

# PROJECT FINAL REPORT

Grant Agreement number:	266200
Project acronym:	WASHTech
Project title:	Water, Sanitation and Hygiene Technologies
Funding Scheme:	FP7-CP-FP-SICA
Date of latest version of Annex I against which the assessment will be made:	10/12/2010
Period number:	2
Period covered - start date:	*01/01/2011
Period covered - end date:	*31/12/2013
Name of the Project Manager and Organisation:	P1: IRC International Water and Sanitation Centre; Mr. Jo Smet
Tel:	+31 70 3044000 (direct +31 70 3044027)
Fax:	+31 70 3044044
E-mail:	<a href="mailto:smet@irc.nl">smet@irc.nl</a>
Project Partners	P2: Cranfield University, Cranfield, UK P3: Skat, St. Gallen Switzerland P4: WaterAid, London, UK P5: WSA (former CREPA), Ouagadougou, Burkina Faso P6: TREND, Accra, Ghana P7: KNUST, Kumasi, Ghana P8: NETWAS-Uganda, Kampala, Uganda
Project website	<a href="http://WASHTechnologies.net">http://WASHTechnologies.net</a> <a href="http://WASHTechAfrica.wordpress.com">http://WASHTechAfrica.wordpress.com</a>

# 1 Final publishable summary report

## 1.1 Executive summary

The Water, Sanitation and Hygiene Technologies (WASHTech) was a three-year action research initiative (2011 to 2013) that:

- ✓ Is driven by the goal towards **effective investment in new technologies for sustained access to WASH services**
- ✓ Aims to strengthen the sector’s capacity to arrive at **informed decisions in the choice of sustainable WASH technologies**
- ✓ Undertakes participatory **action research to identify obstacles and opportunities for uptake and scaling up** technology beyond pilot testing
- ✓ Offers sector professionals (governmental agencies, development partners, NGOs, private operators, research institutes etc.) **a set of methodological tools and participatory approaches** for informed decision-making, strategic planning and introduction of validated WASH technologies and capacitating of host institutions on using the tools and support in incorporation of tools in national procedures to improve WASH sustainability in countries
- ✓ Through the participatory development, implementation and evaluation of the methodological tools, **embeds the practice of multi-stakeholder learning, sharing and collaboration** - instilling individual and collective ownership of, attention to, and responsibility for sustainability
- ✓ Set up web based resource base to ensure access and sustainability beyond project phase

WASHTech developed, tested in Burkina Faso, Ghana and Uganda, and introduced a robust assessment tool, the **Technology Applicability Framework (TAF)** that provides a neutral approach for investigation of WASH technological innovation through an objective examination of criteria in the specific context of technology application using six key dimensions and three stakeholder perspectives:

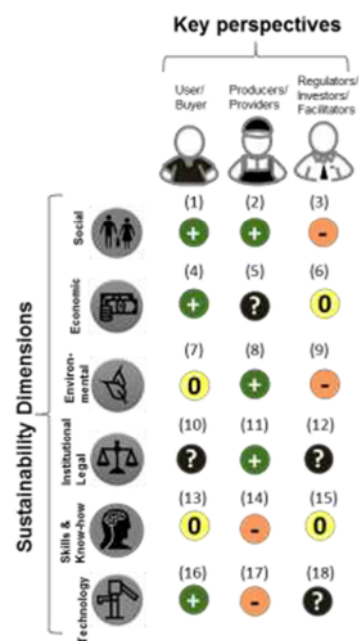
Sustainability dimensions:

- ✓ Social aspects
- ✓ Economic and Financial aspects
- ✓ Environmental aspects
- ✓ Institutional and legal aspects
- ✓ Skills and know-how
- ✓ Technological aspects

Stakeholder perspectives:

- ❖ Technology user-buyer perspective
- ❖ Technology producer – provider perspective
- ❖ Technology facilitator (e.g., government), investor or regulator.

WASHTech developed in close consultation with the government, private sector, development partners and research institutes in Burkina Faso, Ghana and Uganda, country-specific guidelines for a **Technology Introduction**. The country-specific guidelines take a validated WASH technology through a multi-stakeholder process



with agreed responsibilities to a successful introduction and uptake in the WASH sector in areas where the specific technology is promising to contribute to a sustainable WASH service delivery. As basis for these country-specific guides, a generic guidance document was developed, the Technology Introduction Process (TIP), which could be useful for other countries.

**The WASHTech project and sector professionals identified four main uses of the TAF:**

1. For *validation* of a *new* WASH technology for application in the country. Technology developers who want to get their technology accepted, they approach national level ministries, which will apply the TAF & TIP.
2. For *validation* of an *existing* WASH technology for application in a specific context, for instance at district or sub-district level with specific local socio-, cultural, economic and other conditions. Then the TAF is applied before a technology is being introduced at that decentralised level. Barriers to sustainability are being identified and can be addressed prior to local introduction of the specific WASH technology.
3. As a *monitoring tool* to assess why *one* WASH technology is a success while *another one* is a failure. Then hindrance and success factors are determined that will lead to choosing either another technology or formulating actions to do better.
4. And, as a tool in a project/programme *appraisal process*, in which the proposed WASH technology is being appraised for its potential to contribute to a sustainable WASH service.

## 1.2 A summary description of project context and objectives

### 1.2.1 Concept and objectives of WASHTech

The water and sanitation sector is not short of new and emerging technologies, but despite many projects piloting them, hardly any have been adopted into national strategies in Sub-Saharan Africa (SSA), nor have they been widely taken up by private enterprise. Their contribution to MDG targets appears therefore to have been minimal in the last 20 years. A key constraint to reaching the sector targets therefore appears to be the lack of systems to assess the potential of a technology and lack of ability to take new appropriate technologies to scale effectively.

### 1.2.2 Introducing new technologies

The challenges of meeting the MDG targets in water and sanitation are enormous, especially in rural areas. The JMP<sup>1</sup> shows that increases in water supply coverage in sub-Saharan Africa has averaged less than 1% per year, with more rural people without access to safe water now than in 1990. Peri-urban and small town populations have grown three times faster than rural communities as people move into urban areas, but even so the majority of un-served (over 80%) remain in rural areas. A four-fold increase in rates of coverage for rural areas is needed for water MDG targets to be met. 40 million more rural people are without sanitation than in 1990, reflecting a 0.25% per annum growth in coverage. Alarming, 7% per year will be needed to reach the goal. It seems ‘business as usual’ using technologies and approaches of the last twenty years will not achieve the MDGs and that new mind-sets and innovative ideas are needed.

---

<sup>1</sup> JMP 2009 Drinking water and sanitation coverage, 1990 and 2006

### 1.2.3 Description baseline parameters

**Introducing new technologies** --- In response to this need in sub-Saharan Africa a wide range of innovations in low-cost water and sanitation technologies and promotion strategies have already been made, including those below:

- Technologies for household level or small communities, such as rope pumps, or on-site latrines. Some of these seek multiple-use of water for both domestic and productive purposes, or re-use of by-products in agricultural production
- Decentralised technologies for use in small towns or peri-urban areas, such as constructed wetlands with reuse of wastewater, bank infiltration with reed beds, solar pumping for small piped water supplies, mechanised boreholes with privately-owned connections,
- Accompanying management models, including lease contracts for private operators, community management contracts, and household owned shared supplies
- New approaches to marketing water and sanitation technologies, such as CLTS, Self Supply, micro-financial support.

Some of these technological and institutional innovations have come from NGOs and small-scale entrepreneurs from African countries themselves. There are many new technologies available, and many organisations promoting the specific ones that they favour. However there is no objective system, which i) provides a transparent measure of how well any one option is performing, and ii) evaluates whether the approach used to introduce it could be improved to increase up-take and improve sustainability. This is what WASHTech aims to provide.

- a) Level of agreement in-country on criteria to use for adopting new and existing low-cost technologies in the WASH sector.
- b) Level of functionality of an in-country mechanism or platform to introduce and take to scale given low-cost WASH technologies.

WASHTech seeks to address the problem through research on an innovatory process for assessing the potential and sustainability of a wide range of new technologies, and for designing successful strategies for scaling up.

### 1.2.4 Introducing new technologies

The challenge of meeting the MDG targets in water and sanitation are enormous, especially in rural areas. The JMP<sup>2</sup> shows that increases in water supply coverage in sub-Saharan Africa has averaged less than 1% per year, with more rural people without access to safe water now than in 1990. Peri-urban and small town populations have grown three times faster than rural communities as people move into urban areas, but even so the majority of un-served (over 80%) remain in rural areas. A four-fold increase in rates of coverage for rural areas is needed for water MDG targets to be met. 40 million more rural people are without sanitation than in 1990, reflecting a 0.25% per annum growth in coverage. Alarming, 7% per year will be needed to reach the goal. It seems 'business as usual' using technologies and approaches of the last twenty years will not achieve the MDGs and that innovative ideas are needed.

---

<sup>2</sup> JMP 2009 Drinking water and sanitation coverage, 1990 and 2006

### 1.2.5 Description baseline

As mentioned above in the 'baseline parameters' section, in sub-Saharan Africa a wide range of innovations in low-cost water and sanitation technologies and promotion strategies exist, including:

- Technologies for household level or small communities, including multiple-use of water
- Decentralised technologies for use in small towns or peri-urban areas,
- Accompanying management models
- New approaches to marketing water and sanitation technologies

NGOs and small-scale entrepreneurs from within/outside Africa contributed to these technological and institutional innovations. WASHTech will provide a neutral and transparent instrument to measure the performance of new and existing WASH technologies, and a process to introduce technologies for successful uptake and long-term sustainability

**Decentralised water supply systems** --- Of the de-centralised piped water supply systems, which are in place, few are performing ideally, even in the best organised countries of sub-Saharan Africa. Where piped supplies are not viable or reliable in the region, some 370,000 or so handpumps have been installed but of which over 130,000 are estimated to be broken down at any one time<sup>3</sup>. Yet since the intense research on handpump performance in the 1980's by the World Bank, there has been no subsequent concerted effort to evaluate recently developed pumps, and at no time has there been a comprehensive analysis of the social and cultural factors, which affect handpump performance. Thus innovation is necessary not just to expand coverage but also to develop robust methodologies, which improve on the sustainability of those water supply systems already in place. It is this that WASHTECH aims to do, with particular reference to the interface between district and community levels.

Meanwhile in small towns and peri-urban areas, problems with solid waste and sewage lead to growing environmental degradation, water pollution and increased health risks. Piloting of sustainable businesses in solid waste management in areas characterised by poverty and lack of minimum institutional support is becoming a major need, as are a wider variety of technical and managerial sanitation solutions. These systems need evaluating not just for their effects on the environment but also for their business potential, affordability, and the relationship between public and private sectors. It is this holistic approach, which the TAF is designed to address.

**Going to scale**---The sustainability of conventional technological solutions is one problem, but a second is that whilst many new solutions have been developed, and even piloted, they are having little overall impact on the MDG targets for the sector.

Numerous developments of technologies such as eco-sanitation, rainwater harvesting, multiple use, and household water treatment have been tested and piloted by projects but very few have spread beyond the areas in which they have been introduced. This is mainly as a result of the approach through which such innovations have been initiated, and in particular the low involvement of the private sector and poor development of effective social marketing. These two factors, when combined with demonstration models given free, the high dependence on donor funds and project driven approaches, have usually confined technology adoption to piloted areas. Community Led Total Sanitation and Self Supply are approaches, which seek to avoid this trap, encouraging less donor-dependent replication of improved water supply and sanitation facilities from the outset. These approaches therefore have the potential for more cost effective and rapid technology up-take. Thus

---

<sup>3</sup> Delta Partnership. Africa Handpump Market Mapping Study. Draft Main Report UNICEF June 2009.

the research, development and testing of the TAF will explore ways of moving from demonstration or piloting to going to scale in ways which maximise up-take through users' capacities, private sector investment and local government's limited resources. Research and analysis will therefore concentrate particularly on the elements which link households and communities to service providers in many different forms.

**Technology assessment and validation** --- Up-take of new technologies by policy makers and planners as well as the private sector has been weak, with, for example, no new technology for point water systems being taken to scale since the handpumps tested and widely introduced from the early 1980's. This has been largely due to the lack of formalised systems for technology assessment.

#### **Description Baseline 'technology assessment and validation'**

There are many examples of this lack of technology assessment systems. For instance in Zimbabwe the present economic situation calls for cheaper household latrines and community and household adoption of rope pumps but government has no process by which such technologies can be accepted alongside the conventional options approved many years ago. Similarly governments in Ghana, Mozambique, Burkina Faso, Zambia and Uganda, among others, are considering whether rope pumps can be considered as an acceptable level of supply for households and communities. These governments have, however, delayed for several years from any decision because there is no procedure in place to validate technologies or to evaluate the effects of other social, institutional, economic, and market factors, which would affect going to scale. There is also no objective assessment of the performance of other piloted pumps, giving proponents the opportunity to claim all pumps are working well or require no maintenance and others to claim that the same technologies are usually broken down.

The lack of processes and methodologies for technology evaluation is part of the problem, but lack of availability of necessary capacities to develop or implement such processes is another. Government ministries for water and sanitation in sub-Saharan Africa generally do not have technology accreditation sections, or well-researched data on performance of specific technologies. Country resource centres, academic institutions and government engineers have staff with relevant backgrounds but little research capacity or experience in developing assessment methodologies. The aim of developing the TAF is partly to provide a well-designed framework for assessment, but the process of the research and development will also be used to build up in-country expertise in technology testing and validation.

### **1.2.6 Objectives**

The overall development objective is for **more effective investment in new technologies** to achieve MDG targets. The project (WASHTECH) objective is to **strengthen sector capacity to make effective investment in new technologies**, through research and development of a framework, which assesses the potential of new technologies introduced into innovative decentralised systems. Here 'new technologies' are taken to range from those that are un-tested, through to those that have been piloted, but have not been taken to scale through adoption into national sector strategy. Most emphasis will initially be put on the latter.

### **1.2.7 Outputs**

The direct outputs are:

- A widely applicable Technology Applicability Framework (TAF) and process that will provide a simple system and criteria for evaluating new technologies and their performance, identifying sustainability issues, and analysing approaches to introduction, innovation, diffusion and scaling up.
- Well-established capacities in three countries for the application and adaptation of the Technology Applicability Framework (TAF) and processes to local context and type of technology. The in-country Resource Centres will have the capacity to manage and facilitate the assessments independently
- The second level of outputs depends on the TAF development and capacity building. They define strategies for innovation and scaling up, and the time-span and process needed to achieve successful up-take and sustainability. These outputs are both of direct use to the sector and are also an indication of the value and application of the framework. These recommendations and strategies for sustainable innovation and going to scale will be finalized.

The WASHTECH objective and outputs are achieved through a set of research activities which increase awareness of new technology options, develop assessment systems relevant to different stakeholders, and build long-term local capacity to identify weaknesses in approach and assess sustainability and scalability of new technologies. These activities are undertaken in three countries, Burkina Faso, Ghana and Uganda, where IRC and other consortium members have been working for a long time in partnership with key sector actors. These countries offer a wide range of technologies and different cultural, socio-economic and physical environments. The process and the tools developed are, however, appropriate for use in other countries and the web support and training materials which form part of the outputs will be freely accessible. This three-year research project produced results that can be used for scaling up with minimum delay.

The assessment framework evaluates the sustainability of new low cost technologies in their institutional, economic, and social contexts and so also identify and elaborate sustainable innovation strategies for introducing new technologies. Building capacity and procedures for technology validation as part of the framework facilitates government endorsement of technical innovations. The strategies will be suitable to a range of sector actors. Capacity building focuses not just at national level but also on the practitioners, i.e. the decision makers who are in charge of the WASH sector development at district and decentralised levels and on whom many of the issues of sustainability depend.

### ***1.3 A description of the main S&T results/foregrounds***

WASHTech produced five main S&T results and foregrounds, for each a description is included:

1. Research Report
2. Technology Applicability Framework- TAF: manual with questions and questionnaires
3. Guide to Technology Introduction Process (TIP) – generic and for each of the project countries
4. Project Impact Assessment
5. Learning Alliances in WASHTech

#### **1.3.1 WASHTech Research Report**

This report outlines the research process that was followed to develop two tools that are useful for the WASH sector: The Technology Applicability Framework (TAF) and the Technology Introduction

Process (TIP). The TAF is applied to validate different technology options considered for a given context, and to thus assess possible blockages to their sustainability and scalability. The TAF, therefore, assists the local sector stakeholders to find solutions to overcome the stumbling blocks hindering provision of lasting services. The TIP is a guidance document to be used to steer the multi-stakeholder coordinated initiation of a specific WASH technology towards a local WASH service that lasts.

### **Rationale**

WASH practitioners can draw upon a number of different technology options when delivering water supply, sanitation and hygiene services. There are many different types of pumps, different ways of powering pumping, different latrines and different hand-washing facilities. At the same time, there is a serious challenge facing producers, practitioners, communities, governments and development partners whereby the services introduced, struggle to remain in operation or perform optimally for sufficient lengths of time to truly meet user needs. Broken down pumps, semi-functional piped schemes and abandoned latrines are only all too common.

The WASH sector is currently faced with a situation where lessons learned in pilots are not widely transferred. There is little or no feedback loop from communities to producers and implementers of some widely used WASH technologies, that meaning user difficulties persist for long periods without being resolved. Many countries do not have policies or standards in place for assessment and uptake of new WASH technologies, resulting in arbitrary adoption of options that are not fit for purpose, too expensive for users to pay for, not scalable and inadequately supported at local level. Technologies that look like a good idea on paper and in marketing campaigns in developed countries can be promoted for long periods of time before it becomes clear that they lack relevance or practical application on the ground. The lack of guidance has led to a set of negative consequences, which include:

- Introduction of technologies and services that do not meet user needs;
- Introduction of technologies that look like a good idea on paper and in marketing campaigns in developed countries but lack relevance or practical application on the ground;
- Introduction of technologies in an arbitrary way, with poor consideration of criteria likely to impact on success;
- Introduction of technologies that are too expensive for users to pay for;
- Introduction of technologies that cannot be adequately supported in the local context resulting in breakdown and failure;
- Introduction of technologies that are not scalable because of multiple barriers to their uptake;
- Misdiagnosis of reasons for failure with good technologies dismissed as sub-standard;
- Assumptions being made about certain technologies that are rarely corroborated or that are not true but are perpetuated as myths;
- Aggressive promotion of technologies that are not appropriate;
- Overwhelming of government institutions or support agencies with technologies that are at such a basic stage of development that they are not yet fit for purpose.



