ASSIGNMENTS: 3

1. **Why is community based managed essential in management of water resource?**

**Answers**:

Because community management refers to the capability of a community to control, or at least strongly influence, the development of its water system, and it is indeed essential for the purpose of maintenance, sustainability and replicability than when it is to be directly under Payam / county management.

**Community management consists of three basic components**:

**Responsibility**: the community takes on the ownership of and attendant obligations to the system.

**Authority**: the community has the legitimate right to make decisions regarding the system on behalf of the users.

**Control**: the community is able to carry out and determine the outcome of its decisions." An emphasis should be placed upon establishing good communications between professionals and communities facilitating closer dialogue and partnership, helping governments to move from being providers to becoming promoters and facilitators at grass roots level.

There is a powerful logic to community management of water supplies. The resource is local, its use is local and its effects are local. Nevertheless, it has to be recognized that there are genuine fears among agency staff (and at higher levels of government) that empowerment of communities to manage their own systems may diminish the role of and respect for water agency staff or conflict with national government priorities. In Sudan, Yemen, Uganda and Honduras and Cameroon such fears have proved unjustified. Support for community managed water supplies has brought more effectiveness and greater job satisfaction in the implementing agencies while the community water management organization have remained non-political

1. **With examples, discuss the difference between Community management and Community**

**Participation.**

**Answers:**

Community Participation

Community participation arose as a concept in the mid-1960s. It was not adopted by the International Drinking Water Supply and Sanitation Decade (IDWSSD) until the mid-eighties after it became apparent that governments and donors could no longer afford totally centralized operation and maintenance systems for water and sanitation. Planners began to realize that in order to share the responsibilities for maintenance, beneficiaries or users would have to be involved in some way in the on-going maintenance of their own community systems.

It is now realized that if communities are expected to take responsibility for maintenance, they must also be involved in planning and implementation of projects from the initial stages. They must develop a sense of "ownership" and understand that maintenance is essential, and is a community responsibility.

Communities should be perceived as informed consumers, clients and managers, capable of making choices as to the type of services they have the capacity to provide rather than passive receivers. Communities must also acquire management and organization skills with leadership capable of defining tasks and managing facilities. It should be recognized that many communities may already have considerable management and organizational skills.

Central agencies responsible for water and sanitation must change from "benefactors" who make all the decisions to "facilitators" who enable communities to make their own decisions.

**A classification of different types of community participation, developed in 1984, is listed below**

1. Consultation

2. A financial contribution by the community

3. Self-help projects by groups of beneficiaries

4. Self-help projects involving the whole community

5. Community specialized workers

6. Mass action

7. Collective commitment to behavior change

8. Endogenous development

9. Autonomous community projects

10. Approaches to self-sufficiency

**Community Management**:

According to McCommon et al., "the distinctive feature of community management is the nature of decision making and the locale of responsibility for executing those decisions.

Community management refers to the capability of a community to control, or at least strongly influence, the development of its water and sanitation system. Community management consists of three basic components:

**Responsibility**: the community takes on the ownership of and attendant obligations to the system.

**Authority**: the community has the legitimate right to make decisions regarding the system on behalf of the users / beneficiaries.

**Control**: the community is able to carry out and determine the outcome of its decisions." An emphasis should be placed upon establishing good communications between professionals and communities facilitating closer dialogue and partnership, helping governments to move from being providers to becoming promoters and facilitators.

**According to McCommon et al., important preconditions for community management are likely to include the following:**

"There must be community demand for an improved system;

The information required to make informed decisions must be available to the community;

Technologies and levels of service must be commensurate with the community's needs and capacity to finance, manage, and maintain them;

The community must understand its options and be willing to take responsibility for the system;

The community must be willing to invest in capital and recurrent costs;

The community must be empowered to make decisions to control the system;

They should have the institutional capacity to manage the development and operation of the system;

The community should have the human resources to run these institutions;

There should be a policy framework to permit and support community management;

Effective external support services must be available from governments, donors, and the private sector (training, technical advice, credit, construction, contractors, etc.)."

**The benefits of community management should include the following (McCommon et al., 1990):**

 Short term improvements in system performance such as greater use of water and sanitation facilities, adoption of improved hygiene practices, and greater community support for system maintenance;

 Changes in support conditions: long term improvements in available resources and complementary investments;

 Long term impacts: anticipated health, social well-being, economic and environmental quality changes.

**The workshop held in The Hague, The Netherlands (1992) studied in depth seven case studies from developing countries including Honduras, Guatemala, Cameroon, Yemen, Indonesia, Pakistan and Uganda. The principal findings were the following**:

Community Management goes beyond community participation and equips communities to take charge of their own water supply improvements.

