</b>	<b>0,1</b>	<b>-14,2</b>	<b>9,4</b>	<b>6,8</b>	<b>-32,1</b>	<b>20,9</b>

Part of summary report of household surveys conducted in rural villages as part of the TAZAMO program in Tanzania. Under 'Scores for all household together' are the numbers of household surveys conducted. Red means a poor situation, orange is in between and green is good.

## A2.3 Examples of Evaluation detail reports

1	Toilet facilities	Score 1 - very poor	Score 2 - poor	Score 3 - reasonable	Score 4 - good	Score 5 - No answer	Total	Average score	% of answers <=2	% no answer
1.1	Toilet type used by the family. Observe yourself.	30	750	108	61	0	949	2,2	82,2	0,0
1.2	Is the toilet and its direct surroundings dirty, fly invested, and/or smelling bad? Observe.	31	347	468	90	4	940	2,7	40,4	0,4
1.3	Is there a hand washing facility near the toilet? Observe yourself.	310	211	302	105	5	933	2,2	56,1	0,5
2	Toilet use	Score 1 - very poor	Score 2 - poor	Score 3 - reasonable	Score 4 - good	Score 5 - No answer	Total	Average score	% of answers <=2	% no answer
2.1	What is done with stools of babies/young children?	0	0	0	0	0	0			
3	Drinking water sources - rainy season	Score 1 - very poor	Score 2 - poor	Score 3 - reasonable	Score 4 - good	Score 5 - No answer	Total	Average score	% of answers <=2	% no answer
3.1	From what type of water source do you get drinking water in the rainy season?	0	0	0	0	0	0			

*Detailed household survey report (the household survey software is part of the Evaluation module of SMART Info) with scores per question for some topics from the household surveys conducted as part of the TAZAMO program in Tanzania in villages at the end of the program period.*

### **Annex 3 SMART INFO versus other PMER initiatives**

There are a lot of initiatives with regard to the development of PMER tools, both methods and software. Within the water sector for instance there is FLOW, the AKVO web-based reporting module and WaterPoint Mapper just to mention a few. There are also numerous SMS and SMART phone initiatives, such as the Humana SMS tool for HIV surveying. Etc. Through a story we will explain what the difference between such tools and SMART Info is. This is followed by some overviews that show SMART Info in relation to the tools mentioned here, as an example and eye opener, which we believe is also valid for other current tools and initiatives related to PMER.

The story is about a horse that has to push a grain mill every day. To survive the horse also has to obtain food, water and sleep. And this is not easy for the horse.

The horse has got a problem. As said it needs all kinds of nutrients to stay alive and do its important job. It also needs water and enough rest. Though, every nutrient, the water tank, the pasture and the stable where it can rest, are all in different places. The problem is that the horse doesn't know the roads to all these places and it can hardly reach those places in other ways. So unfortunately the horse dies.

But imagine the horse does know the path to the water tank, as it has received a map showing the path and a training in how to interpret the map and how to find the way to the water tank with it. The horse now can find the path to the water tank. But it still doesn't know about the other roads, so it can't provide itself with food and rest. Despite the fact that the horse now has got water, the horse still dies.

Now suppose the horse knows the path to the water tank, due to the map and the training. Beside that the horse also knows another path he can find with another map, which has to be used in a different way and for which it has received another training and acquired other knowledge. Additionally it can also reach the other places, though not via the roads which it doesn't know to find, but through dense bush and with lots of difficulties. What happens then? You'll probably find a severely fatigued horse which might just survive, probably dealing with a heavy burn-out and at least it won't succeed to push that heavy grain mill properly.

And if the horse knows all the roads? Because he has received a different map for each path, though each map has to be used in a completely different way. But fortunately the horse did a different training for how to use each map. Well, all that knowledge he needs to have to find every path in a totally different way is driving the horse crazy. Besides the reality is that there aren't any good maps yet for most roads, and of course in those cases also no trainings.

In all cases the farmer is deeply disappointed. The horse dies or doesn't function well. What a stupid horse. The examiner, who wants to know how much water a horse can drink, is very happy, because he can see exactly how much the horse drinks and he can report about that. But the horse won't be able to push the mill or dies later.