To address this gap, the TAF and TIP were developed and tested within the EU-funded action research project WASHTech.

### Technology Applicability Framework (TAF)

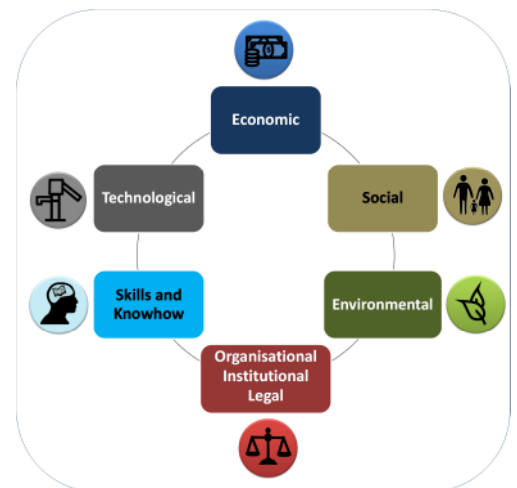
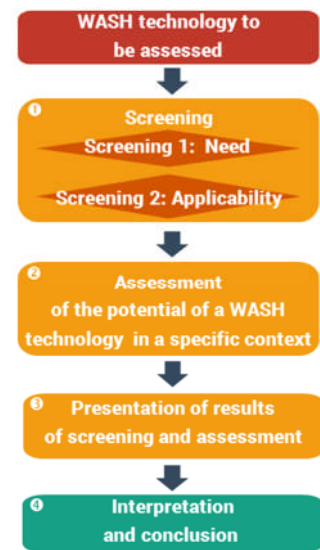
The TAF is a decision support tool to assess applicability and scalability of a specific water, sanitation or hygiene technology. It is applied in a participatory approach in four steps:

- Screening
- Assessment
- Presentation of results
- Interpretation and conclusion.

For the assessment of a technology, 18 indicators have been defined which reflect six sustainability dimensions and which take into account perspectives of all key actors involved in the technology introduction process. These 18 indicators consider not only the particular technology itself but also the way the technology is introduced. In a scoring workshop, the verified data from desk studies and field visits are used to answer scoring questions. Each indicator is scored in the workshop using a traffic light system. All relevant actors participate in the scoring workshop and contribute their views. As a result of the scoring workshop, a graphical profile is generated which presents the achievements so far but also the limitations related to the technology and to the introduction process. This presentation allows various entry points for interpretation and to identify mitigation measures where needed. Apart from the validation of a WASH technology in a local given context, the TAF will also enable all institutions involved in technology introduction to identify blockages to sustainability and scalability of WASH services, using technology as the entry point for discussions. The results are documented in a Final Assessment Report and as a summary in a Technology Brief.

The TAF has been tested in 18 technology assessments on 13 different WASH technologies in three rounds in three countries: Burkina Faso, Ghana and Uganda. After the testing in all three countries, institutions were appointed to host the TAF. This will provide an institutional memory and national resource base for it. In the process of testing, it became clear that the perception of the performance of WASH technologies was mainly based on limited anecdotal information, often with little evidence from the ground. By going through the TAF process, judgments on performance became more nuanced and grounded. Exposure to the field and to inputs presented by other actors in the scoring workshop improved understanding. In particular, it became clear that successful technologies and lasting services are not only dependent on the technology itself but also on their introduction process. For technologies that had previously been identified as failed, it was revealed that the introduction had often been so poor that the technology could not perform properly. In one instance, an entire community was using a hand pump as the only water supply system, although the pump had originally been designed to serve only a couple of households.

The TAF is a cost efficient tool. The costs for applying the TAF are estimated around US\$ 3,000 per



assessment of one technology in one district.

### Technology Introduction Process (TIP)

The TAF is linked to a second tool, the Technology Introduction Process (TIP), which also has been developed and applied within the WASHTech project. The TIP is a generic guidance document on technology introduction. The TIP should be applied once a technology has passed a TAF successfully. During introduction of a technology the TAF can also be used as a monitoring tool to follow up the performance of an introduction process over time. The TIP is designed to provide step-by-step guidance for successful introduction of WASH technologies to provide lasting WASH services. In all three countries the TIP has been used to support the sector in developing country specific guidelines for technology introduction.

### Resource Base

The TAF and TIP are provided in the public domain. The TAF comprises a manual and a set of questionnaires, which can be adopted and customized to specific local needs. All relevant documents and additional information on TAF and TIP including Q/A service are available on [www.washtechnologies.net](http://www.washtechnologies.net), hosted by RWSN.



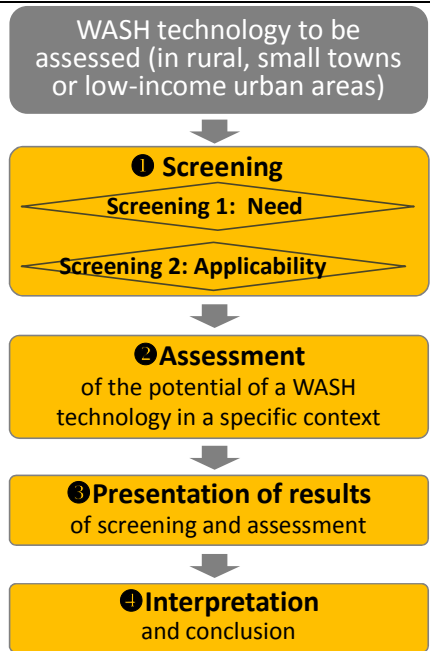
### 1.3.2 Technology Applicability Framework- TAF: manual

The TAF Manual, screening questions and guiding & scoring questions are available from [www.washtechnologies.net](http://www.washtechnologies.net)

### Overview : TAF

<p>What is the TAF for?</p>	<p><b>Applicability Framework (TAF) is a decision support tool on the applicability, scalability and sustainability of a specific WASH technology to provide lasting services in a specific context and on the readiness for its introduction.</b> The TAF can be used to</p> <ul style="list-style-type: none"> <li>➤ Start discussion, documentation and sharing experiences about a WASH technology and approaches to scale up this technology</li> <li>➤ Assess the potential of a specific technology with respect to applicability, scalability, sustainability and uptake in a specific context,</li> <li>➤ Assess readiness of a sector to scale up this technology including identification of potential measures for improving uptake,</li> </ul> <p>Monitor performance of technology and its introduction process.</p>
<p>How does it work?</p>	<p><b>The TAF should be applied when a technology is being piloted.</b> It can also be used to support monitoring and evaluation of progress and</p>

	performance of technology introduction processes
When to apply the TAF?	The TAF is designed as a <b>participatory</b> tool. It is applied using a stepwise <b>process</b> . It uses specific questionnaires for screening and field questionnaires for the assessment. Information needed is collected through <b>desk studies</b> and <b>field visits</b> . All relevant actors are involved in the collection of data and in the generation and discussion of results. This allows all actors, including representatives from national and local government and users of the technology such as communities, to bring in their perspectives and views and to hear the opinions of other actors.
Where are the limits?	The TAF is designed to assess a single WASH <b>technology</b> (e.g. a pump or UDDT), which is or will be used to provide <b>WASH services</b> in a district or region. The TAF can also be used to assess complex <b>systems</b> such as a piped supply with tanks, pipes and taps. However, prior to the TAF assessment of a system, the <b>boundaries for the assessment</b> have to be defined. Field visits are used to verify the context and boundaries of each TAF application. The TAF is designed as an assessment tool for a single WASH technology in a specific context, not a selection tool, which selects between various technologies.

Four steps in the TAF assessment	 <pre> graph TD     A["WASH technology to be assessed (in rural, small towns or low-income urban areas)"] --&gt; B["1 Screening&lt;br/&gt;Screening 1: Need&lt;br/&gt;Screening 2: Applicability"]     B --&gt; C["2 Assessment&lt;br/&gt;of the potential of a WASH technology in a specific context"]     C --&gt; D["3 Presentation of results&lt;br/&gt;of screening and assessment"]     D --&gt; E["4 Interpretation&lt;br/&gt;and conclusion"]             </pre>	<p>The assessment within the TAF follows a procedure with four steps: The TAF process starts with a screening in step-1 The screening focuses on two key questions:</p> <ul style="list-style-type: none"> <li>➤ Is there a need for this technology?</li> <li>➤ Is the technology at all feasible in this region?</li> </ul> <p>If the screening is positive, the technology will be comprehensively assessed in step-2. In step-3 the results are collected and presented. In step-4 all results are comprehensively interpreted.</p>
----------------------------------	---	---

**Overview: TAF Methodology**

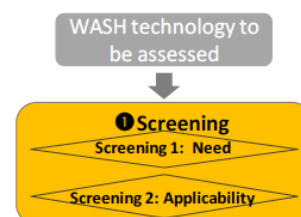
Stepwise procedure for application of the TAF

Preparation	<ol style="list-style-type: none"> <li>1. Analysis of the objective of the assessment (e.g. which technology, context, experiences so far, need, partners)</li> <li>2. Setting up of Study team Step</li> </ol>
Step-1	<ol style="list-style-type: none"> <li>3. Screening, mostly desk work</li> </ol>
Step-2	<ol style="list-style-type: none"> <li>4. Preparation of field work: e.g. contextualization of questionnaires incl. data on costs needed (e.g. CapEx for indicator 4), training of study team on TAF, logistics, orientation of partners in field including districts and villages to be visited</li> <li>5. Formal orientation of partners in the field, including districts and villages to be visited, training on TAF methodology, logistics incl. translation for local languages</li> <li>6. Field visits: interviews and data collection, using Focus Group Discussion, bilateral interviews with randomly chosen households and site visits</li> <li>7. Processing and validation of data, maybe in a workshop</li> <li>8. Scoring workshop; attended by all relevant actors, moderated by an experienced and neutral facilitator</li> </ol>
Step-3	<ol style="list-style-type: none"> <li>9. Presentation of all results (screening, field visits, scoring) in the workshop</li> </ol>
Step-4	<ol style="list-style-type: none"> <li>10. Interpretation of results in the workshop and documentation</li> </ol>

The TAF Manual gives the details per step – see [www.washtechologies.net](http://www.washtechologies.net) :

**Step-1: Screening**

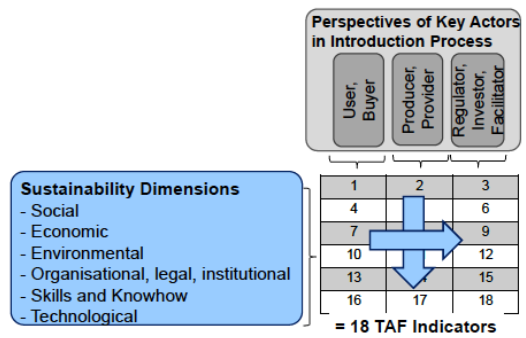
The purpose of the screening is to assure a cost effective assessment of a technology, which has the potential to be feasible and reasonable in a specific context. The screening helps to reject technologies, which are not **suitable in a particular context**, e.g. latrines where the groundwater level is high and the area is often flooded.



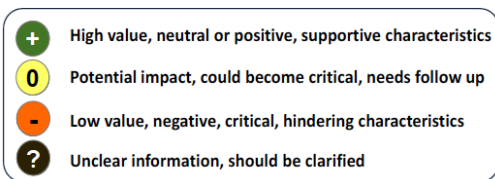
**Step-2 Assessment**

The Technology Applicability Framework (TAF) is a **decision support tool** on the **applicability, scalability and sustainability of a specific WASH technology to provide lasting services in a specific context** and on the readiness for its introduction. The TAF assesses not only the **technology** but also

if key elements for a successful introduction of this technology are in place to assure that **lasting services** can be provided. The concept of the TAF allows the user to identify areas of risks and of opportunities and to define specific measures to support the technology **introduction process**. The TAF can be used to identify requirements and challenges of a specific cost model, which has been chosen as basis for the introduction process.



Scoring rules in the TAF, see this traffic lights diagram.



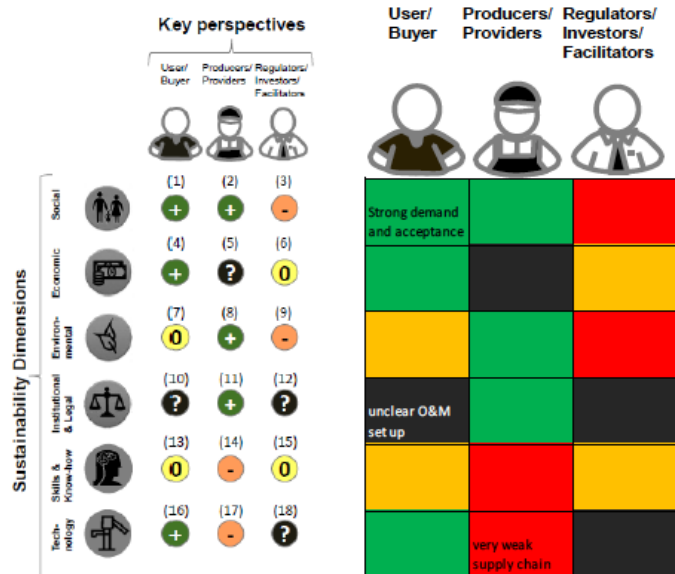
### Step-4 Presentation of Results

Step-1“Screening” provides general information about the context the technology is supposed to be applied in, but in particular, the results include

- the assessment of the **need to introduce the technology in the context considered;**
- the assessment of the **applicability of this technology in this context.**

After the field visits the data collected should be verified. And presented in the scoring workshop for approval prior to the scoring. A compilation of the approved field data should be included in the presentation of the assessment as an annex.

The resulting 18 scores of the TAF assessment will be presented according to their numbers in a **graphical TAF profile**. The figure below shows on the left side an **example** of a TAF profile. On the right side, an example of an annotated profile is added.



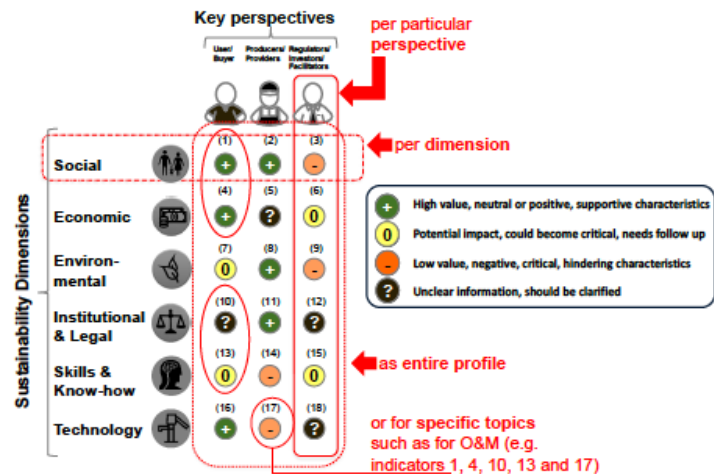
### Step-5 Interpretation of Results

The interpretation of the results of Step-1 “Screening” is straightforward. **Results of the screening are very context specific and not applicable to other regions without detailed analysis.**

Information on the scope of technology use, the mode of introduction and the boundaries defined for the assessment or impressions and information from the **field visits** are crucial inputs for Step-2 and the interpretation of the results. Questions, which came up during the screening should be clarified during the assessment in Step-2. The results of Step-2 are interpreted based on the graphical

profile, on the comments coming up during the field visit and the discussion but also on additional comments received during the screening and field visits. The **graphical profile** offers various entry points and supports a comprehensive interpretation:

- Per row focusing on a specific **sustainability dimension**
- Per column focusing on a **specific perspective**
- Comprehensively as an **entire profile**
- Additionally specific thematic interpretation is possible with respect to **cross cutting topics** such as O&M



These entry points allow to **identify areas of high risk** and to define appropriate **mitigation measures**, e.g. to improve the design of the introduction process. The **result of the TAF assessment** can support the decision making to “Go”, “NOT-GO” or “GO under certain conditions for the technology being considered”. It also indicates the bottlenecks e.g. concerning the service level provided by this technology and the introduction process. The TAF process also triggers discussion if there are actors willing to take the technology further.

A comprehensive synthesis of the discussion of the results and of the detailed interpretation including the nuances in the process is documented in a **Final Assessment Report**. The report should elaborate on the process of the TAF testing, participation of the different actors, the atmosphere in the scoring workshop but also on the particular technology, e.g. photos or drawings, the TAF profile. As a four page summary document of the Final Assessment Report a **technology brief** informs the sector on the results of this assessment.

**Results of the TAF assessment are very context specific and not applicable to other regions without detailed analysis.**

### 1.3.3 Guide to Technology Introduction Process (TIP)

This report outlines the research process that was followed to develop two tools that are useful for the WASH sector: the Technology Applicability Framework (TAF) and the Technology Introduction Process (TIP). The TAF is applied to validate different technology options considered for a given context, and to thus assess possible blockages to their sustainability and scalability. The TAF, therefore, assists the local sector stakeholders to find solutions to overcome the stumbling blocks hindering provision of lasting services. The TIP is a guidance document to be used to steer the multi-stakeholder-coordinated initiation of a specific WASH technology towards a local WASH service that lasts.