Some critical features distinguish community management from community participation and are at the heart of successful community managed water systems.

The community has legitimate authority and effective control over management of the water supply system and over the use of the water.

The community commits people and raises money toward the implementation and upkeep of the water system. The link between the scale of community contribution and the resulting sense of ownership is not yet well understood, but the need for a significant contribution is well established.

Supporting agencies provide advice and technical support, but all key decisions are taken with the community. This means that real choices must be offered, backed by a full appraisal of all the resources needed for each.

Development of people is a parallel goal with development of water. Community management is "people-centered". Its success depends on the user community and support agency staff acquiring new skills and confidence in applying them. Special capacity-building techniques are required.

Local organizations for water management are in tune with existing community decision making structures and ensure that the views of all section of the community are reflected in management decisions. Strong community leadership, or the continuous involvement of a charismatic individual, has been shown to be a major factor in the success of many community-managed water supplies. Women are known to be highly influential in community-managed water supplies, though the influence is not always apparent in organizational structures.

Community Management involves a long-term and changing partnership between communities and supporting agencies. It strengthens the capacity of each partner and enables their combined resources to be used more effectively.

A community's partners in the management of its water supply system may include government agencies, NGOs, the private sector and crucially, other communities. Relationships change as the community develops greater capacity to manage its own affairs and to choose for itself where to acquire the support services it needs to keep its water system functioning reliably. Inter community collaboration can add a new dimension in terms of both resource sharing and replicability.

The case studies include a wide variety of community management applications matched to particular cultural and socio-economic settings. In Guatemala, Pakistan and Indonesia support from national and international NGOs enable communities to implement and sustain cost effective water projects and in some cases to replicate those projects through evolving community networks. In Yemen, Honduras, Uganda and Cameroon, government agencies successfully transfer control of water projects to communities while enhancing their own performance and status

I Julius had an experience while working for Samaritan’s Purse as WASH team leader from 2006 – 2008 in Darfur of Sudan, whereby most of WATSAN activities were executed through community participation and couple of water systems were own and managed by communities and most of them were cost effective.

Therefore, even if there are great differences between community management and community participation as reflected above. However, they are both of great important to communities in service delivery for the purpose of ownership, sustainability and replicability.

1. **Give five maintenance problems and difficulties. How can you overcome maintenance difficulties in the water supply system management?**

**Answers**:

**The five maintenance problems and difficulties are**:

* High cost – mainly from transportation of tools and spare parts.
* Reluctance of communities - protect and care for the water system which are considered to be the responsibility of far government.
* Long system down - times because of long waiting for Technicians/mechanics to arrive
* Corruption – tools and spare parts sold due to no incentives / salaries not being paid for the last five months to the civil servants, like E.g. Current situation of South Sudan.
* Insecurity – inaccessibility to hard to reach areas.

In recognition of these problems, most governments and country programs are now establishing systems of village level operation and maintenance where community members are primarily responsible for the operation and maintenance of installations.

Village Level Operation and Maintenance (VLOM) is a strategy to help in solving the widespread problems experienced with centralized maintenance. Experience in one country after another has shown that a central maintenance system, requiring a motor vehicle and crew to move out from a base camp, is unable to keep pumps in satisfactory operational condition. The large expense of such maintenance and the logistical and staffing needs to supply enough experienced and motivated teams of mechanics to carry out repairs promptly have proved very difficult to sustain. But the desirable alternative of village-level maintenance is only feasible if the pump design allows for it. A common feature of successful hand pump projects is the emphasis on village management of maintenance, reducing the dependence on central government support of essential functions. In the extended VLOM concept, where "M" means management of maintenance, these elements have been added:

1. **What are Water technologies available in your area? Explain five**.

**Answers**:

1. **Household connections**: Urban water system which delivers water through taps to household / individual.
2. **Standpipes**: Pipe distribution system could be from elevated tank through gravity connected to number of taps which serve beneficiaries in a location.
3. **Rain water harvesting**: Directly from roofs through gutters to storage tanks for use at schools or individual houses.
4. **Single point system**: Which usually comprises of borehole / hand dugs fitted with hand pump for easy drowning of water.
5. **Springs**: Usually found in mountainous formation, to be protected and connected through taps for use by beneficiaries.
6. **How do you ensure cost effectiveness in supply of water?**

**Answers**:

Cost effectiveness can be ensured in water supply through establishment, Operation and Maintenance Costs of a water system including the more obvious costs such as the cost of the labor, materials and equipment needed for the construction of the system but also forgetting the cost associated with project planning and administration, donor agency overheads, import duties, equipment authorization, etc.

