

### **1.3 Action Plan for Post Construction Support for Community-Managed Water Systems**

#### ***1.3.1 Description of Technology***

The Post-Construction Support (PCS) technology is aimed at increasing the success and sustainability of community-managed water systems. This is even true for those systems that are implemented according to all the currently recognized best practices of the "demand-driven", community-managed model. PCS is typically carried out through government programs, municipalities and other bodies that provide community-managed water systems. Thus, it is an "aware" technology. Types of PCS include, but are not limited to:

- Technical training for water system operators;
- Technical and engineering support, including provision of technical manuals;
- Financial and accounting assistance (e.g. setting tariffs);
- Help with settling disputes (e.g. bill payment or water sources);
- Help with maintenance, repairs and finding spare parts;
- Assistance in finding external funding for O&M, expansion or repairs;
- Assistance in assessing the sufficiency of supply for expansion or in the case of drought;
- Start-up capital for emergency system repairs;
- Household visits to residents to discuss water system use (Elliot *et. al*, 2011).

PCS contributes to climate change adaptation at the community level through:

- a) Diversification of community water supply;
- b) Promotion of water conservation, and
- c) Increased resilience to water quality degradation.

PCS can empower community water committees and operators to access the financial, management and technical resources that enable utility-managed supplies to prepare for and adapt to adverse precipitation conditions. PCS facilitates community ownership, management

and maintenance of water systems, promotes women participation in their management and improves system performance and sustainability.

### ***1.3.2 Target for Transfer and Diffusion***

Over the years, various types of water systems have been built in several communities in all the ten regions of Ghana. The action plan for the transfer and diffusion of the PCS technology, targets 500 communities in the country where there are various types of water systems. In most of the communities where there are these systems there are serious challenges with maintenance. It is intended that the transfer and diffusion of the technology will be done within a five-year period beginning from 2013 (to 2017).

### ***1.3.3 Barriers to the Transfer and Diffusion of the Technology***

The fundamental problem this technology provides solution to, is the poorly managed community water systems resulting in reduced accessibility of communities to good quality water, increased poverty and general poor community health and wellbeing. There are economic and socio-cultural constraints in the transfer and diffusion of this technology.

The main economic and financial barrier is inadequacy of funds available to communities for emergency repairs and general maintenance of their water systems. This results directly from high maintenance costs and inadequate access of communities to financial resources. The important root causes are the inadequate financial support from government and inadequate support of external agencies resulting in limited maintenance of the community water systems.

The institutional barriers to the diffusion of this technology are conflicting sectoral policies resulting in lack of co-ordination in the implementation of the technology, ineffective management teams at the community level as result of inadequate involvement of communities in implementation of technology and also weak local or district level institutions incapable of effectively driving the management process. Another institutional barrier is inadequate integration of the technology in policy plans resulting in insufficient support from government and other agencies in driving the processes for its implementation.

Technical barriers include untimely maintenance of water systems by communities due to lack of adequate capacity. The root causes of this barrier are inadequate technical and financial management expertise at the local level to empower communities to effectively manage the technology and make it sustainable.

There are also the socio-cultural barriers. These include community reluctance to self-manage their water systems and bias against women and other vulnerable groups in the management and use of the water systems. The root causes are inadequate community development specialists and logistics to design and implement appropriate community educational and awareness-raising programs in beneficiary communities.

#### ***1.3.4 Measures to address the Barriers***

Financial measures hinged mainly on the need for government action to allocate national resources for repair and maintenance of the community water systems within a project framework based on the PCS technology. Stakeholders also need to source complementary resources especially external support for the effective implementation of the technology.

A key institutional measure identified was the development and operationalization of a coherent government policy action on climate change recognising the technology as an important mechanism to increase the resilience of vulnerable communities to the impacts of climate change on water availability. Such a policy action should provide sufficient institutional arrangement for sectoral policy harmonisation and strong local institutions to form, monitor and supervise management teams at the community level.

Technical measures should aim at ensuring that the necessary expertise and logistics are available at the local level to give communities the necessary training to enable them manage the technology adequately and derive optimum benefit from it. In addition, government should encourage the involvement of external agencies in the technology dissemination and sustenance.

Community development specialists would be required to properly animate communities and raise their awareness in order to overcome inappropriate socio-cultural practices. The various

measures constitute the basis for the action plan for the transfer and diffusion of the technology.  
This is summarised in Table 1.3.

**Table 1.3 Summary of Action Plan for Post-Construction Support Technology**

| <i>Action/ Measure</i>   | <i>Why Action</i>   | <i>Responsible Agent</i>   | <i>Period</i> | <i>Cost</i>                                     | <i>Sources of Funding</i>   | <i>Indicator of Success</i>                          | <i>Challenges to success</i>   |
|--|---|--|---------------|---|---|--|--|
| Post construction support for 500 communities ó material inputs (e.g. cement, spare parts for pumps) | Communities nationwide need resources to properly manage and maintain water systems | District Assemblies in collaboration with the Ministry of Water Resources, Works and Housing (MWRWH):<br><br><i>District Assemblies – implementation at district level</i><br><br><i>MWRWH: oversight and coordination of project implementation</i> | 2013 ó 2017   | \$10,000 per community<br><br>Total \$5,000,000 | Government of Ghana, development partners (multi & bilateral agencies), SADA, private sector and NGOs | 80% of baseline documented systems being functional. | - Too few community- or district-based input suppliers resulting in scarcity and high cost of inputs |
| Enhancing technical capacity at district and community levels for maintenance of water systems ó     | Need for skilled personnel to ensure effective maintenance                          | District assemblies, communities, Local government service and technical agencies:   | 2013 ó 2017   | \$5,000 per community<br><br>Total              | Government of Ghana, development partners (multi & bilateral agencies), SADA,                         | 80% of baseline documented systems being functional. | -Unwillingness of communities to undergo technical training<br><br>-Non availability of              |

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|---|---|---|--------------|--|---|--|---|
| recruitment, training, technical assistance   |   | <i>MWRWH – technical assistance, training.</i><br><br><i>Agents in districts – community mobilisation and project implementation</i>  |              | \$2,500,000                                      | private sector and NGOs   |  | requisite technical expertise to undertake training in the communities                                  |
| Management systems including monitoring at all levels of community, district, regional and national | There is need for management and monitoring systems to ensure effectiveness | National Project Coordination Unit, communities, district assemblies, regional authorities:<br><br><i>PCU – coordination and monitoring.</i><br><br><i>Regional and local authorities – monitoring in communities</i> | 2013 to 2017 | \$3,000 per community<br><br>Total - \$1,500,000 | Government of Ghana, development partners (multi & bilateral agencies), SADA, private sector and NGOs | Establishing PCS as a regular feature of building water systems for communities. | - Non availability of requisite technical expertise to undertake management training in the communities |
| Total   |   |   |              | \$9,000,000                                      |   |  |   |