#### Rationale

The rationale for the TIP is basically the same as for the TAF. Indeed, the TAF and TIP are ‘two hands of the same body’. TAF & TIP complements each other. A validated and promising technology needs a coherent and coordinated introduction to get scaled up. If one important stakeholder in the introduction does not deliver, the entire scaling up may fail. An opportunity in the national or local

WASH sector missed to make progress towards sustainable water and sanitation service delivery.

## Technology Introduction Process

The Technology Introduction Process (TIP) is a guidance document on technology introduction. The TIP gives guidance for countries on how to develop country-based technology validation and introduction guidelines and how to apply them so that the sector can learn and develop in terms of innovation.

The TIP provides generic information on actors involved in the introduction process and on key tasks in each phase of the process. For each application, the generic tasks need to be contextualized to the country-specific conditions. The TIP proposes steps for the development and application of country-specific guidelines, for the institutional set-up and options and for funding of the process and its follow up.

In all three WASHTech partner countries, Burkina Faso, Ghana and Uganda, the TIP has been used to support the sector in developing country specific guidelines for technology introduction.

The TAF and the TIP are designed as complementary tools. The TAF can be used as a validation tool for WASH technologies. During the introduction of a technology, the TAF can also serve as a monitoring tool to follow up the performance of an introduction process over time.

## Resource Base

The TAF and TIP are provided in the public domain. All relevant documents and additional information on TAF and TIP including Q/A service will be available on [www.washtechnologies.net](http://www.washtechnologies.net), hosted by the Rural Water Supply Network (RWSN).

## Approaches to technology introduction

In the case of the so-called **supply-driven approaches**, it is usually the producer and provider who put a lot of effort into the development and promotion of a specific product. In the past, government bodies or development partners were often also pushing to introduce a specific WASH technology and related services. The supply-driven approach may be promoted with or without business-related intentions. For example, a market-based, supply-driven approach takes place when a private company promotes a water filter for household water treatment by applying intensive methods such as advertising, offering giveaways, etc.

There are also so-called **demand-responsive approaches** where products and the way to introduce them are developed starting from the needs of the target population. In some cases, the product will even be developed together with the target users.

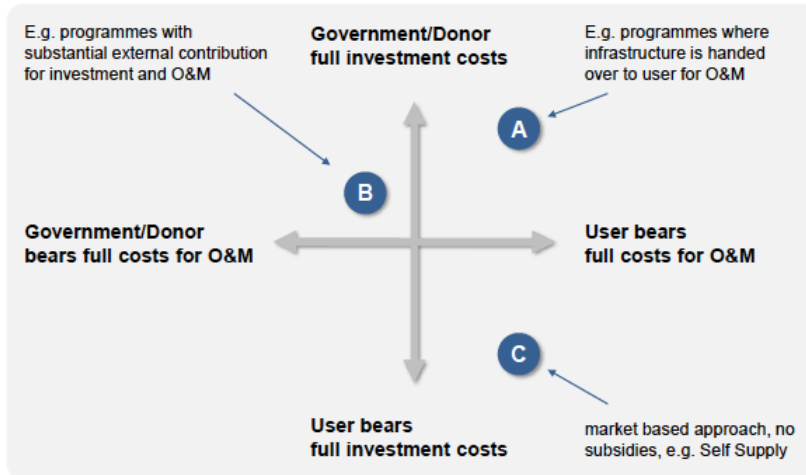
In all cases, the socio-economic context of the target population is one of the key factors that determines the success of the introduction and influences the dynamics of the uptake. A comprehensive assessment of the applicability and scalability of WASH technologies is provided through the Technology Applicability Framework (TAF) (Olschewski and Casey, 2013).

## Cost models used

The introduction process depends on the technology itself, but also on factors within the wider context, such as the institutional and legal set-up. In particular, the introduction approach is linked to the financial and funding framework which defines who will pay for the life cycle-cost components, especially for the investment costs (CapEx) and which actor will bear or contribute to the costs for operation and maintenance (OpEx) or the costs for major repairs (CapManEx).

Many different cost models are used for the introduction of WASH technologies. Three often-used

models are described in the figure below.



**A) Capital-Subsidy Model**

In this model, almost all capital investment costs for WASH infrastructures are subsidized, but the costs for operation and maintenance should be covered by the users themselves. Subsidies go to the buyers of a technology, but not to the producer. This is a common model for capital-intensive infrastructure that is, impossible or highly improbable, for the end user to afford, but where on-going operations and maintenance costs are covered wholly or partially by the end user through an on-demand purchase or a regular tariff. While this approach reduces the drain on public funds, tariffs for water and sanitation services rarely cover the full lifecycle costs (including Capital Maintenance Expenditure (CapManEx) and direct and indirect support costs. For a long time, a subsidized model for the introduction of technologies has been used, and it still is predominant.

**B) 100% Subsidy Model**

In this model, it is the public sector or the donors that assume full responsibility for the technology introduction, its upfront capital costs, on-going minor (OpEx) and major maintenance costs (CapManEx) and support costs. Such an approach can allow for efficiencies through national standardization, supply chains, training, and quality control, but also requires healthy public finances and a competent government structure at all levels. However, long-term sustainability of this model has to be assessed carefully. Nowadays, cost model B is not often used, except in situations, which are close to an emergency.

**C) Zero Subsidy**

In a zero-subsidy approach, the users cover all costs. This approach bears the hope of increasing ownership and accountability, to avoid the problems associated with donor-dependence, weak public finances or institutions and sustainability issues. Here, the role of the state is mainly focused on creating a suitable environment for market creation, e.g. through stimulation of demand and developing capacities of local business, but also through monitoring and controlling quality of products and level of services. In the so-called market-based approach, the technologies and services are provided through the private sector on a commercial basis. The users are clients and not beneficiaries. All products are provided through a private sector-based supply chain.

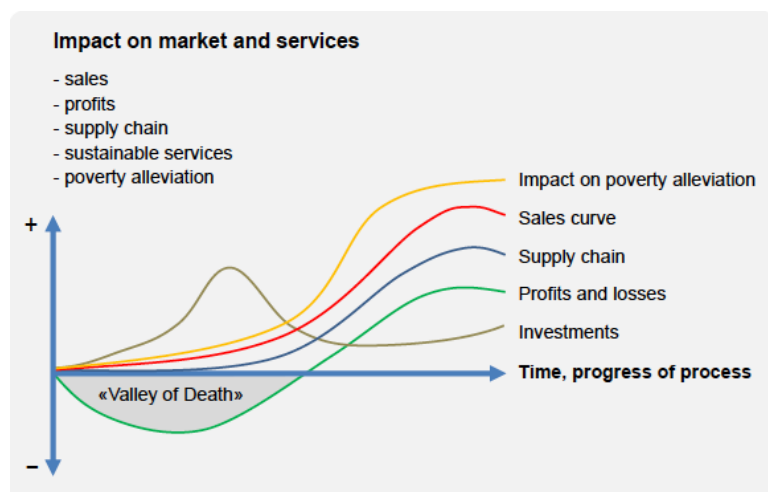
Nowadays, many sanitation technologies are promoted following a market-based approach. However, the private sector also provides more and more water-related technologies, e.g. for self supply, for filters for household water treatment or for providing water for productive and domestic use (multiple use of water).

In reality, all cost models can be found, although models A and C are prominent.



## Key aspects of the introduction process

Based on the various experiences from different fields of technology introduction, a common picture of the dynamics throughout the uptake process of new technologies was identified. As shown in Figure below, technologies that were taken up followed an S-shaped curve (see red curve). The dynamic indicates a slow uptake in the beginning and a steeper uptake after a certain time, followed by a plateau when market saturation is reached. However there are many examples where introduction failed and efforts ended in the “Valley of Death”, which refers to the period in the beginning of the introduction process when the expenditures increase and there is still no or very little revenue. The resulting gap can be substantial and cause a risk for the entire process if there is not sufficient funding. If the “Valley of Death” cannot be properly funded, introduction won’t succeed.



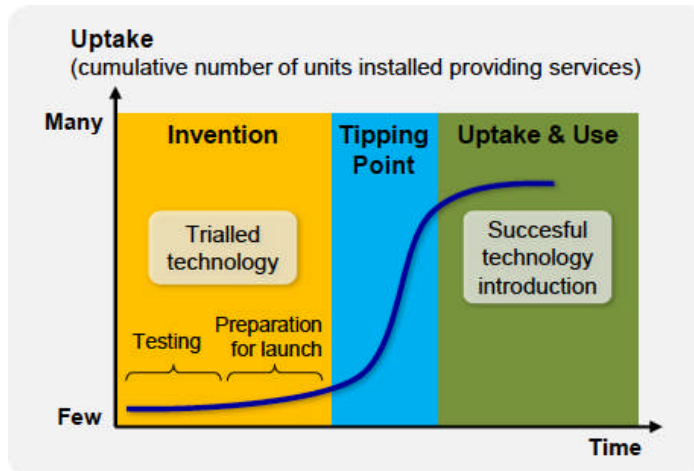
## Scope of the TIP

The TIP is a **management tool** for guidance of technology introduction processes, actors’ roles and responsibilities. The overall **objective** of the TIP is to support the actors of the WASH sector in designing and planning their country-specific guidelines for validation and technology introduction. It provides a generic description of roles and tasks of key actors in the introduction process. The TIP considers all phases of the Project Management Cycle, such as preparing, planning, managing, monitoring or analyzing a specific uptake approach. The TIP offers a set of inputs to support the sector in developing and establishing the country-specific guidelines for technology introduction. These elements include:

- **Components** of the TIP – key phases, actors, roles and tasks: For each of the key phases which determine the introduction process, the TIP describes the roles and tasks of the actors involved.
- **Process of developing the country-specific guidelines:** The TIP describes a stepwise procedure and key issues which need to be discussed and decided during the process of developing and approving the country-specific guidelines.
- **Application and adaption** of guidelines through an iterative process: once the guidelines are approved, a mechanism needs to be in place to share experiences, to learn as a sector and to trigger innovation.

## Key phases in technology introduction

The TIP follows the concept of distinguishing and characterizing the introduction process with three major phases: the **invention phase**, the **phase of the tipping point** and **phase of uptake and use** (Figure below). The background of this concept is based on various experiences from product introduction applying market-based approaches (Heierli 2000, 2007, 2008) and additional literature on innovation in developing countries (Douthwaite 2002, Rogers 2003, Danert 2003).



The key phases can be summarized as follows:

- The **invention** phase involves research, development of prototypes, assessing feasibility, testing and piloting on a wider scale and the preparation for the wider launch. The invention phase includes two sub-phases:
  - **testing** and
  - **preparing for launch**.

**Testing** includes the development of a new technology or the adaptation of an existing one, its piloting and assessment of feasibility. Feasibility should be assessed comprehensively to capture key issues for introduction right from the onset. This is the moment when the TAF comes in as a methodology for assessing applicability and scalability of the technology in that particular context. The results of the TAF assessment provide relevant inputs for a better design and management of the introduction process. In this sub-phase, the focus of activities is on improving performance and costs of the technology, aligning it with national strategies and developing a viable business case for it. Additional market research may be needed to improve feasibility of the technology and its introduction.

If, after testing, the feasibility and the potential are proven, the decision might be taken to introduce the technology on a larger scale, e.g. through promotion in a national WASH programme.

Preparatory work is undertaken to **prepare the launching** of the technology on a larger scale. At this stage, major efforts are made to set up mechanisms for quality control, training of target users, and marketing and promotion, establishing production capacity and viable supply chains, and capacity development of the supply chain to follow up introduction. In this phase, a “big kick” could perhaps be organized to support promotion, e.g. a specific event to create visibility and demand. Complementary efforts such as demand creation through social marketing can be undertaken. Apart from the producer, many other actors will be involved in supporting the uptake and giving guidance including the government as a regulator, or local NGOs to facilitate the uptake process.

- The **tipping point** is the phase at which the technology is widely taken up. Many units are produced, purchased and installed. Production capacity and viable and efficient supply chains are further strengthened. Sufficient resources for proper after-sales follow up are provided. Specific marketing measures might be needed, including promotion. Product quality control is required and effective support and mitigation measures including monitoring are needed to keep up and to further improve performance of the technology and of the introduction process. In order to cope with the increasing

## Key actors and their role

A thorough understanding of the formal roles, connections and driving interests of the actors involved is essential for the design and management of the introduction process and for anticipating the reactions of actors. As a starting point, a mapping of **actors** involved in the introduction process should be done considering the key roles in the technology introduction process:

- National government, e.g. Ministry for Water, Ministry of Health
- TIP host (to assure accountability, it should be within government)
- Private sector at national level
- Private sector at local level, such as local retailers, pump mechanics or service providers
  - User of technologies; e.g. water user committees or, for complex technologies, the system operator
- Local government
- Inventor of the technology
- Investor/Development partner
- NGO
- Academia, research
- Other actors, e.g. microfinance institutions

The **list of actors** has to be adapted to the country-specific situation and to the type of technology to be introduced, e.g. for sanitation, different actors might be involved compared to water-related technologies. For specific phases and activities, the list has to be extended to include representatives from the media but also local leaders.

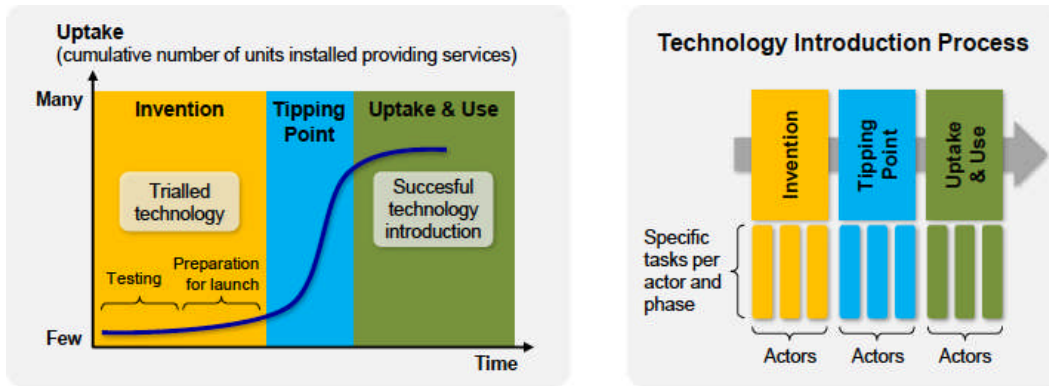
The **roles** should clearly describe a defined range and type of tasks. Roles are defined specifically with respect to responsibility and accountability and not necessarily to one institution. The key roles in technology introduction are as follows:

- Regulator at national and local level,
- Developer of technology / inventor of technology,
- Producer,
- Provider including service provider,
- Users (household members, communities or institutions or even operators for complex technologies)
- Investor in the introduction process,
- Facilitator of introduction process,
- Research & development organizations,
- Lead of the introduction process

## Tasks of actors in key phases

By allocating specific **tasks** to actors, their role in the introduction process will be defined. Actors become accountable for their responsibilities and activities. The TIP provides a **generic description** of

the tasks related to WASH technology introduction. In the TIP, particular focus is put on the roles of actors involved in the introduction process in order to assure a precise allocation of the tasks to the actors. The description of tasks is based on the concept of key phases of the introduction process (Figure below). In the process of developing the country-specific guidelines, the actors and their tasks will be specified for activities in the three key phases: **invention phase, tipping point and the uptake and use**.



No matter which cost model and approach is followed for the introduction of WASH technologies, a wide range of tasks are required to drive an introduction successfully as a sector. To give proper instruction, the TIP provides a **generic description of key tasks** which are presented in tables for each phase, in the so-called TIP Matrix. The collection of tasks is based on an analysis of many case studies. To support the user of the TIP in translating the generic description of tasks into the contextualized definition of tasks, the generic set of tasks is grouped into five different levels (Figure below). These five levels characterize the activities and indicate the capacities and resources needed to accomplish these tasks.

	Phase:	Phase 1A	Phase 1B	Phase 2	Phase 3
<b>Level:</b>		Initial Steps and Testing	Preparing Launch	Tipping Point	Uptake & Use
<b>Level A: Strategic focus</b>		Tasks..	Tasks..	Tasks...	Tasks..
<b>Level B: Operational focus</b>		Tasks..	Tasks..	Tasks..	Tasks..
<b>Level C: Technology development</b>		Tasks..	Tasks..	Tasks..	Tasks..
<b>Level D: Innovation in the sector</b>		Tasks..	Tasks..	Tasks..	Tasks..
<b>Level E: Leading the introduction process</b>		Tasks..	Tasks..	Tasks..	Tasks..

### Building on existing procedures and experiences

The development and introduction of formal procedures for validation and introduction of WASH technologies should build on existing experiences and capacities in the sector and should be embedded in established procedures.

The starting point to develop or to revise guidelines for technology introduction or validation might differ from country to country. Depending on the context in each country, e.g. whether a guideline for introduction is already in place or not, but also on the technology to be introduced, or the type of cost model selected, the tasks listed in the TIP matrix need to be further adapted and then allocated to specific actors in the sector.

## Stepwise process for developing guidelines

In most cases, the process of developing guidelines for validation and technology introduction will develop step by step. Key steps include:

### I. Kick-off and preparation

This phase will include the establishment of a working group and a steering committee. The steering committee should comprise members of all relevant stakeholder groups in the sector. A work plan for the development of the guidelines should be developed taking into consideration the level of formal or informal procedures existing and known in the WASH sector. The **objectives and scope of the guidelines** and a work plan should be approved by the steering committee as “TOR” for the working group developing the details. The next steps should be organized as workshops with work in between accomplished by the working group or the members it has appointed.

### II. Draft Concept

In the first step, a mapping of key actors in the process of validation and introduction and of their roles is carried out. Based on this mapping, in the second step, particular tasks are defined and assigned to these actors. As a basis for this work, the generic description of tasks as documented in the TIP Matrix can be used. The draft concept of the county specific guidelines should be developed by and discussed in the working group and presented to the steering committee. Setting out from the feedback on the draft guidelines, options for funding particular work packages related to the introduction process should also be developed. Above all, ideas should be generated that show how the activities of the working group and the steering committee can be funded, especially in the testing phase, but also beyond it.