This is illustrative for tools such as Flow and the Humana SMS initiative. They provide the map and the corresponding training and info about the path to the water tank, but the horse also needs maps and knowledge to be able to find the roads to all the other places. Only then the horse can really survive and function well. SMART Info provides the horse 1 good map showing all the roads and also a good training about how to use the map to be able to find each of these roads well and easy. The horse has got everything it needs in a way it can handle properly. The horse is happy, the farmer is happy and the examiner is also very happy.

Flow and the Humana SMS initiative don't cover the problems of the horse (the local organisation) fully. The horse remains with a problem and doesn't function at all or not as good as it should be able to.

Perhaps now you can say 'yes, but we are only interested in certain information and it is not our job to hand a complete information tool to local organisations'. But with this argument we ignore the fact that implementing organizations are the executive parties for the things we would like to achieve as laid down in our mission statements. One or a few IT tools that only cover part of their information needs or a bundle of IT tools that do cover all needs but are not integrated and all require completely different ways of handling is not a logical solution. They need something which covers all their information needs adequate in an integrated way and in a way they can handle easily. Otherwise they won't survive or at least function a lot more difficult and worse than necessary if they would have got a good and fully integrated IT tool covering all their information and accountability needs.

Many local organizations are in the same position the described poor horse is, that knows 1 or 2 roads, but has to try different ways to eventually still be able to cover a few of the other necessities. Those organizations have a hard time, they mostly have to create the maps to the roads themselves, but they don't have the expertise for it. Their performances are insufficient in most cases. They try to hide this by writing reports of which it is often unclear (also for themselves) whether the information is correct or not, it is impossible to verify the information, and which also often lacks a lot of the necessary information. These organizations do not learn from their mistakes. Their sponsors have no understanding of what is happening, what the actual results of the organizations they fund are and what problems these organizations actually face. They simply just take over

their information in their reports towards their underlying donors and turn their thumbs that it hopefully will turn out right, which in reality is rarely the case.

I think for IT specialists in the development sector it's very important to understand the real IT needs of implementing organizations. For IT specialists it would be good to work for some local aid agencies for 6 months or longer, and during the job look carefully to what these organisations encounter in daily practice. I'm sure that this will be an eye opener for them. SMART Info has arisen from years of intensive research and development of software and methods, together with several of our implementing local partners, regarding the information needs that both implementing organizations and their donors have to be able to execute their roles and duties properly.

As mentioned above, also sponsors of local implementing organizations and other stakeholders have a range of information needs with respect to what can be realized 'on the ground'. They will be happy with a tool like Flow, but also need other information, which can neither be provided by Flow or the Humana SMS initiative. So they keep struggling to obtain additional information from their local partners and have continued troubles in their efforts to verify the quality of the local organizations funded by them and the quality of their information. They have to be satisfied with incomplete and often low quality information. As we all know, receiving fully and good information of local partners has always been an ongoing problem. SMART Info is an initiative that looks over the direct interests of every organization to the general interest of well functioning local and international organizations. It therefore covers all information required by different parties for all to be able to function well. According to us it is very important that such an integrated and comprehensive tool will quickly be available. It will have a huge effect to the functioning of large groups of organizations active in development work.





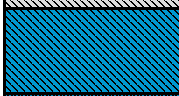

About Flow. Flow could be the map + training the horse needs to find the path to the water tank. But the horse notices soon that the water tank provides a limited amount of water. The horse has to grind extra grain every Friday for the market on Saturday, so it needs extra water that day. The water tank doesn't contain enough water, so the horse has to walk along another path each Friday to another water tank to find that extra water. In other words, even within the field covered by Flow (water and sanitation) the tool is too restricted (the same counts for the Humana SMS initiative). Flow is a system that indicates whether the existing water systems and sanitation systems are still working well, including several characteristics and number of users. Though, an organization which constructs water systems can't use Flow for their planning, logistics and monitoring of these works. Indeed Flow fills in a nice and important piece of information needs of the pallet, but it doesn't even cover all the information needs of the involved implementing organizations when it comes to the subarea 'water and sanitation'. The reason is that Flow has another purpose: to provide an overview of water




























and sanitation systems in an area, not necessarily aimed at 1 organization, project or donor. SMART Info enables organizations to accomplish projects well, to accomplish good quality results and sufficient good quality data to guarantee and account for the quality and progress of the work, and to learn and carry through necessary adjustments in time. It also automatically provides all data and information that platforms as Flow need.

