Operation and maintenance costs are frequently higher than originally anticipated and not fully taken into account at the project planning stage. Although the situation has improved in recent years with the application of lessons learned over the last two decades, there are still many water supply projects that ultimately fail because of inadequate provisions for these costs. These had been seen in a rise in the cost of fuel or electricity for pumps in a piped water system. However there are also many examples of "low maintenance" options such as hand pumps or photovoltaic solar systems in which the operation and maintenance costs become far higher than originally planned.

**Variables Affecting Cost**

The cost of water can vary from a couple of dollars / South Sudanese pounds to several hundred dollars / pounds per person served and depends on a number of variables:

**Technology Choice**

There is always a choice of technologies for new water supply systems that affects the final cost of the system. This choice is often related to the level of service desired but can also be influenced by other factors such as the type of source, government and donor agency preference, and the lack of awareness of or unavailability of alternatives.

**Level of Service**

The two basic indicators for level of service are the quantity of water per person per day (often expressed as the number of people served by each water point) and the minimum distance from a water point. A country that has defined the minimum level of service to be 500 people per water point within 2 kilometers will pay less than a neighboring country that has defined the minimum as 150 people within half a kilometer. Or, within the same country, the cost of an urban system based on in-house connections (one family per water point within 0 kilometers) will be significantly higher than the cost of rural systems.

**Labor and Material Costs**

These costs are highly variable within and between countries and regions and have a major influence on the final cost of the system. The degree to which a project depends on highly skilled national or expatriate technicians influences the overall cost. Another important factor is the amount of material and equipment which must be imported from abroad. While importing equipment such as hand pumps may be economically justifiable (and may be the only option available) during the construction phase of the project, it can create problems later with the maintenance of the system, especially if no provision has been made for the continuing import of spare parts once the project has finished.

**Accessibility and Quality of the Water Source**

The least expensive water supply systems are, with few exceptions, based on shallow-to-medium depth groundwater sources. This is because there are a variety of inexpensive technologies to tap and pump the water (hand-dug wells or bore wells with hand pumps) and, of equal or greater importance, the water does not often have to be treated before use. The use of other water sources such as deep groundwater that is beyond the range of hand pumps, bacteriologically polluted ponds or streams, or groundwater with high concentrations of iron or fluoride can significantly increase system costs. Even water sources which, at first glance, appear to be plentiful and of good quality can be much more expensive to tap than shallow groundwater. Examples include rainwater-based systems, which can become very expensive because of the need to construct large storage reservoirs, and springs, which are often too far from beneficiaries and thus require expensive piped systems. In all cases the specific situation determines the final choice of water source - in hilly areas; for example, a spring-fed piped water system may be more cost effective than hand-dug wells or bore wells.

**Efficiency and Cost Effectiveness of Project Management**

The cost of management can be a significant proportion of the overall project cost. Overhead costs of government, NGOs and donor agencies contribute to, and thus must be included, in the overall cost of a water system. Management expenses and overheads in some projects can easily add 25 percent or more to the total project cost, and can thus significantly affect its cost effectiveness. Inefficient project management is often a factor that results in costly projects. Poor logistics resulting in equipment down-time, non-standardization of equipment, problems relating to transportation or port clearance, and the under-utilization of labor or equipment are all common examples of inefficient project management.

**Community Management**

Numerous examples have shown that a project that is managed by the community itself is much more cost effective in the long run than a "top down" project. When the community is involved at every stage from planning to operation and maintenance, and thus has a real sense of ownership of the system from the outset, many costs are minimized or eliminated. Cost savings can be direct such as when the community provides volunteer or low-cost labor during construction or contributes locally available materials. Indirect cost savings are often more important: for example, when the community is involved in the planning stage of the project, it may provide the local knowledge necessary to avoid using a water source that would be inappropriate for cultural reasons or identifying a water source such as a spring which may have been overlooked by outsiders. Cost savings through community management are often significant in the area of operation and maintenance: a routine maintenance programme designed and implemented by the community itself will function much better than a system imposed from outside and will result in a reduction in repair and replacement costs.

**Involvement of Women**

Women are the primary stakeholders in the area of domestic water supply. They are responsible for water at the household level, and are traditionally influential in any decisions regarding communal water supplies. If women are fully involved at all stages of project implementation, the risk of costly errors in system design will be minimized. In addition, the active participation of women in community management bodies will ensure that these bodies are effective, and therefore cost efficient.