### III. Final Concept and approval

The final document presenting the country-specific guidelines will be **approved** by the steering committee. Depending on country-specific legislation, the procedures for approval might be rather informal, through practice in the sector, or more formal, through a ministerial decree. In many cases, an outright legislation of the guideline might not be possible in the short term. A high-level body of the sector will adopt the guideline. After development and approval, they will be **communicated** to the actors, maybe through a particular information event, e.g. information sessions at high-level sector events.

## Iterative development

The guidelines should be looked at as a “living document”. This means that to a certain extent, they will be further developed in a somehow iterative process. However due to the formal act of approval, each and every approved version should be implemented and enforced.

## Institutional set-up and funding requirement

For the process of the development, application and review of guidelines, a dedicated and defined institutional set-up is needed which determines the involvement of specific actors as well as the allocation of financial resources.

- In the process of **developing the guidelines**, the lead for the process should be at government level. For practical reasons, a **working group** should be established that does the footwork to work out the guidelines and organize consultation with key actors. A **steering committee** should be established at high level to guide the process and finally approve the product and the guidelines. Members of the steering committee should include

representatives of the ministries for water and sanitation and finance or trade, members of the government agency responsible for standardization and quality control of products, and members of the private sector.

- For the **application of the guideline**, i.e. in the case of a concrete **introduction process** of a specific technology, a specific task force should be established that takes on the tasks as defined in the guidelines.

## Linkages between TAF and TIP

The TAF and the TIP are designed as complementary tools and at the same time the TAF is embedded within the TIP as key step in an early phase of an introduction process.

The TAF is a decision-support tool for the WASH sector to comprehensively assess the applicability and the scalability of a specific WASH technology in a specific context. The TAF is a participatory process and should be applied in the **testing** phase, the very first phase of introduction, to provide a comprehensive feasibility assessment and **validate** the technology. In this respect, the TAF should be used as a validation tool. The TAF can be applied to new technologies or to already existing technologies, which should be further scaled up.

Once the technology has successfully passed the TAF, it can be taken up to a wider scale if any actors are interested in and dedicated to investing in this technology. The results of the TAF assessment can then be used in various phases of the introduction process to improve its design. In the generic TIP Matrix as shown in Annex 3, the figures listed in bold in the table show the indicators and aspects which should be considered in detail, e.g. for defining specific mitigation measures to improve progress in uptake. In this respect, the TAF can also be used as a proper monitoring tool in the introduction process.

### 1.3.4 Project Impact Assessment

This is a synthesis of country and global reports evaluating the impact of the Water Sanitation and Hygiene Technology (WASHTech) project up to November 2013.

The overall development objectives are to strengthen WASH sector capacity to make effective investment in new technologies, thereby improving sustainability of WASH services and ensuring the scale-up of suitable technologies is realized. The project proposed to achieve this objective through the development of tools aiding in technology assessment and scale-up, employing an action research methodology within three participant countries: Burkina Faso, Ghana and Uganda. The terms of reference outlined in the projects description of work document demanded that the impact evaluation covered the following aspects:

- Assess the changes in capacity, attitudes and knowledge among learning alliance members and Technology Applicability Framework (TAF) users (including project partners themselves).
- Gauge the degree of adoption of the technical validation tool and its ease of use
- Identify new potential users of the TAF and those adopting or considering adoption of the recommendations.

This report outlines the findings from 40 key informant interviews and one focus group discussion among stakeholders within the three participant countries. Further country and global perspectives pertaining to the project and the tools developed (particularly the TAF) have been accounted for

through interviews conducted as part of the process monitoring component of the project (WP 7.3) which has employed a Most Significant Change (MSC) methodology (Davis and Dart 2004).

## Key Findings

### Project Outputs

WASHTech has succeeded in producing its main outputs. The project has developed two main tools. The first tool, the Technology Applicability Framework (TAF), is a tool, which aims to assist WASH sector professionals in making rigorous assessments about the suitability of a given technology to a specific context. The TAF takes into account the views of various key stakeholders including the user of the technology, the producer or provider and the regulators of the sector. The tool employs a participatory approach to decision making and requires a field team to collect data on the technology, which is processed and analysed at multi-stakeholder platforms. The second tool, the Technology Introduction Process (TIP), provides a guide to scaling up technologies, identifying all the key actors and their roles and responsibilities in this process. Aside from the tools, the project has also produced a number of documents and literature reviews of WASH technologies used in Africa, the tools for assessing technologies and performance and methods of assessment in the three participant countries. The main tools and the projects reviews are now in the public domain and are available on a website hosted by the Rural Water Supply Network (RWSN)

### Assessing technology

Throughout the action research component of the project the TAF tool was applied to technologies being used in the different countries. The interviews revealed cases where the tool and the methodology behind its application have helped to identify new technologies for scale-up, barriers to scaling up both new and old technologies and various areas where technologies and their introduction can be improved. Thus, WASHTech has demonstrated that the tools they have produced have the potential to fulfil their main objectives.

### Attitudes

The project has allowed stakeholders a platform to discuss current issues relating to technology assessment and introduction in the sector. This has allowed people to recognize the importance of hardware in service delivery and has worked to increase technology issues on the sector agenda. The project has created a demand for a formalized and documented approach to technology assessment and introduction, something that was previously lacking in each of the countries involved. A key attitudinal change among interviewees was to recognize the value of obtaining the users perspective and the social considerations around technology. The interviews also uncovered numerous examples where the assessment of technologies by the TAF had changed attitudes towards specific technologies.

### Control and Coordination

Each country has had previous problems with inadequate assessment and informal introduction of WASH technologies. Interviewees believed that the tools had the ability to address these issues by providing a standardized approach to assessment and introduction and that this in turn could make the processes more explicit and transparent to NGOs and private technology developers. The project has engaged stakeholders from different areas of the sector. This has generated different cases where coordination around technology introduction has been improved. NGOs and technology

developers have been put in touch with government officials and are now engaging with official bodies. At the same time, government officials have been able to appreciate the difficulties faced by external organizations regarding the lack of clear processes to follow.

### **Sector practices and procedures**

Interviews discovered examples of how WASH stakeholders had begun to modify their practices. These examples predominantly came from representatives of NGOs and the private sector. Some mentioned they were now making efforts to engage with official government approval and introduction process as mentioned above. Private technology developers also mentioned that they were now trying to ensure users of their technologies are able to contact them about operation and maintenance of the technology. The majority of national and regional government stakeholders explained how their working practices were guided by directives from government ministries. As such, most of these actors were awaiting official approval of the tools and the subsequent integration into policy before their practices and procedures would be changed.

### **Stakeholder perceptions of the tools**

The tools have certainly filled a gap within each of the sectors and interviewees were unanimous in their opinion that the tools were important. Some interviewees thought the TAF tool was still quite a heavy document and needed further refinement before certain actors in the sector use it. Other actors had reservations about how the tools would be funded and these are clearly factors, which need to be resolved before the tool is widely taken up by the sector.

### **Sector embedding**

Significant steps have been taken to embed the tools within each country's sector. Country partners have identified institutional hosts who will be responsible for implementing the tools. However, there is clearly a lot of work remaining in terms of raising awareness of the tools in the sector, building capacity of potential users of the tool, encouraging official government approval and policy integration, and determining clear processes behind the implementation of the tools. At a global level, the tools were shared in the public domain in September 2013. The official launch of the main project products was on 12 December 2013 during an international WASHTech webinar. As such, the awareness of the tools is still relatively low. Again, project consortium members will have to continue to disseminate the tools and advocate their use beyond the project timeline. The uptake of the tool and process TAF & TIP by international development partners and financing institutions, like the EU, would be very important, e.g. by using the tools in their programmes, by documenting impact, in promoting it in events, appraisals and assessments.

## **1.3.5 Learning Alliances in WASHTech**

This document describes the theoretical underpinnings of the learning alliance approach and provides a framework for assessing the actual progress and challenges in implementing this approach in WASHTech. It is intended as a working document that will be periodically updated. A checklist for reviewing progress and gathering evidence is provided at the end of the document.

This document replaces the Guidelines for training learning alliance facilitators as the country teams concluded that they have sufficient experience from previous work. Instead a framework to support reflection and documentation of the learning alliance process in the focus countries was deemed more useful. This framework consists of five elements that cover key elements of any learning



alliance process: essence, arborescence (or rooting), presence, resilience and evidence of the alliance.

The learning alliances in Burkina Faso, Ghana and Uganda build on existing platforms, groups and learning events at national and decentralised levels. In 2011, alliance activities such as scoping studies and meetings were initiated. At this stage of the project it is too early to speak of evidence and resilience of the alliances. Alliance facilitators in each country have identified opportunities and challenges faced in 2011. Opportunities include several national and international platforms and events, which provide space to share WASHTech outputs and engage stakeholders (end 2011 and 2012) and linkages between the host organisations and other sector players. Challenges include the development of (linkages with) active decentralised platforms, getting the right people involved and keeping them on board in a learning process. Linkages with other learning initiatives such as CLARA and with researchers outside WASHTech are important issues in the further embedding of the TAF in the coming year.

### Why this document and who is it for?

WASHTech states that it will apply a learning alliance approach. Learning alliances (LAs) are not new but are a fairly complex multi-level and multi-stakeholder approach to carry out action-research and implementation work. The central premise of learning alliances is the embedding of research and implementation work in the local and national policy processes and in the practices of key sector stakeholders.

This document provides an overview of the concept of learning alliances in the WASHTech project, explains how a learning alliance is supposed to work and what it aims to improve. It also provides insights into the practical choices and implications for learning alliance processes in the three project countries and at the international level.

This document replaces the official deliverable D6.1 / D4 (Guidelines for training LA facilitators). After consultation with all country team coordinators, it was concluded that guidelines were not necessary, but instead sound documentation of the theory and practice of applying a learning alliance approach in the project would be useful.

This is a working document that should help all learning alliance facilitators (the WASHTech national coordinators) and WASHTech consortium members 1) understand the vision of change that learning alliances promote and 2) provide a framework for them to reflect on their practice and decisions regarding the facilitation of the learning alliance process and its development within and beyond the project's lifetime.

## 1.4 The potential impact and the main dissemination activities and exploitation of results

### 1.4.1 Potential use and impact

**The WASHTech project and sector professionals identified four main uses of the TAF:**

1. For *validation* of a *new* WASH technology for application in the country. Technology developers who want to get their technology accepted, they approach national level ministries, which will apply the TAF & TIP.
2. For *validation* of an *existing* WASH technology for application in a specific context, for instance at district or sub-district level with specific local socio-, cultural, economic and other conditions. Then the TAF is applied before a technology is being introduced at that

decentralised level. Barriers to sustainability are being identified and can be addressed prior to local introduction of the specific WASH technology.

3. As a *monitoring tool*, to assess why *one* WASH technology is a success while *another one* is a failure. Then hindrance and success factors are determined that will lead to choosing either another technology or formulating actions to do better.
4. And, as a tool in a project/programme *appraisal process*, in which the proposed WASH technology is being appraised for its potential to contribute to a sustainable WASH service.

As mentioned before, the guidance on Technology Introduction Process, developed in this WASHTech project, will lead to:

- Introduction of technologies and services that do meet user needs;
- Introduction of technologies that have relevance for practical application on the ground;
- Introduction of technologies in a concerted and coherent way, with good consideration of criteria likely to impact on success;
- Introduction of technologies that are affordable for users to pay for;
- Introduction of technologies that can be adequately supported in the local context, resulting in lasting water and sanitation services from these technologies;
- Introduction of technologies that are scalable because of multiple barriers to their uptake have been removed;
- Proper diagnosis of reasons for success and failure of highly potential technologies resulting in acceptance and scaling up;
- Assumptions made about certain technologies that are rarely corroborated or that are not true but are perpetuated as myths are discussed and removed;
- Former aggressive promotion of technologies -that are not appropriate- stopped;
- The end of overwhelming of government institutions or support agencies with technologies that are at such a basic stage of development that they are not yet fit for purpose.

Application of the WASHTech tool TAF and process TIP will contribute to:

- ✓ More effective investment in new technologies for sustained access to WASH services
- ✓ A sector that makes informed decisions in the choice of sustainable WASH technologies
- ✓ A participatory action research to identify obstacles and opportunities for uptake and scaling up technology beyond pilot testing
- ✓ Providing sector professionals (governmental agencies, development partners, NGOs, private operators, research institutes etc.) a set of methodological tools and participatory approaches for informed decision-making, strategic planning and introduction of validated WASH technologies
- ✓ The participatory development, implementation and evaluation of the methodological tools, embeds the practice of multi-stakeholder learning, sharing and collaboration - instilling individual and collective ownership of, attention to, and responsibility for sustainability

## Main dissemination activities and exploitation of results

See under section 2. for all the details on dissemination and use.

### 1.5 The address of the project public website, if applicable as well as relevant contact details.

To ensure the continued availability for the sector professionals and organisations of the WASHTech project outputs, it was agreed within the project consortium to have a hosting arrangement with the Rural Water Supply Network. RWSN has a wide membership in the WASH sector of International Financing Institutions, UN organisations, International NGOs, knowledge and research centres etc., see <http://www.rural-water-supply.net/en/supported-by>. The key documents TAF with questions and TIP, and the case studies, templates etc. and discussion forum are now accessible from <http://www.washtechnologies.net/> with both English and French versions.

During the 3-year project period 2011-2013, the project used the website <http://washtechafrika.wordpress.com>. For 2014, this project website will remain accessible, and if there is a significant number of users still at the end of 2014, then the project website will continue for another year.

Consortium partner	Country	Role	Contact person	Email
IRC International Water and Sanitation Centre	The Netherlands	Coordinator; lead in WP1-6-8-9	Mr Jo Smet Mrs Carmen da Silva-Wells	<a href="mailto:smet@irc.nl">smet@irc.nl</a> <a href="mailto:dasilvawells@irc.nl">dasilvawells@irc.nl</a>
Cranfield University	United Kingdom	Researcher, lead in WP2-7	Dr Alison Parker	<a href="mailto:a.parker@cranfield.ac.uk">a.parker@cranfield.ac.uk</a>
Skat Foundation	Switzerland	Researcher, lead in WP3-5	Mr André Olschewski	<a href="mailto:andre.olschewski@skat.ch">andre.olschewski@skat.ch</a>
WaterAid	United Kingdom	Research facilitator, lead in WP4	Mr Vincent Casey	<a href="mailto:vincentcasey@wateraid.org">vincentcasey@wateraid.org</a>
Water and Sanitation for Africa (WSA; former CREPA)	Burkina Faso	Country Facilitator, Communication and Researcher	Dr Andrews Dr Yacouba Coulibaly	<a href="mailto:andrewsnkansah@wsafrica.org">andrewsnkansah@wsafrica.org</a> <a href="mailto:yacoubanoelcoulibaly@wsafrica.org">yacoubanoelcoulibaly@wsafrica.org</a>
Training, Research and Networking for Development LBG (TREND)	Ghana	Country Facilitator, Communication	Mr Benedict Tuffuor	<a href="mailto:btuffuor@gmail.com">btuffuor@gmail.com</a>
Kwame Nkrumah University of Science and Technology	Ghana	Researcher	Dr Kwabena Nyarko	<a href="mailto:nyarko.k.b@gmail.com">nyarko.k.b@gmail.com</a>
Network for Water and Sanitation Uganda (NETWAS)	Uganda	Country Facilitator, Communication and Researcher	Mrs Hellen Obuya Eritu Mr Simon Peter Sekuma Mr Paul Kimera	<a href="mailto:hnhellen@gmail.com">hnhellen@gmail.com</a> <a href="mailto:petersekuma@gmail.com">petersekuma@gmail.com</a> <a href="mailto:paulkim245@gmail.com">paulkim245@gmail.com</a>

The WASHTech logo:

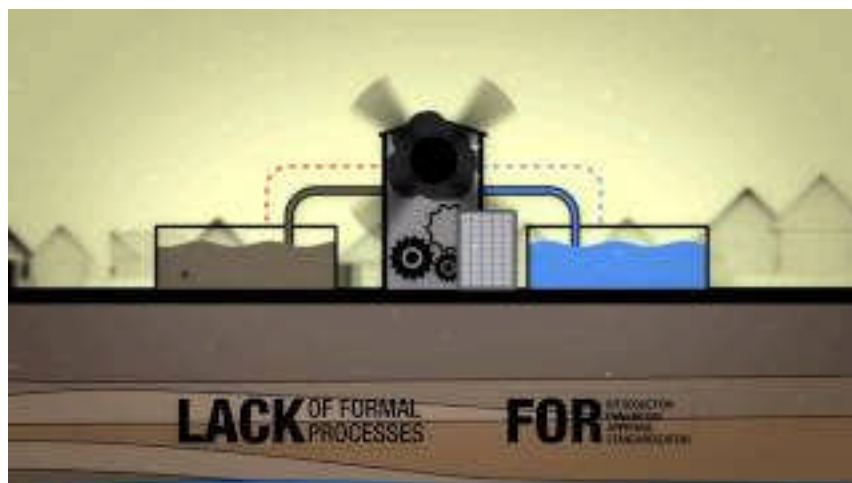


Diagrams and photographs are available from [www.washtechnologies.net](http://www.washtechnologies.net) and from <http://washtechafrika.wordpress.com> under country programmes and ‘outputs and deliverables’.

Videos on WASHTech are:

1. The WASHTech Video made by WaterAid:

<http://www.youtube.com/watch?v=d5eUWuRYufk>



2. The WASHTech video on the validation of solar-powered pumping in Uganda:

<http://youtu.be/MS8DUfhFOmg>

## 2 Use and dissemination of foreground

The use and dissemination of the foreground has two Phases and various streams:

1. Phase-1 during the project period, with an emphasis on both in-country use & dissemination
2. Phase-2 after the project period, that is from 01 January 2014 onwards.