Of course the question is whether it is possible to create a tool which covers all information needs of all (often very different) organizations. We claim it is, as far as it concerns an information tool for realisation of and accountability over projects. The reason for our claim is that we have produced and tested that tool largely already. We call it SMART Info! We now want to make it web-based, expand it, include SMART phone data entry functionality in it, and connect it to other tools, such as Flow. The use of SMART Info by organizations will even enhance the use of tools like Flow. After all SMART Info provides the necessary info automatically to a tool like Flow, that puts it on the internet in an attractive way reaching a larger audience than SMART Info would.

The overviews on the next pages show, from different angles, what places and functions tools like Flow and the Humana SMS initiative have in the whole field of information needs of local organizations and other stakeholders engaged in development aid, compared to SMART Info. This clarifies the differences between SMART Info and these kind of tools further. The overviews show that SMART Info practically covers all information needs of project orientated organizations. Flow and the Humana SMS initiative are added in the overviews as examples to illustrate the differences.

Legend


	SMART Info
	FLOW
	SMART Info and FLOW
	Humana SMS
	SMART Info and Humana SMS
	SMART Info, FLOW and Humana SMS

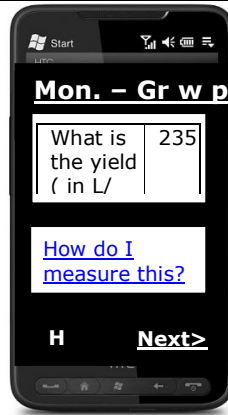
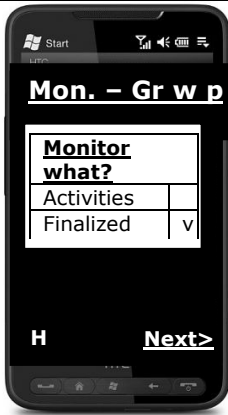
		Internal organization	Watsan projects	Agricultural projects	HIV awareness projects	Democratization projects	Civil society strengthening projects	Other projects
Project cycle	Planning							
	Implementation							
	Reflection & accountability							
	Improvements							

		Local implementing organizations	Authorities in the project countries	International NGO's	(Back) donors
Project cycle	Planning				
	Implementation				
	Reflection & accountability				
	Improvements				

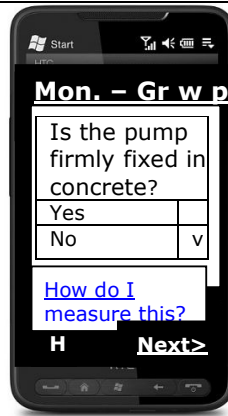
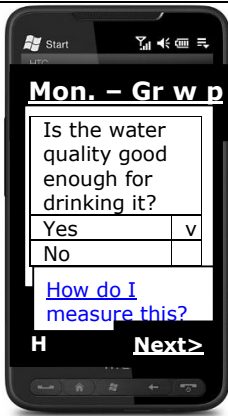
			Data collection	Data entry	Data storage	Data structuring	Data reporting	Data analysis	Data use	
Project cycle	Planning	<i>Project planning</i>								
		<i>Budget planning</i>								
		<i>Year plans</i>								
		<i>Weekly and daily planning</i>								
	Implementation	<i>Inputs</i>								
		<i>Transport</i>								
		<i>Production of output</i>								
		<i>Training &amp; guidance</i>								
	Reflection & accountability (R&A)	<i>R&amp;A on quality of realized products</i>								
		<i>R&amp;A on project progress (nrs. realized versus nrs. planned, exp. realized vs. exp. planned)</i>								
		<i>R&amp;A on results per area</i>								
		<i>R&amp;A on numbers of beneficiaries and benefits for beneficiaries</i>								
		<i>R&amp;A on impact</i>								
		<i>R&amp;A on the quality of staff</i>								
		<i>R&amp;A on results per donor</i>								
	Improvements	<i>Use of information to evaluate and improve project output</i>								
		<i>Use of information to target areas where products/projects are needed</i>								
		<i>Use of information to evaluate the success of certain infrastructure in areas in general</i>								
		<i>Use of information to evaluate and improve project impact</i>								
		<i>Use of information to evaluate and improve the internal organization</i>								