In Phase-1 the use was related to the pilot testing of the TAF and TIP in the three project countries Burkina Faso, Ghana and Uganda. The use and dissemination was both at the national and decentralised level. The use of the foreground has been secured by the arrangements of hosting at national level with government departments, particular at ministerial and public water and sanitation agency level. Dissemination using communication and learning alliance modes was also done through the consortium partners at EU and project country level, through international communication, and several webinars and presentations at international conferences; see tables below.

In Phase-2, the dissemination was done through the newly established website hosted by RWSN, [www.washtechologies.net](http://www.washtechologies.net) and a series of webinars in collaboration with Engineering for Change (E4C), Triple-S project <http://www.waterservicesthatlast.org> and with SuSanA on 12<sup>th</sup> of March 2014. Benedict and me will present.

Details on use and dissemination after the project period and per country and International level are given in the deliverable WP8 D8.7 Final Plan for the dissemination and use of foreground.

<http://washtechafrika.files.wordpress.com/2011/04/washtech-wp8-d8-7-d31-final-plan-fv.pdf>

### 2.1 Section A (public)

WASHTech did not have peer-reviewed publications and articles. Three papers were presented at international conferences and three published for international dissemination:

Title	Authors	Conference & Publication	URL of paper	URL of presentation
Using the Technology Applicability Framework (TAF) tool for Urine Dry Diverting Toilet (UDDT); technology evaluation and recommendations for sustainability in Burkina Faso.	Coulibaly Yacouba Noël and Kossi Wozuame. 10 April 2012.	Monitoring sustainable WASH service delivery Symposium, Addis Ababa, Ethiopia, 9-11 April 2013.	<a href="http://www.irc.nl/page/79367">http://www.irc.nl/page/79367</a>	<a href="http://www.slideshare.net/ircuser/9-yacoubacoulibaly-addis-ababa-presentation">http://www.slideshare.net/ircuser/9-yacoubacoulibaly-addis-ababa-presentation</a>
Context-specific Validation and Introduction of Technologies for Sustainable WASH Services	P.Kimera, J.Smet, A.Olschewski & A. Parker	36th WEDC International Conference, Nakuru, Kenya, 2013	<a href="http://wedc.lboro.ac.uk/resources/conference/36/Kimera-1728.pdf">http://wedc.lboro.ac.uk/resources/conference/36/Kimera-1728.pdf</a>	<a href="http://www.slideshare.net/WASHTech/technology-applicability-framework-taf">http://www.slideshare.net/WASHTech/technology-applicability-framework-taf</a>
WASH Technology Applicability Framework (TAF) A tool to validate low-income urban WASH technologies	J. Smet, B. Tuffuor, S.P. Sekuma, and A. Olschewski	3 <sup>rd</sup> IWA Congress, Nairobi, October 2013	<a href="http://www.editorialmanager.com/iwaconferences/download.aspx?id=67965&amp;guid=29078775-f621-4e40-a989-eeeda66a786e&amp;scheme=1">www.editorialmanager.com/iwaconferences/download.aspx?id=67965&amp;guid=29078775-f621-4e40-a989-eeeda66a786e&amp;scheme=1</a>	<a href="http://www.slideshare.net/WASHTech/context-specific-validation-and-introduction-of-technologies-for-sustainable-urban-wash-services">http://www.slideshare.net/WASHTech/context-specific-validation-and-introduction-of-technologies-for-sustainable-urban-wash-services</a>
Validating water and sanitation innovations	Smet, J., Olschewski, A. and Achiro, B.	<i>International Innovation Journal</i> , June 2013, pp. 49-51.	<a href="http://www.irc.nl/page/80822">http://www.irc.nl/page/80822</a>	n.a.

This overview below gives all communication outputs of the WASHTech project produced by Consortium partners and others both at international and country (Burkina Faso, Ghana and Uganda) level. It covers WASHTech project web pages, magazine articles, videos, blog and forum posts, newsletter items, articles and links on other websites and print promotional materials.

## 2.1.1 International

### Websites

The main legacy and most important communications output of the WASHTech project is the website [washtechnologies.net](http://washtechnologies.net), which was developed by Consortium partner SKAT and



launched in December 2013. This interactive website includes manuals, tools, case studies and a discussion forum. It allows users to learn about the Technology Applicability Framework (TAF) and Technology Introduction Process (TIP) and to share and discuss case studies and experiences of the use of these tools.



Fig. 1: Screenshot of website [washtechnologies.net](http://washtechnologies.net)

From the start in 2011 until the end of the WASHTech project in 2013, news and updates **were posted on a WordPress blog** [washtechafrica.wordpress.com](http://washtechafrica.wordpress.com). The blog attracted 15,635 page views, 41 comments and 67 followers.

IRC maintained project pages in English ([www.irc.nl/page/62223](http://www.irc.nl/page/62223)) and French ([www.fr.irc.nl/page/62170](http://www.fr.irc.nl/page/62170)) with WASHTech background information and highlights.

## Videos

The official WASHTech video, commissioned by Consortium partner WaterAid, was released on 31 October 2013. The 6-minute video uses animations and interviews with WASHTech project staff from Ghana. Other available project videos are listed in tab. 1. WASHTech will also feature in forthcoming video on FP7-funded water projects entitled 'Water in Africa in a changing climate' produced by Africa Turns Green.

Tab.1. WASHTech project videos

Title	Views*
WASHTech -- supporting the vision of sustainable WASH services, 2013, <a href="http://www.youtube.com/watch?v=d5eUWuRYufk">http://www.youtube.com/watch?v=d5eUWuRYufk</a>	792
Technology Assessment of Solar Water Pumping in Uganda, 2013, <a href="http://www.youtube.com/watch?v=MS8DUfhFOmg">http://www.youtube.com/watch?v=MS8DUfhFOmg</a>	451
WASHTech according to...., 2012, <a href="http://www.youtube.com/watch?v=9yCOSnJK1Wc">http://www.youtube.com/watch?v=9yCOSnJK1Wc</a>	165
The use of life-cycle costs in WASHTech, 2012, <a href="http://www.youtube.com/watch?v=J70iXmHR3yE">http://www.youtube.com/watch?v=J70iXmHR3yE</a>	87
WASHTech webinar: Investing in effective technologies with the Technology Applicability Framework, 2013, <a href="http://www.youtube.com/watch?v=r9coB9O4DEw">http://www.youtube.com/watch?v=r9coB9O4DEw</a>	109

\*As of 31 Dec 2013



Fig. 2 Screenshot WASHTech video

### Print promotional materials

WASH project leaflets, TAF & TIP leaflets and postcards were distributed at a series of international events (tab. 2). For a full list see IRC, 2013, Ch. 8

Tab. 2 International events in which WASHTech staff participated

Event title	Date
6th RWSN Forum, Kampala, Uganda	29 November – 1 December 2011
Monitoring sustainable WASH service delivery symposium, Addis Ababa, Ethiopia	9-11 April 2013
12th Sanitation Community of Practice Meeting: Assessing and Responding to Risk in Sanitation Planning	19 April 2013
36th WEDC International Conference, Nakuru, Kenya	1-5 July 2013
Stockholm World Water Week, Sweden	1-6 September 2013
IWA Development Congress and Exhibition Nairobi, held in Nairobi, Kenya	14 -17 October 2013
University of North Carolina, Water and Health Conference, North Carolina, USA	14-18 October 2013
WASH Advocates lunch presentation, Washington, DC, USA	22 October 2013
International Water Week, Amsterdam, The Netherlands	4-6 November 2013

### Magazine articles

One article was published in an international magazine:

Smet, J., Olschewski, A. and Achiro, B., 2013. Validating water and sanitation innovations. *International innovation journal*, June, pp. 49-51. Available at: <<http://www.irc.nl/page/80822>>

## Blog and forum posts on other websites

WASHTech Consortium staff and others posted 24 articles in the following blogs and forums: Learning for Change (3), WASH Technology (10), WASHFunders.org (2), SustainableWASH.org (1), RWSN blog (4), Community Voices for Action (1), Sanitation Updates (1), SuSanA Forum (1) and KnowledgePoint (1). For a full list see IRC, 2013, Ch. 4.

## Newsletter items

WASHTech Consortium staff and others posted 13 articles in the following newsletters: E-Source – English (2), E-Source – French (6), eUpdates (4) and SDC Updates (1). For a full list see IRC, 2013, Ch 5.

## Articles and links on other websites

The Technology Applicability Framework (TAF) and Technology Introduction Process (TIP) have been listed in the Akvopedia's Sustainability and Finance ([akvopedia.org/wiki/Finance\\_Portal](http://akvopedia.org/wiki/Finance_Portal)) Portals. They are among the 10 articles about WASHTech posted on the following websites: SSWM (1), WaterAid (1), Water services that last (2), Akvopedia (3) and RCN Ghana (3). For a full list see IRC, 2013, Ch. 6.

### 2.1.2 Burkina Faso

The WASHTech Burkina Faso team maintained a country page ([washtechafrika.wordpress.com/burkina-faso](http://washtechafrika.wordpress.com/burkina-faso)) on the WASHTech blog.

The team produced the following other communication outputs:

- French leaflet, postcard and banner (see IRC, 2013, Ch. 8)
- Most-significant-change stories in English and French (see IRC, 2013, Ch. 7)
- News items for E-Source (see IRC, 2013, Ch. 5)

These outputs were distributed at national sector events mentioned in [washtechafrika.wordpress.com/burkina-faso](http://washtechafrika.wordpress.com/burkina-faso)

### 2.1.3 Ghana

The WASHTech Ghana team maintained a country page ([washtechafrika.wordpress.com/ghana](http://washtechafrika.wordpress.com/ghana)) on the WASHTech blog.

The team produced the following other communication outputs:

- Ghana country leaflet (see IRC, 2013, Ch. 8)
- Most-significant-change stories (see IRC, 2013, Ch. 7)
- Items for the RCN Ghana website (see IRC, 2013, Ch. 6)

These outputs were distributed at national sector events mentioned in [washtechafrika.wordpress.com/ghana](http://washtechafrika.wordpress.com/ghana)

### 2.1.4 Uganda

The WASHTech Uganda team maintained a country page ([washtechafrika.wordpress.com/uganda](http://washtechafrika.wordpress.com/uganda)) on the WASHTech blog.

The team produced the following other communication outputs:

- Uganda country leaflet (see IRC, 2013, Ch. 8)



- Uganda TAF & TIP leaflet (see IRC, 2013, Ch. 8)

These outputs were distributed at national sector events mentioned in

[washtechafrika.wordpress.com/uganda](http://washtechafrika.wordpress.com/uganda)

## 2.1.5 Communication and information shared via webpages

### WASHTech Project websites

Title	Description	URL
Technology Applicability Framework & Technology Introduction Process	Interactive website with manuals, tools, case studies and a discussion forum	<a href="http://www.washtechtechnologies.net">http://www.washtechtechnologies.net</a>
WASHTech, THE project (2011-2013)	Project blog with news, updates and country pages	<a href="http://washtechafrika.wordpress.com">http://washtechafrika.wordpress.com</a>
IRC - WASHTech project page	Project pages on IRC website in English and French	<a href="http://www.irc.nl/page/62223">http://www.irc.nl/page/62223</a> <a href="http://www.fr.irc.nl/page/62170">http://www.fr.irc.nl/page/62170</a>

### Magazine articles

Reference	URL
Smet, J., Olschewski, A. and Achiro, B., 2013. Validating water and sanitation innovations. <i>International innovation journal</i> , June, pp. 49-51	<a href="http://www.irc.nl/page/80822">http://www.irc.nl/page/80822</a>

### Videos

Title	URL
WASHTech -- supporting the vision of sustainable WASH services, 2013	<a href="http://www.youtube.com/watch?v=d5eUWuRYufk">http://www.youtube.com/watch?v=d5eUWuRYufk</a>
Technology Assessment of Solar Water Pumping in Uganda, 2013	<a href="http://www.youtube.com/watch?v=MS8DUfhFOMg">http://www.youtube.com/watch?v=MS8DUfhFOMg</a>
WASHTech according to....	<a href="http://www.youtube.com/watch?v=9yCOSnJK1Wc">http://www.youtube.com/watch?v=9yCOSnJK1Wc</a>
The use of life-cycle costs in WASHTech	<a href="http://www.youtube.com/watch?v=J70iXmHR3yE">http://www.youtube.com/watch?v=J70iXmHR3yE</a>
WASHTech -- supporting the vision of sustainable WASH services, 2013	<a href="http://www.youtube.com/watch?v=d5eUWuRYufk">http://www.youtube.com/watch?v=d5eUWuRYufk</a>
WASHTech webinar: Investing in effective technologies with the Technology Applicability Framework	<a href="http://www.youtube.com/watch?v=r9coB9O4DEw">http://www.youtube.com/watch?v=r9coB9O4DEw</a>
WASHTech webinar: Introducing and scaling up sustainable water and sanitation technologies	<a href="http://washtechafrika.wordpress.com/2013/12/16/introducing-and-scaling-up-sustainable-water-and-sanitation-technologies/">http://washtechafrika.wordpress.com/2013/12/16/introducing-and-scaling-up-sustainable-water-and-sanitation-technologies/</a>
'Water in Africa in a changing climate'. By Yann Verbeke and Séverine Dieudonné, copyright Africa Turns Green.	<a href="http://www.youtube.com/watch?v=4p1Nvuxk3LU">http://www.youtube.com/watch?v=4p1Nvuxk3LU</a>
WASHTech budget and Jo Smet (IRC), Seyram Asimah (TREND) contributed to this video on FP7 water projects	

## Blog and forum posts on other websites

Reference	URL
Da Silva Wells, C., 2013. Technologies that work...and keep working. <i>Learning for Change</i> , 9 Dec. 2013	<a href="http://wp.me/p1s5GS-ig">http://wp.me/p1s5GS-ig</a>
Da Silva Wells, C., 2013. How to scale up new technologies? <i>Learning for Change</i> , 29 Oct. 2013	<a href="http://wp.me/p1s5GS-hR">http://wp.me/p1s5GS-hR</a>
Da Silva Wells, C., 2012. Reinventing the toilet? <i>Learning for Change</i> , 14 Aug 2012	<a href="http://wp.me/p1s5GS-aE">http://wp.me/p1s5GS-aE</a>
December 11, 2013 Webinar – Introducing and scaling up sustainable water and sanitation technologies. <i>WASH Technology</i> , 3 Dec 2013	<a href="http://wp.me/pceRa-78">http://wp.me/pceRa-78</a>
TAF addresses the challenge of technology in WASH (video). <i>WASH Technology</i> , 2 Nov 2013	<a href="http://wp.me/pceRa-76">http://wp.me/pceRa-76</a>
1st WASHTech webinar attracts 25 participants and lots of questions. <i>WASH Technology</i> , 2 Jul 2013	<a href="http://wp.me/pceRa-73">http://wp.me/pceRa-73</a>
Webinar: investing in effective technologies with the Technology Applicability Framework. <i>WASH Technology</i> , 27 May 2013	<a href="http://wp.me/pceRa-71">http://wp.me/pceRa-71</a>
Pre-launch: context-specific validation and introduction of WASH technologies for sustainable services. <i>WASH Technology</i> , 20 Feb 2013	<a href="http://wp.me/pceRa-6Y">http://wp.me/pceRa-6Y</a>
Progress on TAF development and stakeholder engagement. <i>WASH Technology</i> , 28 Aug 2012	<a href="http://wp.me/sceRa-427">http://wp.me/sceRa-427</a>
Leaflet available on the Technology Applicability Framework (TAF) and the Technology Introduction Process (TIP) Guide. <i>WASH Technology</i> , 11 May 2012	<a href="http://wp.me/sceRa-414">http://wp.me/sceRa-414</a>
Technology selection in Uganda, Ghana and Burkina Faso reviewed. <i>WASH Technology</i> , 24 Apr 2012	<a href="http://wp.me/sceRa-413">http://wp.me/sceRa-413</a>
Review of frameworks for technology assessment. <i>WASH Technology</i> , 13 Mar 2012	<a href="http://wp.me/sceRa-412">http://wp.me/sceRa-412</a>
Africa wide WASH technology review published. <i>WASH Technology</i> , 16 Dec 2011	<a href="http://wp.me/pceRa-6z">http://wp.me/pceRa-6z</a>
Olschewski, A. (2013). "If you want to go fast, go alone. If you want to go far, go together." <i>WASHFund.org</i> , 24 Nov 2013	<a href="http://www.washfund.org/Blog/if-you-want-to-go-fast-go-alone.-if-you-want-to-go-far-go-together">http://www.washfund.org/Blog/if-you-want-to-go-fast-go-alone.-if-you-want-to-go-far-go-together</a>
Olschewski, A. (2013). Why bother with technologies? <i>WASHFund.org</i> , 24 Jun 2013	<a href="http://www.washfund.org/Blog/Why-Bother-with-Technologies">http://www.washfund.org/Blog/Why-Bother-with-Technologies</a>
Olschewski, A. (2013). TAF & TIP: Why bother about technologies? <i>SustainableWASH.org</i> , 10 Jun 2013	<a href="http://sustainablewash.org/blog/taf-tip-why-bother-about-technologies">http://sustainablewash.org/blog/taf-tip-why-bother-about-technologies</a>
December 11, 2013 Webinar - Introducing and scaling up sustainable water and sanitation technologies. <i>RWSN Blog</i> , 4 Dec 2013	<a href="http://rwsnblog.wordpress.com/2013/12/04/december-11-2013-webinar-introducing-and-scaling-up-sustainable-water-">http://rwsnblog.wordpress.com/2013/12/04/december-11-2013-webinar-introducing-and-scaling-up-sustainable-water-</a>