## Annex 4 Data entry through smartphones

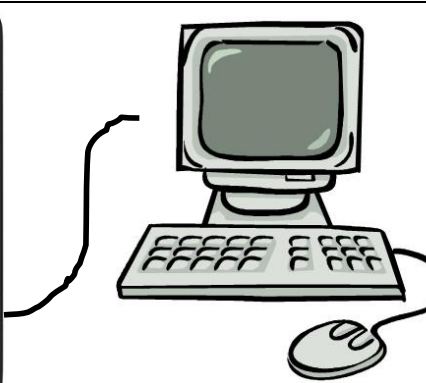
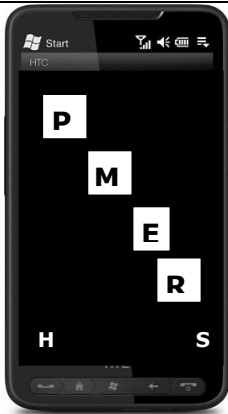
	<p>Mary, fieldworker of a local NGO in Tanzania, takes her handheld computer, puts it on, ticks on the PMER icon (here in green) and then looks at the appearing screen with four PMER icons. She first wants to Plan (P) her journey to the field and therefore ticks on the P icon. (<i>The white H stands for a button one can click on to go back to the opening page of the PDA; the white S stands for Synchronize which one can tick when the PDA is connected to a computer and then starts synchronizing PMER data and reports with the computer</i>)</p>
	<p>She now comes in the Planning page and sees the icons Prepare and Agenda. She ticks the Prepare icon. (<i>Later we will look at the Agenda function which probably will be the standard Microsoft Outlook agenda</i>). The Prepare window opens and Maria ticks on the Mon. (monitoring) header which then produces a number of subjects from which she selects two (water and commdev, which stands for community development).</p>
	<p>She now gets information what she should do to prepare for monitoring water projects and comm. Dev actions (<i>in reality there should be more info on the screen but I couldn't fit it in</i>) and what materials she needs for this work. In the title she can also click on the blue words to link to further information on the subjects (guidance on how to execute the actions with regard to the subject). Mary goes back to the screen with the four PMER icons and ticks on the M icon.</p>
	<p>Mary now comes in the Monitoring screen. She first wants to visit a water project and monitor it so she ticks the box behind 'Water'. Now she sees a screen about monitoring water (with three possibilities she can choose from, being 'Groundwater point', 'Gravity piped water system' and 'Roof water harvesting') and she enters that she wants to monitor groundwater points.</p>



Mary now can choose whether she wants to monitor activities or a finalized groundwater point. She ticks the finalized groundwater point. The first question comes up (What is the yield (in L/hour)?). This question belongs to an indicator type which we call Measurement Indicators. Other groups of indicators for which Mary will answer questions include: Product Quality Critical Indicator (indicators that, if not met, will lead to rejection of the product), Product Utilization Critical Indicators (same idea but for utilization issues), Product Quality Indicators, Product Utilization Indicators, and Numeric Indicators. Mary measures the yield which is 235 L/Hour and she ticks the 'Next>' button to go to the next question. If she would have wanted info on how to measure the yield she could have ticked the button 'How do I measure this?'. This would have yielded an explanatory text popping up telling her how to measure the yield.