	<a href="#">and-sanitation-technologies/</a>
WASHTech Burkina Faso: The final sprint has begun! <i>RWSN Blog</i> , 19 Nov 2013	<a href="http://rwsnblog.wordpress.com/2013/11/19/washtech-burkina-faso-the-final-sprint-has-begun/">http://rwsnblog.wordpress.com/2013/11/19/washtech-burkina-faso-the-final-sprint-has-begun/</a>
TAF to be tested on other technologies Rwenzori region. <i>RWSN Blog</i> , 9 Aug 2013	<a href="http://rwsnblog.wordpress.com/2013/08/09/taf-to-be-tested-on-other-technologies-rwenzori-region/">http://rwsnblog.wordpress.com/2013/08/09/taf-to-be-tested-on-other-technologies-rwenzori-region/</a>
Sustainability of solar water pumping in Uganda. <i>RWSN Blog</i> , 21 Sep 2012	<a href="http://rwsnblog.wordpress.com/2012/09/21/sustainability-of-solar-water-pumping-in-uganda/">http://rwsnblog.wordpress.com/2012/09/21/sustainability-of-solar-water-pumping-in-uganda/</a>
WASHTech: Assessing Solar Water Pump Technology in Uganda. <i>Community Voices for Action</i> , 10 Oct 2012	<a href="http://kiyimba-james.blogspot.nl/2012/10/washtech-assessing-solar-water-pump.html">http://kiyimba-james.blogspot.nl/2012/10/washtech-assessing-solar-water-pump.html</a>
Africa wide WASH technology review published. <i>Sanitation Updates</i> , 16 Dec 2011	<a href="http://wp.me/paGBZ-1HM">http://wp.me/paGBZ-1HM</a>
WASHTech video and TAF (Technology Applicability Framework) now online. <i>SuSanA Forum</i> , 12 Nov 2013	<a href="http://forum.susana.org/forum/categories?func=view&amp;catid=39&amp;id=6343">http://forum.susana.org/forum/categories?func=view&amp;catid=39&amp;id=6343</a>
Cost and reliability of solar pumps in Mali? <i>KnowledgePoint</i> , 28 Nov 2013	<a href="http://knowledgepoint.org/questions/501/cost-and-reliability-of-solar-pumps-in-mali/">http://knowledgepoint.org/questions/501/cost-and-reliability-of-solar-pumps-in-mali/</a>

## Newsletter items

Reference	URL
TAF addresses the challenge of technology in WASH (video). <i>E-Source</i> , 2 Nov 2013	<a href="http://www.source.irc.nl/page/81717">http://www.source.irc.nl/page/81717</a>
Africa wide WASH technology review published. <i>E-Source</i> , 18 Dec 2011	<a href="http://www.source.irc.nl/page/68409">http://www.source.irc.nl/page/68409</a>
Projet WASHTech : Evaluer l'introduction des technologies HAEP par un outil test scientifique. <i>E-Source</i> , 16 Mar 2013	<a href="http://www.nouvelles.irc.nl/page/70387">http://www.nouvelles.irc.nl/page/70387</a>
WASHTech Burkina: le développement participatif d'un outil d'évaluation des technologies d'eau et d'assainissement. <i>E-Source</i> , 26 Nov 2012	<a href="http://www.nouvelles.irc.nl/page/75664">http://www.nouvelles.irc.nl/page/75664</a>
Encourager la collaboration en ligne après les rencontres physiques du secteur eau et assainissement au Burkina. <i>E-Source</i> , 3 Jul 2012	<a href="http://www.nouvelles.irc.nl/page/72592">http://www.nouvelles.irc.nl/page/72592</a>
WASHTech Burkina: La pompe à Corde, bien appréciée des communautés peine pourtant à être vulgarisée. <i>E-Source</i> , 31 May 2012	<a href="http://www.nouvelles.irc.nl/page/72062">http://www.nouvelles.irc.nl/page/72062</a>
Le consortium du projet WASHTech partage et harmonise sa stratégie d'intervention. <i>E-Source</i> , 9 Jan 2012	<a href="http://www.nouvelles.irc.nl/page/67181">http://www.nouvelles.irc.nl/page/67181</a>
Evaluation de l'impact des nouvelles innovations technologiques AEAH en Afrique. <i>E-Source</i> , 11 Apr 2011	<a href="http://www.nouvelles.irc.nl/page/62976">http://www.nouvelles.irc.nl/page/62976</a>
Two new tools for introducing and scaling up sustainable water and sanitation technologies,	<a href="http://us5.campaign-archive2.com/?u=dffe16177d418dd9c2">http://us5.campaign-archive2.com/?u=dffe16177d418dd9c2</a>

and WASHTech -- supporting the vision of sustainable WASH services. <i>eUpdates</i> , Dec 2013	<a href="http://www.us5.campaign-archive2.com/?u=dffe16177d418dd9c2938bfba&amp;id=5135c3aef9">938bfba&amp;id=5135c3aef9</a>
Technology Applicability Framework showcased at Aquatech Amsterdam. <i>eUpdates</i> , Oct 2013	<a href="http://www.us5.campaign-archive2.com/?u=dffe16177d418dd9c2938bfba&amp;id=149ea208cc">http://us5.campaign-archive2.com/?u=dffe16177d418dd9c2938bfba&amp;id=149ea208cc</a>
1st WASHTech webinar attracts 25 participants and lots of questions. <i>eUpdates</i> , Jul-Aug 2013	<a href="http://www.us5.campaign-archive1.com/?u=dffe16177d418dd9c2938bfba&amp;id=ce80a2e338">http://us5.campaign-archive1.com/?u=dffe16177d418dd9c2938bfba&amp;id=ce80a2e338</a>
TAF and TIP: Support for decision makers in the WASH sector. SDC Water News, no. 22, Nov 2013	<a href="http://www.sdc-water.ch/en/Home/Ressources/media/SDC%20WATER%20NEWS%20-%20N22%20November%202013.pdf">http://www.sdc-water.ch/en/Home/Ressources/media/SDC%20WATER%20NEWS%20-%20N22%20November%202013.pdf</a>

### Articles and links on other websites

Reference	URL
Assessment of technology options. <i>SSWM</i> , 2013	<a href="http://www.sswm.info/content/assessment-technology-options">http://www.sswm.info/content/assessment-technology-options</a>
12 amazing things you helped WaterAid achieve in 2013. <i>WaterAid</i> , 19 Dec 2013	<a href="http://www.wateraid.org/news/news/12-amazing-things">http://www.wateraid.org/news/news/12-amazing-things</a>
WASHTech -- Supporting The Vision Of Sustainable WASH Services. <i>Water services that last</i> , 10 Dec 2013	<a href="http://www.waterservicesthatlast.org/media/videos/washtech_supporting_the_vision_of_sustainable_wash_services">http://www.waterservicesthatlast.org/media/videos/washtech_supporting_the_vision_of_sustainable_wash_services</a>
Two new tools for introducing and scaling up sustainable water and sanitation technologies. <i>Water services that last</i> , 10 Dec 2013	<a href="http://www.waterservicesthatlast.org/news/news_events_2/webinar_introducing_and_scaling_up_sustainable_water_and_sanitation_technologies">http://www.waterservicesthatlast.org/news/news_events_2/webinar_introducing_and_scaling_up_sustainable_water_and_sanitation_technologies</a>
Technology Applicability Framework (TAF): a decision support tool for more effective investments in innovative technologies. <i>Water services that last</i> , 20 Oct 2013	<a href="http://www.waterservicesthatlast.org/resources/concepts_tools/taf_decision_support_tool_for_technologies">http://www.waterservicesthatlast.org/resources/concepts_tools/taf_decision_support_tool_for_technologies</a>
Technology Applicability Framework (TAF). <i>Akvopedia - Finance Portal</i> , 2013	<a href="http://akvopedia.org/wiki/Technology_Applicability_Framework_(TAF)">http://akvopedia.org/wiki/Technology_Applicability_Framework_(TAF)</a>
Technology Assessment (TAF). <i>Akvopedia - Sustainability Portal</i> , 2013	<a href="http://akvopedia.org/wiki/Technology_Assessment_(TAF)">http://akvopedia.org/wiki/Technology_Assessment_(TAF)</a>
Technology Introduction (TIP). <i>Akvopedia - Sustainability Portal</i> , 2013	<a href="http://akvopedia.org/wiki/Technology_Introduction_(TIP)">http://akvopedia.org/wiki/Technology_Introduction_(TIP)</a>
Technology Assessment Framework (TAF) for sustainable WASH services in Ghana. (WASH reflections; no. 24). <i>RCN Ghana</i> , 2012	<a href="http://www.washghana.net/page/1478">http://www.washghana.net/page/1478</a>
Wumbei, A., 2012. Understanding the Technology Assessment Framework (TAF). <i>RCN Ghana</i> , 25 June 2012	<a href="http://www.washghana.net/home/understanding_the_technology_assessment_framework_taf/%28language%29/eng-GB">http://www.washghana.net/home/understanding_the_technology_assessment_framework_taf/%28language%29/eng-GB</a>
Ndhlovu, D-F., 2011. Poverty reduction through water research network. <i>RCN Ghana</i> , 14 Feb 2011	<a href="http://www.washghana.net/home/wash_calendar/past_events/poverty_reduction_through_water_research_network/%28language%29/eng-GB">http://www.washghana.net/home/wash_calendar/past_events/poverty_reduction_through_water_research_network/%28language%29/eng-GB</a>

## Most-Significant-Change stories

Reference	URL
Wumbei, A., 2013. Stakeholders review stories to monitor the process of change. <i>WASHTech, THE project (2011-2013)</i> , 10 Apr 2013	<a href="http://wp.me/p1szDW-7r">http://wp.me/p1szDW-7r</a>
WSA, 2013. Impacts of WASHTech project. WSA, 2013	<a href="http://www.wsafrica.org/en/what-we-do/impacts-washtech-project">http://www.wsafrica.org/en/what-we-do/impacts-washtech-project</a>
WSA, 2013. Des impacts du projet WASHTech. WSA, 2013	<a href="http://www.wsafrica.org/fr/ce-que-nous-faisons/des-impacts-du-projet-washtech">http://www.wsafrica.org/fr/ce-que-nous-faisons/des-impacts-du-projet-washtech</a>

## Leaflets, postcards, banners, pictures

Title	URL
WASHTech International leaflet	<a href="http://washtechafrica.files.wordpress.com/2011/04/washtech-110325-leaflet-v5-final.pdf">http://washtechafrica.files.wordpress.com/2011/04/washtech-110325-leaflet-v5-final.pdf</a>
WASHTech Uganda country leaflet	<a href="http://washtechafrica.files.wordpress.com/2011/04/washtech-brochure-final-3.pdf">http://washtechafrica.files.wordpress.com/2011/04/washtech-brochure-final-3.pdf</a>
WASHTech Burkina Faso country leaflet	<a href="http://washtechafrica.files.wordpress.com/2011/04/washtech-wp8-131106-taf-brief-4-p-french.pdf">http://washtechafrica.files.wordpress.com/2011/04/washtech-wp8-131106-taf-brief-4-p-french.pdf</a>
WASHTech TAF & TIP leaflet	<a href="http://washtechafrica.files.wordpress.com/2011/04/washtech-wp8-130402-flyer-tip_taf_april-2013.pdf">http://washtechafrica.files.wordpress.com/2011/04/washtech-wp8-130402-flyer-tip_taf_april-2013.pdf</a>
WASHTech leaflet for Stockholm World Water Week	<a href="http://washtechafrica.files.wordpress.com/2011/04/washtech-wp8-130831-sww-flyer-2-pager-final.pdf">http://washtechafrica.files.wordpress.com/2011/04/washtech-wp8-130831-sww-flyer-2-pager-final.pdf</a>
WASHTech postcard – English	<a href="http://washtechafrica.files.wordpress.com/2011/04/washtech-wp8-130901-postcard.pdf">http://washtechafrica.files.wordpress.com/2011/04/washtech-wp8-130901-postcard.pdf</a>
WASHTech postcard – French	<a href="http://washtechafrica.files.wordpress.com/2011/04/washtech-wp8-131031-postcard_francais_final.docx">http://washtechafrica.files.wordpress.com/2011/04/washtech-wp8-131031-postcard_francais_final.docx</a>
WASHTech banner - French	<a href="http://washtechafrica.files.wordpress.com/2011/04/washtech-wp8-131031-banner_final_francais.docx">http://washtechafrica.files.wordpress.com/2011/04/washtech-wp8-131031-banner_final_francais.docx</a>
WASHTech consortium meeting & MSC training	<a href="http://www.flickr.com/photos/7907304@N04/sets/72157627837956460">http://www.flickr.com/photos/7907304@N04/sets/72157627837956460</a>

### 2.1.6 Scripts on WASHTech

This section contains the scripts of papers and presentations to national and international fora, both with an Anglo- and Franco-phone audience.

#### General presentations

Presentations giving a *general* introduction to WASHTech:

##### **English**

Tools for sound technologies for sustainable water, sanitation and hygiene services. Action Research 2011-2013.

Link: <http://www.slideshare.net/WASHTech/tools-for-sound-technologies-for-sustainablewater-sanitation-and-hygiene-services-action-research-20112013>

***French***

Des technologies d'Eau, d'Assainissement et d'Hygiène plus innovantes et applicables pour l'Afrique. Recherche-Action pour des Services d'Eau, d'Assainissement et d'Hygiène Durables. 2011-2013.

Link: <http://www.slideshare.net/WASHTech/tools-for-sound-technologies-for-sustainablewater-sanitation-and-hygiene-services-action-research-20112013>

## Scripts and papers shared at International fora

Event	Paper title, author & link	Accompanying presentation title, author & link
Monitoring sustainable WASH service delivery symposium, Addis Ababa, Ethiopia, 9-11 April 2013.	Using the Technology Applicability Framework (TAF) tool for Urine Dry Diverting Toilet (UDDT); technology evaluation and recommendations for sustainability in Burkina Faso. Coulibaly Yacouba Noël and Kossi Wozuame. 10 April 2012. <a href="http://www.irc.nl/page/79367">http://www.irc.nl/page/79367</a>	Using the Technology Applicability Framework (TAF) for Urine Dry Diverting toilet: evaluation and recommendations for sustainability. Yacouba Noël Coulibaly (WSA Burkina Faso) <a href="http://www.slideshare.net/ircuser/9-yacoubacoulibaly-addis-ababa-presentation">http://www.slideshare.net/ircuser/9-yacoubacoulibaly-addis-ababa-presentation</a>
36th WEDC International Conference, Nakuru, Kenya, 1-5 July 2013.	Context specific validation and introduction of technologies for sustainable WASH services. P. Kimera, J. Smet, A. Olschewski & A. Parker, Uganda. <a href="https://wedc-knowledge.lboro.ac.uk/details.html?id=20770">https://wedc-knowledge.lboro.ac.uk/details.html?id=20770</a>	Technology Applicability Framework – TAF. Paul Kimera (ATC), Jo Smet (IRC), Andre. Olschewski (Skat Foundation) Alison Parker (Cranfield University) <a href="http://www.slideshare.net/WASHTech/technology-applicability-framework-taf">http://www.slideshare.net/WASHTech/technology-applicability-framework-taf</a>
IWA Development Congress and Exhibition Nairobi, held in Nairobi, Kenya 14 -17 October 2013.	WASH Technology Applicability Framework (TAF) – A tool to validate low-income urban WASH technologies. J. Smet, B. Tuffuor, S.P. Sekuma, and A. Olschewski <a href="http://www.editorialmanager.com/iwaconferences/download.aspx?id=67965&amp;guid=29078775-f621-4e40-a989-eeeda66a786e&amp;scheme=1">www.editorialmanager.com/iwaconferences/download.aspx?id=67965&amp;guid=29078775-f621-4e40-a989-eeeda66a786e&amp;scheme=1</a>	Context-specific validation and introduction of technologies for sustainable urban WASH Services. J. Smet (IRC), B. Tuffuor (TREND Ghana), S.P. Sekuma (NETWAS Uganda), and A. Olschewski (Skat Foundation) <a href="http://www.slideshare.net/WASHTech/contextspecific-validation-and-introduction-of-technologiesfor-sustainable-urban-wash-services">http://www.slideshare.net/WASHTech/contextspecific-validation-and-introduction-of-technologiesfor-sustainable-urban-wash-services</a>
Forthcoming: 2014 Tech4Dev International Conference, Ecole Polytechnique Fédérale de Lausanne, Switzerland. 4-6 June 2014	The abstract ‘Technology Applicability Framework (TAF) – the tool to validate and scale up low-income urban WASH technologies for sustainable services’, by A. Olschewski (Skat Foundation) and V. Casey (WaterAid UK) has been submitted and accepted.	N.a.