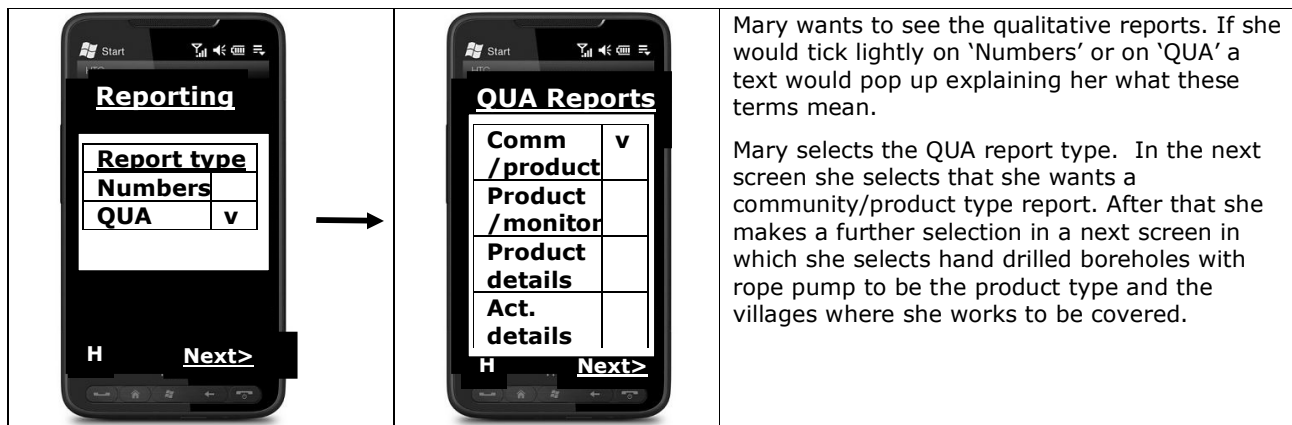
The next question is a Product Quality Critical Indicator type of question (about water quality) which she answers with Yes, then she tick the Next> button after she has controlled for turbidity, taste, color and salinity and bacteriological contamination. After several other critical indicator questions she comes to a Product Quality indicator type of question (Is the pump firmly fixed in concrete?). Because the pump is a bit loosely fixed on the concrete she answers with No. Mary answers all other questions. The PDA automatically measures and stores the GPS data and the date while Mary also enters the name of the location, her name as the monitor, enters some other basic information details and finalizes the monitoring of the groundwater point. She also visits a Community development event, being an Appreciative Inquiry (AI, this is a type of self assessment with and by a village that has just started in the process) and monitors the activity of this AI. After this she returns to the office.



After having done monitoring for about a week on different issues Mary connects her PDA to the central computer in the office and ticks the S (Synchronize) button. The computer now does the following things:

- download all new PMER data from Mary's PDA into the central PMER database on the computer,
- upload all latest fieldworker reports from the computer to Mary's PDA,
- upload to Mary's PDA all relevant PMER administration changes made since the last time her PDA was connected to the computer.

From the computer the administration staff upload the latest data on the internet (see further on) and obtain back all updated reports. Mary connects again to the computer and her PDA now receives all latest reports that also include Mary's latest data. Mary is curious about the latest fieldworker reports and therefore ticks the R for Reports.



Mary wants to see the qualitative reports. If she would tick lightly on 'Numbers' or on 'QUA' a text would pop up explaining her what these terms mean.

Mary selects the QUA report type. In the next screen she selects that she wants a community/product type report. After that she makes a further selection in a next screen in which she selects hand drilled boreholes with rope pump to be the product type and the villages where she works to be covered.

**Product type: Hand drilled boreholes with rope pump**

Community	No. measured	% critical	Product quality	Product utilization	Activities quality
Manhapuane	1	0	0,8	0,9	0,7
Marenga	16	12	0,7	0,9	0,8
Mualege	4	0	0,7	0,8	.
Muripotana-José	24	4	0,8	0,6	.
Muripotana-Kucune	0	.	.	.	.
Naculue Reno	15	0	0,5	0,8	0,5
Namanhunhu	26	20	0,6	0,5	0,6

Mary now gets on her pda screen this report which informs what the QUA aspects are of the hand drilled boreholes with rope pumps realized in the villages that are under her responsibility. The scores in the Table go from 0 (very bad) to 1 (very good) with colors showing immediately where the problems are (red = bad, orange = in between, green = good). She sees that especially in Namanhuhu there is a problem but also in Naculue Reno with utilization and in Marenga 12% of the realized boreholes with rope pumps are rejected (probably due to too low yield). She decides that for Naculue Reno and Namanhunhu she needs to investigate further what the problems are. She goes back to the QUA Reports screen (see before) and selects the Product details.

In a new screen Mary selects hand drilled boreholes with rope pump to be the product type she wants to have information about and the two villages (Naculue Reno and Namanhuhu). She gets on her pda screen the report shown below (not in one piece but she can scroll downwards). In it she sees that in the two villages the main problem is the poor quality of the rope pump which is also confirmed by the textual explanations she has added herself when she did the monitoring). She can now remember a story that the workshop producing the rope pumps in town had a period they had several staff who were not functioning well while the manager was sick during a number of weeks. She thinks that probably the rope pumps in these villages have been produced during that time and decides she will talk about it with the manager to see if the company can change the rope pumps for good ones.