## Presentations shared at international fora

Event	Paper title, author	Link
6th Rural Water Supply Network (RWSN) Forum, Kampala, Uganda 29 November – 1 December 2011	Introducing Technologies: WASHTech André Olschewski (Skat Foundation)	<a href="http://rwsnforum.files.wordpress.com/2011/11/presentation-18-3-andre-olschewski-rwsn.pdf">http://rwsnforum.files.wordpress.com/2011/11/presentation-18-3-andre-olschewski-rwsn.pdf</a>
Triple-S WASH Learning and Sharing event. Sustainability of WASH Initiatives. London, United Kingdom, 26th of January 2012	WASHTech – an introduction. Alison Parker (Cranfield University)	<a href="http://www.slideshare.net/WASHTech/washtechan-introduction">http://www.slideshare.net/WASHTech/washtechan-introduction</a>
Monitoring sustainable WASH service delivery symposium, Addis Ababa, Ethiopia, 9-11 April 2013	Technology Applicability Framework (TAF) – a tool for scaling up and monitoring of Water, Sanitation and Hygiene Technologies for providing sustainable service delivery. André Olschewski (Skat Foundation), Benedict Tuffuor (TREND)	<a href="http://www.slideshare.net/ircuser/1-olschewskitaf">http://www.slideshare.net/ircuser/1-olschewskitaf</a>
Pre-launch: context specific validation and introduction of WASH technologies for sustainable services. 12 April 2014, Addis Ababa, Ethiopia.	Technology Applicability Framework (TAF) – a tool for scaling up and monitoring of Water, Sanitation and Hygiene Technologies for providing sustainable service delivery. André Olschewski (Skat Foundation), Benedict Tuffuor (TREND)	<a href="http://www.slideshare.net/WASHTech/ircsymposium-2013-taf-presentation-final">http://www.slideshare.net/WASHTech/ircsymposium-2013-taf-presentation-final</a>
12th Sanitation Community of Practice Meeting: Assessing and Responding to Risk in Sanitation Planning. University College London, London. 19 April 2013	How can technologies contribute to failure? Alison Parker (Cranfield University), Joanne Beale, (WaterAid)	<a href="http://www.iwaterwiki.org/xwiki/bin/download/WorkGroup_SanCop/SanCoP+12th+Meeting/WASHTechpresentationcombine.d1.pdf">http://www.iwaterwiki.org/xwiki/bin/download/WorkGroup_SanCop/SanCoP+12th+Meeting/WASHTechpresentationcombine.d1.pdf</a>
WASHTech Webinar: Investing in effective technologies. Hosted by IRC International Water and Sanitation Centre. 3 June 2013. Link to full webinar recording: <a href="https://www.youtube.com/watch?v=r9coB9O4DEw">https://www.youtube.com/watch?v=r9coB9O4DEw</a>	WASHTech: Piloting the TAF – Experiences with the Rope Pump in Ghana Benedict Tuffuor (TREND) <a href="http://www.slideshare.net/WASHTech/wash-techwp8-130603-webinar-tuffuor-taf-rope-pumpghana-3june2013">http://www.slideshare.net/WASHTech/wash-techwp8-130603-webinar-tuffuor-taf-rope-pumpghana-3june2013</a>	Technology Applicability Framework (TAF) – a tool for assessing applicability and scalability of WASH Technologies. André Olschewski (Skat Foundation) <a href="http://www.slideshare.net/WASHTech/wash-techwp8-130603-webinar-andre-taf-general-3-june2013">http://www.slideshare.net/WASHTech/wash-techwp8-130603-webinar-andre-taf-general-3-june2013</a>
Stockholm World Water Week. 1-6 September 2013.	The Technology Applicability Framework (TAF) was presented during a side meeting on Sustainability Checks & tools organized by Triple-S with Development Partners in Rica Talk Hotel, on Tuesday 3 September 17:30 – 18:30. Vincent Casey (WaterAid UK)	
Ideas Marketplace. Stockholm World Water Week. 1-6 September 2013.	The Technology Applicability Framework (TAF) was presented during the ideas marketplace at the Stockholm World Water Week. 4 September 2013 Alison Parker (Cranfield University)	Announcements at: <a href="http://programme.worldwaterweek.org/event/ideas-marketplacethe-3034">http://programme.worldwaterweek.org/event/ideas-marketplacethe-3034</a> <a href="http://washtechafrica.wordpress.com/2013/08/27/learn-about-thethe-technology-applicability-framework-at-stockholm-world-waterweek/">http://washtechafrica.wordpress.com/2013/08/27/learn-about-thethe-technology-applicability-framework-at-stockholm-world-waterweek/</a>



<p>Young Professionals Day. Stockholm World Water Week. 1-6 September 2013.</p>	<p>The Technology Applicability Framework (TAF) was presented during the Young Professionals Day at the Stockholm World Water Week. 4 September 2013. Alison Parker (Cranfield University)</p>	
<p>University of North Carolina Water and Health Conference. North Carolina, USA. 14-18 October 2013.</p>	<p>A workshop “New Approaches to Scaling Up WaSH Technologies” was 3organized at this year’s <a href="#">University of North Carolina’s Water and Health conference</a> to introduce novel approaches to scaling up WaSH technologies. One of these approaches is the Technology Applicability Framework (TAF). 41 delegates attended the workshop, which included presentations from <a href="#">Skat Foundation</a> about the TAF and TIP (Technology Introduction Process), Water Missions international, Water4, World Vision, Messiah College and Design Outreach on their experiences of introducing solar water pumping, prepayment water vending, manual drilling, a pvc handpump, improvements to the India Mark II and a new heavy duty handpump for very deep wells (down to 150m)</p>	<p>Blog post on the event:  <a href="http://washtechafrika.wordpress.com/2013/10/29/washtech-side-event-at-unc-water-healthconference-2013/">http://washtechafrika.wordpress.com/2013/10/29/washtech-side-event-at-unc-water-healthconference-2013/</a></p>
<p>WASH Advocates lunch presentation, Washington, DC. 22 October 2013.</p>	<p>During a lunchtime presentation an explanation of TAF featured heavily. The presentation was attended by a group of 19 professionals from a wide range of organizations, including USAID, Plan International, the Millennium Water Alliance, Rotary WASRAG, Johns Hopkins University and World Vision.</p>	
<p>WASHTech Webinar: Introducing and scaling up sustainable water and sanitation technologies. Hosted by IRC International Water and Sanitation Centre. 11 December 2013.</p>	<p>From WASH Technologies to innovation and lasting services. Andre Olschewski (Skat Foundation)</p> <p>TAF Development in Ghana Benedict Tuffuor (TREND)</p> <p>Uganda Technology Introduction Process (TIP) Paul Kimera (Appropriate Technology Centre for Water and Sanitation – ATC Uganda)</p> <p>An introduction to WASHTech’s online resource base. Sean Furey (Skat Foundation)</p>	<p><a href="http://www.slideshare.net/WASHTech/20131211-wash-tech-webinartaftip-intro-olschewski">http://www.slideshare.net/WASHTech/20131211-wash-tech-webinartaftip-intro-olschewski</a></p> <p><a href="http://www.slideshare.net/WASHTech/20131211-wash-tech-webinartaf-in-ghanatuffuor">http://www.slideshare.net/WASHTech/20131211-wash-tech-webinartaf-in-ghanatuffuor</a></p> <p><a href="http://www.slideshare.net/WASHTech/20131211-wash-tech-webinartip-in-uganda">http://www.slideshare.net/WASHTech/20131211-wash-tech-webinartip-in-uganda</a></p> <p><a href="http://www.slideshare.net/WASHTech/20131211-wash-tech-webinarwebsite-introfurey">http://www.slideshare.net/WASHTech/20131211-wash-tech-webinarwebsite-introfurey</a></p>

## Presentations shared at Ghana Specific fora

Event	Title, author & organisation	Link
25 <sup>th</sup> National Level Learning Alliance Platform (NLLAP): Assessment Framework for sustainable WASH Technologies in Ghana. Erata Hotel, Accra, 29 March 2012	<i>Piloting of draft TAF in Ghana.</i> Jesse Coffie Danku, (WaterAid Ghana) Link to blog post on this event: <a href="http://washtechafrika.wordpress.com/2013/04/10/understanding-the-technology-assessment-framework-taf-2/">http://washtechafrika.wordpress.com/2013/04/10/understanding-the-technology-assessment-framework-taf-2/</a>	<a href="http://www.washghana.net/home/learning_alliance/national/25th_national_level_learning_alliance_platform_assessment_framework_for_sustainable_wash_technologies_in_ghana/%28language%29/eng-GB">http://www.washghana.net/home/learning_alliance/national/25th_national_level_learning_alliance_platform_assessment_framework_for_sustainable_wash_technologies_in_ghana/%28language%29/eng-GB</a>
Mole XXIII Conference, Tamale, 21-25 August 2012	<i>Water, sanitation and hygiene technologies (WASHTech) project 2011-2013.</i> Benedict Tuffuor and Seyram Ama Asimah (TREND)	<a href="http://www.slideshare.net/coniwas/wash-tech-mole-conf-2?from_search=11">http://www.slideshare.net/coniwas/wash-tech-mole-conf-2?from_search=11</a>
	<i>Technology Assessment Framework (TAF) for Selected WASH Technologies in Ghana.</i> Eric Antwi Oforu (KNUST)	<a href="http://www.washghana.net/page/1308">http://www.washghana.net/page/1308</a>
31 <sup>st</sup> National Level Learning Alliance Platform (NLLAP): Technology Assessment Framework for sustainable WASH services in Ghana. Erata Hotel Accra, 8 March 2013.	<i>WASHTech Ghana. Next steps.</i> Abu Wumbei (Resource Centre Network (RCN) Ghana)	<a href="http://www.washghana.net/page/1458">http://www.washghana.net/page/1458</a>
West Africa Regional Household Water Treatment and Safe Storage (HWTS) Workshop, Accra, Ghana. 6-8 May 2013	The Technology Applicability Framework (TAF) stood out as the Water Sanitation and Hygiene Technologies (WASHTech) Ghana project team participated in a market place exhibition at the HWTS event. The team contributes also with a poster titled 'investing in Sustainable WASH Technologies' Link to poster: <a href="http://washtechafrika.wordpress.com/2013/06/21/taf-stands-out-at-regional-hwts-workshop-exhibition/">http://washtechafrika.wordpress.com/2013/06/21/taf-stands-out-at-regional-hwts-workshop-exhibition/</a> Link to blog post article on this event: <a href="http://washtechafrika.wordpress.com/2013/06/21/taf-stands-out-at-regional-hwts-workshop-exhibition/">http://washtechafrika.wordpress.com/2013/06/21/taf-stands-out-at-regional-hwts-workshop-exhibition/</a>	
2 <sup>nd</sup> Volta Regional Learning Alliance Platform, Ho, Ghana, 24 July 2013.	<i>Technology Applicability Framework (TAF) – a tool for assessing applicability and scalability of WASH Technologies for providing sustainable service delivery.</i> Benedict Tuffuor (TREND)	<a href="http://www.washghana.net/page/1536">http://www.washghana.net/page/1536</a>

## Presentations shared at Uganda Specific fora

Event	Title, author & organisation	Link
WASHTech Uganda Core Team Meeting, 26 August 2011	<i>Investing in adequate technologies for sustainable WASH services (2011-2013)</i>	<a href="http://www.slideshare.net/WASHTech/investing-in-adequate-technologies-for-sustainable-wash-services-20112013">http://www.slideshare.net/WASHTech/investing-in-adequate-technologies-for-sustainable-wash-services-20112013</a>
Interdistrict platform meeting, Waisko district, 23 December 2011.	Mrs. Cate Z. Nimanya, Program Manager NETWAS introduced the Technical Assessment Framework concept to district water officers and Politicians during an inter-district on platform on the 23 <sup>rd</sup> /12/2011 held in Waisko district. The inter-district meeting was convened by Technical support unit 5 (TSU 5). Link to blog post: <a href="http://washtechafrica.wordpress.com/2012/01/31/presenting-taf-at-an-inter-district-meeting/">http://washtechafrica.wordpress.com/2012/01/31/presenting-taf-at-an-inter-district-meeting/</a>	
Uganda, self supply steering committee meeting, Ministry of Water and Environment, Kampala. 30 January 2012	Presentation on the integration of the research on the TAF into the Uganda National Self Supply Acceleration Framework 2011-2015. Presentation on the testing of TAF on two supply self technologies namely, the rope pump and tippy tap.	Link to blog post: <a href="http://washtechafrica.wordpress.com/2012/02/13/towards-embedding-taf-mainstreaming-taf-into-the-self-supply-initiatives-for-2012/">http://washtechafrica.wordpress.com/2012/02/13/towards-embedding-taf-mainstreaming-taf-into-the-self-supply-initiatives-for-2012/</a>
2 <sup>nd</sup> Rwenzori Region Learning Forum, Kabarole. 27-28 February 2012	WASHTech presented at these annual learning platform meetings in two regions. The learning platforms are organized by the MWE technical support units with support from NGOs. The platforms have attendance from local government, government and NGOs.	
1 <sup>st</sup> Northern Uganda Regional Learning Forum. Acholi Inn Hotel, Gulu, Uganda. 28-29 March 2012.		
Kampala City Council Authority, Kampala Water and Sanitation Forum, April 2012	Presentation at launch of KCCA WASH forum: The Kampala City Council Authority launched the first ever Kampala WASH forum in 2012 where WASHTech was presented and disseminated	
UWASNET Technology Working Group Meeting, 4 May, 2012	Experiences of Testing TAF in Uganda Geoffrey Kidega (WaterAid Uganda) shared experiences with using TAF in Iganga and Mayuge districts on the rope pump technology. Brenda Achiro (WASHTech country facilitator) presented an update of the initiatives to sell and create awareness around TAF and the entire WASHTech project since the project inception. Link to blog post: <a href="http://washtechafrica.wordpress.com/2012/05/29/experiences-in-of-testing-taf-in-uganda/">http://washtechafrica.wordpress.com/2012/05/29/experiences-in-of-testing-taf-in-uganda/</a> WASHTech presentation at UWASNET Technology working group, which was reactivated by WASHTech early 2012 to discuss the progress of its members. The working group chaired by Appropriate Technology Centre (ATC) applauded the role of WASHTech to the country.	<a href="http://www.slideshare.net/WASHTech/action-research-on-water-sanitation-and-hygiene-technologies">http://www.slideshare.net/WASHTech/action-research-on-water-sanitation-and-hygiene-technologies</a>

	Link to blog post: <a href="http://washtechafrika.wordpress.com/2012/02/13/activating-the-uwasnet-technology-working-group/">http://washtechafrika.wordpress.com/2012/02/13/activating-the-uwasnet-technology-working-group/</a>	
Joint Technical Review of the Water and Environment Sector, Lira District, Uganda. 24-26 June 2012.	<i>Action Research on Water, Sanitation and Hygiene Technologies. WASHTech EU FP7 2011-2013 (36 months)</i> Cate Nimanya (NETWAS Uganda) WASH Tech presented the research findings of the WASH Technology Introduction and adaptation in Uganda towards government (national and district level) and development partners. Link to blog post with announcement of WASHTech contribution: <a href="http://washtechafrika.wordpress.com/2012/05/14/washtech-presents-at-the-development-partners-joint-technical-review/">http://washtechafrika.wordpress.com/2012/05/14/washtech-presents-at-the-development-partners-joint-technical-review/</a>	<a href="http://www.slideshare.net/WASHTech/wash-tech-presentationjtr-cata-nimanya">http://www.slideshare.net/WASHTech/wash-tech-presentationjtr-cata-nimanya</a>
Joint Sector Review, Speke Resort, Munyonyo, Kampala, Uganda. 23-25 October 2012.	WASHTech presented at this meeting to government, donors and NGOs.	
National CSO fair. Hotel Africana, Kampala, Uganda. 4-5 July 2013 This forum is organized by the national NGO network (NGO-Forum) and has representation from all sectors.	<i>Technology Assessment Framework – TAF</i> Simon Peter Sekuma (NETWAS Uganda)	<a href="http://www.slideshare.net/WASHTech/technology-assessment-framework-taf">http://www.slideshare.net/WASHTech/technology-assessment-framework-taf</a>
WASH Stakeholders meeting, ATC, Mukono district. 27-28 June 2013	NETWAS Uganda, SKAT, the Ministry of Water and Sanitation through the Appropriate Technology Centre (ATC) 44organized a meeting to promote understanding of the TAF and GTI among WASH stakeholders. <i>Recommendations for Sector Strengthening</i> Paul Kimera (ATC)	<a href="http://www.slideshare.net/WASHTech/recommendations-for-sector-strengthening">http://www.slideshare.net/WASHTech/recommendations-for-sector-strengthening</a>
Hand Pump Mechanics Association (HPMA) Learning Journey Kabarole, Uganda. July, 2013	<i>Technology Assessment Framework – TAF</i> Simon Peter Sekuma (NETWAS Uganda) Link to blog post: <a href="http://washtechafrika.wordpress.com/2013/08/01/taf-to-be-tested-on-other-technologies-rwenzori-region/">http://washtechafrika.wordpress.com/2013/08/01/taf-to-be-tested-on-other-technologies-rwenzori-region/</a>	<a href="http://www.slideshare.net/netwas/taf-presentationhpma-learning-journey?from_search=9">http://www.slideshare.net/netwas/taf-presentationhpma-learning-journey?from_search=9</a>
National Sanitation Working Group (NSWG) meeting, Kampala City Council Authority head office, Uganda. 13 August 2013.	Existence of TAF adds value to the WASH sector Link to blog post: <a href="http://washtechafrika.wordpress.com/2013/08/15/existance-of-taf-adds-value-to-the-wash-sector/">http://washtechafrika.wordpress.com/2013/08/15/existance-of-taf-adds-value-to-the-wash-sector/</a>	
Second meeting for the development of Uganda sector specific guidelines for technology introduction, ATC, Kampala, Uganda. 25 September 2013	WASHTech hosts 2 <sup>nd</sup> meeting for development of Guidelines for TIP. The meeting attracted fifteen people with representatives from Ministry of Water, District local government, Universities, NGOs and private sector.  Link to blog post: <a href="http://washtechafrika.wordpress.com/2013/09/27/washtech-host-2nd-meeting-for-development-of-guidelines-for-tip/">http://washtechafrika.wordpress.com/2013/09/27/washtech-host-2nd-meeting-for-development-of-guidelines-for-tip/</a>	

## Presentations shared at Burkina Faso Specific fora

Event	Title, author & organization	Link
14-15 June 2012	<p>Presentation by Yacouba Coulibaly on the WASHTech TAF, its approach and its benefits for the WASH sector in Burkina Faso.</p> <p>Link to blog post on event:  <a href="http://washtechafrika.wordpress.com/2012/06/22/le-reseau-des-centres-de-ressources-du-burkina-rcr-discute-du-taf/#more-296">http://washtechafrika.wordpress.com/2012/06/22/le-reseau-des-centres-de-ressources-du-burkina-rcr-discute-du-taf/#more-296</a></p>	
Meeting at Ministry of Agriculture and Water Resources, 26 July 2012	<p>WASHTech Burkina presents TAF to Ministry of Agriculture and Water Resources</p> <p>Link to blog post on meeting:  <a href="http://washtechafrika.wordpress.com/2012/07/31/wastech-burkina-presents-taf-to-ministry-of-agriculture-and-water-resources/">http://washtechafrika.wordpress.com/2012/07/31/wastech-burkina-presents-taf-to-ministry-of-agriculture-and-water-resources/</a></p>	
Reseau de Centres de Ressources, Burkina Faso, 26 January 2013	<p><i>Presentation of WASHTech</i></p> <p>Romeo Gnann Kouassi (Pan African Intergovernmental Agency – WSA Water and Sanitation for Africa)</p>	<a href="http://www.slideshare.net/sorgho/washtech-presentation?from_search=1">http://www.slideshare.net/sorgho/washtech-presentation?from_search=1</a>
First workshop on Guidelines for the Technology Introduction Process, 19 March 2013.	<p>WASHTech Burkina: premier atelier sur le GTI</p> <p>Link to blog post on workshop:  <a href="http://washtechafrika.wordpress.com/2013/03/21/washtech-burkina-premier-atelier-sur-le-gti/">http://washtechafrika.wordpress.com/2013/03/21/washtech-burkina-premier-atelier-sur-le-gti/</a></p>	
2 <sup>nd</sup> workshop on TAF, EAA, 24-26 April 2013	<p>2ème atelier du TIF au Burkina</p> <p>Link to blog post on workshop:  <a href="http://washtechafrika.wordpress.com/2013/05/06/2eme-atelier-du-tif-au-burkina/">http://washtechafrika.wordpress.com/2013/05/06/2eme-atelier-du-tif-au-burkina/</a></p>	
National training workshop, Department of Studies and Information one Water (DEIE). November 2013.	<p>Presentation of the achievements of the project including tools Technology Assessment Framework (TAF) Technology Introduction Process (TIP) towards actors in the WASH sector.</p> <p>Link to blog post with announcement of event:  <a href="http://washtechafrika.wordpress.com/2013/11/07/washtech-burkina-the-final-sprint-has-begun/">http://washtechafrika.wordpress.com/2013/11/07/washtech-burkina-the-final-sprint-has-begun/</a></p>	

Several presentations (power point) are posted on slide-share: <http://www.slideshare.net/WASHTech/> with a total of 3,391 views (by 20 Feb 2014)

### ***Section B***

The WASHTech project did not produce products with patents, trademarks, and registered designs.

### 3 Report on societal implications

Replies to the following questions will assist the Commission to obtain statistics and indicators on societal and socio-economic issues addressed by projects. The questions are arranged in a number of key themes. As well as producing certain statistics, the replies will also help identify those projects that have shown a real engagement with wider societal issues, and thereby identify interesting approaches to these issues and best practices. The replies for individual projects will not be made public.

#### A General Information *(completed automatically when Grant Agreement number is entered.)*

Grant Agreement Number:

Title of Project:

Name and Title of Coordinator:

#### B Ethics

<p><b>1. Did your project undergo an Ethics Review (and/or Screening)?</b></p> <ul style="list-style-type: none"> <li>If Yes: have you described the progress of compliance with the relevant Ethics Review/Screening Requirements in the frame of the periodic/final project reports?</li> </ul> <p>Special Reminder: the progress of compliance with the Ethics Review/Screening Requirements should be described in the Period/Final Project Reports under the Section 3.2.2 'Work Progress and Achievements'</p>	No
--	----

<p><b>2. Please indicate whether your project involved any of the following issues (tick box) :</b></p>	<input type="checkbox"/>
---	--------------------------

##### RESEARCH ON HUMANS

- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | Did the project involve children?                         |
| <input type="checkbox"/> | Did the project involve patients?                         |
| <input type="checkbox"/> | Did the project involve persons not able to give consent? |
| <input type="checkbox"/> | Did the project involve adult healthy volunteers?         |
| <input type="checkbox"/> | Did the project involve Human genetic material?           |
| <input type="checkbox"/> | Did the project involve Human biological samples?         |
| <input type="checkbox"/> | Did the project involve Human data collection?            |

##### RESEARCH ON HUMAN EMBRYO/FOETUS

- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | Did the project involve Human Embryos?  |
| <input type="checkbox"/> | Did the project involve Human Foetal Tissue / Cells?  |
| <input type="checkbox"/> | Did the project involve Human Embryonic Stem Cells (hESCs)?                                 |
| <input type="checkbox"/> | Did the project on human Embryonic Stem Cells involve cells in culture?                     |
| <input type="checkbox"/> | Did the project on human Embryonic Stem Cells involve the derivation of cells from Embryos? |

##### PRIVACY

- |                          |  |
|--------------------------|--|
| <input type="checkbox"/> | Did the project involve processing of genetic information or personal data (e.g. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)? |
| <input type="checkbox"/> | Did the project involve tracking the location or observation of people?  |

##### RESEARCH ON ANIMALS

- |                          |   |
|--------------------------|---|
| <input type="checkbox"/> | Did the project involve research on animals?            |
| <input type="checkbox"/> | Were those animals transgenic small laboratory animals? |
| <input type="checkbox"/> | Were those animals transgenic farm animals?             |
| <input type="checkbox"/> | Were those animals cloned farm animals?                 |
| <input type="checkbox"/> | Were those animals non-human primates?                  |

##### RESEARCH INVOLVING DEVELOPING COUNTRIES

<ul style="list-style-type: none"> <li>• Did the project involve the use of local resources (genetic, animal, plant etc)?</li> </ul>	
<ul style="list-style-type: none"> <li>• Was the project of benefit to local community (capacity building, access to healthcare, education etc)?</li> </ul>	<input type="checkbox"/>
<b>DUAL USE</b>	
<ul style="list-style-type: none"> <li>• Research having direct military use</li> </ul>	No
<ul style="list-style-type: none"> <li>• Research having the potential for terrorist abuse</li> </ul>	No

### C Workforce Statistics

**3. Workforce statistics for the project: Please indicate in the table below the number of people who worked on the project (on a headcount basis).**

Type of Position	Number of Women	Number of Men
Scientific Coordinator		1
Work package leaders	3	2
Experienced researchers (i.e. PhD holders)	2	5
PhD Students		
Other MSc student		1

**4. How many additional researchers (in companies and universities) were recruited specifically for this project?**

Of which, indicate the number of men:



**D Gender Aspects**

5. Did you carry out specific Gender Equality Actions under the project?  No

6. Which of the following actions did you carry out and how effective were they?

	Not at all effective	Very effective
<input type="checkbox"/> Design and implement an equal opportunity policy	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<input type="checkbox"/> Set targets to achieve a gender balance in the workforce	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<input type="checkbox"/> Organise conferences and workshops on gender	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<input type="checkbox"/> Actions to improve work-life balance	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>
<input type="radio"/> Other: <input type="text"/>		

7. Was there a gender dimension associated with the research content – i.e. wherever people were the focus of the research as, for example, consumers, users, patients or in trials, was the issue of gender considered and addressed?

Yes- please specify

**E Synergies with Science Education**

8. Did your project involve working with students and/or school pupils (e.g. open days, participation in science festivals and events, prizes/competitions or joint projects)?

No

9. Did the project generate any science education material (e.g. kits, websites, explanatory booklets, DVDs)?

No

**F Inter-disciplinarity**

10. Which disciplines (see list below) are involved in your project?

Main discipline<sup>4</sup>: Engineering 2.1

Associated discipline<sup>4</sup>: Social Sciences

**G Engaging with Civil society and policy makers**

11a Did your project engage with societal actors beyond the research community? (if 'No', go to Question 14)  Yes

11b If yes, did you engage with citizens (citizens' panels / juries) or organised civil society (NGOs, patients' groups etc.)?

Yes - in implementing the research

Yes, in communicating /disseminating / using the results of the project

11c In doing so, did your project involve actors whose role is mainly to organise the dialogue with citizens and organised civil society (e.g. professional mediator; communication company, science museums)?  No

<sup>4</sup> Insert number from list below (Frascati Manual).

**12. Did you engage with government / public bodies or policy makers (including international organisations)**

- Yes- in framing the research agenda
- Yes - in implementing the research agenda
- Yes, in communicating /disseminating / using the results of the project

**13a Will the project generate outputs (expertise or scientific advice) which could be used by policy makers?**

- Yes – as a **secondary** objective (please indicate areas below - multiple answer possible)

**13b If Yes, in which fields?**

For national governments, development partners (donors and international financing institutes) to neutrally validate new water and sanitation technology to have them mainstreamed if positively validated.

For national government, development partners and producers (or agents) of technologies to discuss and agree whether the identified obstacles the tested water and sanitation technologies face for rendering a sustainable service can be removed or whether the technology needs to be discarded (for time being) for application in the country.

For national governments, development partners (donors and international financing institutes) to have roles and responsibilities defined and agreed with producers/manufacturers of water and sanitation technologies, towards the introduction and promotion of validated technologies.

For local governments and development partners to validate nationally accepted water or sanitation technologies for application in specific context within the local government area. And to discuss whether the identified obstacles towards sustainable service delivery can be removed or whether another technology needs to be considered for validation for possible application in the given context.

<p>Agriculture          Audiovisual and Media          Budget          Competition          Consumers          Culture          Customs          Development Economic and          Monetary Affairs          Education, Training, Youth          Employment and Social Affairs</p>		<p>Energy          Enlargement          Enterprise          Environment          External Relations          External Trade          Fisheries and Maritime Affairs          Food Safety          Foreign and Security Policy          Fraud          Humanitarian aid</p>	<p>Human rights          Information Society          Institutional affairs          Internal Market          Justice, freedom and security          Public Health          Regional Policy          Research and Innovation          Space          Taxation          Transport</p>	
--	--	--	--	--

<b>13c If Yes, at which level?</b> <input checked="" type="checkbox"/> National level <input checked="" type="checkbox"/> European level <input checked="" type="checkbox"/> International level <input type="checkbox"/> International level		
<b>H Use and dissemination</b>		
<b>14. How many Articles were published/accepted for publication in peer-reviewed journals?</b>	0	
<b>To how many of these is open access<sup>5</sup> provided?</b>		
How many of these are published in open access journals?	0	
How many of these are published in open repositories?	0	
<b>To how many of these is open access not provided?</b>		
<b>Please check all applicable reasons for not providing open access:</b>		
<input type="checkbox"/> publisher's licensing agreement would not permit publishing in a repository <input type="checkbox"/> no suitable repository available <input type="checkbox"/> no suitable open access journal available <input type="checkbox"/> no funds available to publish in an open access journal <input type="checkbox"/> lack of time and resources <input type="checkbox"/> lack of information on open access <input type="checkbox"/> other <sup>6</sup> : .....		
<b>15. How many new patent applications ('priority filings') have been made?</b> <i>("Technologically unique": multiple applications for the same invention in different jurisdictions should be counted as just one application of grant).</i>	0	
<b>16. Indicate how many of the following Intellectual Property Rights were applied for (give number in each box).</b>	Trademark	0
	Registered design	0
	Other	0
<b>17. How many spin-off companies were created / are planned as a direct result of the project?</b>	0	
<i>Indicate the approximate number of additional jobs in these companies:</i>		

<sup>5</sup> Open Access is defined as free of charge access for anyone via Internet.

<sup>6</sup> For instance: classification for security project.

**18. Please indicate whether your project has a potential impact on employment, in comparison with the situation before your project:**

not directly as the project develop a framework to check the technologies on their potential contribution towards sustainable water or sanitation service delivery

- 
- 
- 
- 

Difficult to estimate / not possible to quantify

**19. For your project partnership please estimate the employment effect resulting directly from your participation in Full Time Equivalent (FTE = one person working fulltime for a year) jobs:**

taking 220 days/year as FTE, the project provide to the 8 partners, 21.3 FTE of which 15.5 FTE among African consortium partners and 5.8 among European partners

*Indicate figure:*

8 partners, 21.3 FTE of which 15.5 FTE among African consortium partners and 5.8 among European partners

**I Media and Communication to the general public**

**20. As part of the project, were any of the beneficiaries professionals in communication or media relations?**

Yes

**21. As part of the project, have any beneficiaries received professional media / communication training / advice to improve communication with the general public?**

No

**22 Which of the following have been used to communicate information about your project to the general public, or have resulted from your project?**

- |   |  |
|---|--|
| <input type="checkbox"/> Media briefing                   | <input type="checkbox"/> Coverage in specialist press  |
| <input type="checkbox"/> TV coverage / report             | <input type="checkbox"/> Coverage in general (non-specialist) press                                      |
| <input type="checkbox"/> Radio coverage / report          | <input type="checkbox"/> Coverage in national press  |
| <input type="checkbox"/> Brochures /posters / flyers      | <input checked="" type="checkbox"/> Coverage in international press                                      |
| <input type="checkbox"/> DVD /Film /Multimedia            | <input type="checkbox"/> Website for the general public / internet                                       |
| <input checked="" type="checkbox"/> DVD /Film /Multimedia | <input type="checkbox"/> Event targeting general public (festival, conference, exhibition, science café) |

**23 In which languages are the information products for the general public produced?**

English and French

**Question F-10:** Classification of Scientific Disciplines according to the Frascati Manual 2002 (Proposed Standard Practice for Surveys on Research and Experimental Development, OECD 2002):

## **FIELDS OF SCIENCE AND TECHNOLOGY**

### 1. NATURAL SCIENCES

- 1.1 Mathematics and computer sciences [mathematics and other allied fields: computer sciences and other allied subjects (software development only; hardware development should be classified in the engineering fields)]
- 1.2 Physical sciences (astronomy and space sciences, physics and other allied subjects)
- 1.3 Chemical sciences (chemistry, other allied subjects)
- 1.4 Earth and related environmental sciences (geology, geophysics, mineralogy, physical geography and other geosciences, meteorology and other atmospheric sciences including climatic research, oceanography, vulcanology, palaeoecology, other allied sciences)
- 1.5 Biological sciences (biology, botany, bacteriology, microbiology, zoology, entomology, genetics, biochemistry, biophysics, other allied sciences, excluding clinical and veterinary sciences)

### 2. ENGINEERING AND TECHNOLOGY

- 2.1 Civil engineering (architecture engineering, building science and engineering, construction engineering, municipal and structural engineering and other allied subjects)
- 2.2 Electrical engineering, electronics [electrical engineering, electronics, communication engineering and systems, computer engineering (hardware only) and other allied subjects]
- 2.3. Other engineering sciences (such as chemical, aeronautical and space, mechanical, metallurgical and materials engineering, and their specialised subdivisions; forest products; applied sciences such as geodesy, industrial chemistry, etc.; the science and technology of food production; specialised technologies of interdisciplinary fields, e.g. systems analysis, metallurgy, mining, textile technology and other applied subjects)

### 3. MEDICAL SCIENCES

- 3.1 Basic medicine (anatomy, cytology, physiology, genetics, pharmacy, pharmacology, toxicology, immunology and immunohaematology, clinical chemistry, clinical microbiology, pathology)
- 3.2 Clinical medicine (anaesthesiology, paediatrics, obstetrics and gynaecology, internal medicine, surgery, dentistry, neurology, psychiatry, radiology, therapeutics, otorhinolaryngology, ophthalmology)
- 3.3 Health sciences (public health services, social medicine, hygiene, nursing, epidemiology)

### 4. AGRICULTURAL SCIENCES

- 4.1 Agriculture, forestry, fisheries and allied sciences (agronomy, animal husbandry, fisheries, forestry, horticulture, other allied subjects)
- 4.2 Veterinary medicine

### 5. SOCIAL SCIENCES

- 5.1 Psychology
- 5.2 Economics
- 5.3 Educational sciences (education and training and other allied subjects)
- 5.4 Other social sciences [anthropology (social and cultural) and ethnology, demography, geography (human, economic and social), town and country planning, management, law, linguistics, political sciences, sociology, organisation and methods, miscellaneous social sciences and interdisciplinary, methodological and historical S1T activities relating to subjects in this group. Physical anthropology, physical geography and psychophysiology should normally be classified with the natural sciences].

### 6. HUMANITIES

- 6.1 History (history, prehistory and history, together with auxiliary historical disciplines such as archaeology, numismatics, palaeography, genealogy, etc.)
- 6.2 Languages and literature (ancient and modern)



- 6.3 Other humanities [philosophy (including the history of science and technology) arts, history of art, art criticism, painting, sculpture, musicology, dramatic art excluding artistic "research" of any kind, religion, theology, other fields and subjects pertaining to the humanities, methodological, historical and other S1T activities relating to the subjects in this group]

# 1. FINAL REPORT ON THE DISTRIBUTION OF THE EUROPEAN UNION FINANCIAL CONTRIBUTION

---

This report shall be submitted to the Commission within 30 days after receipt of the final payment of the European Union financial contribution.

## Report on the distribution of the European Union financial contribution between beneficiaries

### *The final amounts to come after final payment EU in 2014*

Name of beneficiary	Preliminary amount of EU contribution per beneficiary in Euros	Final amount of EU contribution per beneficiary in Euros
1. IRC International Water and Sanitation Centre, The Hague, The Netherlands	€ 408,952.65	
2. Cranfield University, Cranfield, UK	€ 107,982.59	
3. Skat Foundation, St. Gallen Switzerland	€ 174,681.71	
4. WaterAid, London, UK	€ 236,221.75	
5. WSA (former CREPA), Ouagadougou, Burkina Faso	€ 161,023.12	
6. TREND, Accra, Ghana	€ 145,719.75	
7. KNUST, Kumasi, Ghana	€ 99,037.19	
8. NETWAS-Uganda, Kampala, Uganda	€ 143,942.52	
Total in EUROS	€ 1,477,561.28	