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**AIPMS/144/2018**

**MODULE THREE OR WEEK 3 ASSIGNMENT**

**Question 1**

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

Community based management is the bottom up approach that involves local resource users and community members in active management and responsibility of resources.

It’s the local stake holder participation in the planning, research, development, management and policy making for a community as a whole

Involving individuals and communities in the entire process is more effective and certainly more monetarily efficient.

It’s a well-known fact that for individuals to invest their efforts in a cause they must feel some sense of ownership.

Without a feeling of personal responsibility and attachment to the outcome, people will struggle to invest time and energy.

This is one of the reasons that top down management which excludes beneficiaries from decision making processes can fail to bring about behaviour change.

Excluded populations tend to harbour feelings of resentment as well as experiencing direct losses to their livelihoods.

Community based management is a strategy for enhancing outcomes while also seeking to improve the livelihoods of the community members

Community based management enables the local people to deal with the unique social, political and ecological problems, their community might face and find solutions ideal to their situation

It ensures involvement of the beneficiary communities in the management of water supply facilities

Community based management can be implemented through community awareness campaigns, community contribution this can be in form of sand, bricks, manpower that can be used for example in the construction of bore halls, hand pumps, elevated water tanks.

Community based management helps give the beneficiary community sufficient information and skills for the supervision of the actual construction works

It ensures sufficient community empowerment and monitoring

It’s the best way of achieving sustainability of water supply resources like boreholes, elevated water tanks, taps, and hand pumps.

It should therefore be observed that water resource projects that do not actively involve the beneficiary communities cannot be sustainable

**Question 2**

**With examples, discuss the difference between community management and community participation?**

Community management is the management of a common resource or issue by a community through the collective action of volunteers and stakeholders.

Community management strategies are frequently employed to encourage sustainability, build relationships within the community, create value for members who participate in the community to create a community where people feel they belong, enhance awareness as this keeps the project fresh in the minds of the people, improves public perception, creates advocates which entails discovering, identifying and nurturing brand advocates and key influencers, collect analysis and feedback, educate existing and potential users.

Community participation is the involvement of people in a community project to solve their own problems.

People cannot be forced to participate in projects which affect their lives but should be given the opportunity to engage where possible.

For example, communities affected by disaster should be given maximum opportunity to participate in emergency relief programs, contribution of ideas making decisions and taking responsibility.

Involvement of people in a community project to solve their own problems

Community participation can take place during any of the following;

Needs assessment, expressing opinions about desirable improvements, prioritising goals and negotiating with agencies.

Planning, formulating objectives, setting goals and criticising plans

Mobilising, raising awareness in a community about needs, establishing or supporting organisational structure within the community

Training, participation in informal and formal training activities to enhance construction and maintenance.

Implementing, contribute directly to construction, operation with labour, materials, contributing cash towards costs

Monitoring and evaluation, recognising improvements that can be made and redefining needs.

**Question 3**

**Give 5 maintenance problems and difficulties. How can you overcome maintenance difficulties in the water supply system management?**

**5 maintenance problems and difficulties:**

* **Storage filtration tanks:** regular cleaning and replacement of filters
* **Water distribution system:** inspection and repair leakages on pipelines and replacement of broken fittings, gate valves, taps, booster pumps etc….
* **Boreholes’:** replacement of faulty submersible pumps.
* **Regular inspection of sanitary appliance for proper maintenance**
* **WWTP:** waste water treatment plans connected with septic tanks and repair leakages on the drainage pipelines

**How can you overcome maintenance difficulties in the water supply system management:**

Water supply system consists of infrastructure that collects, treats, stores and distributes water between water sources and consumers.

Institutional arrangements, high costs mainly in terms of transportation, reluctance of end users to take any initiatives to protect and prevent misuse of installations which are considered to be the responsibility of the WATSN unit or distance government in large Secheles

Technical issues, unaccounted for water, leakage and wastage which is not actually billed for and water charges for the same are not realised from the consumers

Degradation of the quality of water

Reduction in carrying capacity

Inadequate pressures at rail ends of the system

**Question 4**

**What are the water technologies available in your area, Explain 5?**

**Primary waste water treatment plants module 3 (WWTP):**

With this sewage and waste water are treated in large volumes to render it recycled and treated. This water is eventually used for irrigation purposes so as to improve the environment, we use this water to washing cars, water the dusty roads.

**Water treatment plants desalination filtration units module 1:**

Here water is treated from its raw form to a state where it can be used for drinking.

**Main pipe lines network connected with storage water tanks and booster pumps:**

These provide clean and safe water to the premises and this is used for washing, bathing and cooking purposes

**Laboratories:**

Here water is tested in our laboratories to make sure that it is clean and safe from impurities

Improved sanitation. We use modern and improved sanitary appliances these help in purifying the water we use

**Question 5**

**How do you ensure cost effectiveness in supply of water?**

Optimise the unit cost of water supply through proper water resource and treatment planning. This can be done by minimising the unit cost of delivering water to the customer whilst meeting environmental compliance will result in the rationalisation of water supply in the areas with time

Prepare and implement demand management and customer education strategies.

Demand management encompasses activities to manage the use of water as a sustainable resource whilst protecting the environment.

Focus on customer demand in combination with reduced leakage will ensure costs of water abstraction treatment and distribution are reduced, domestic metering programme with water use figures provided quarterly bills and the potential customer savings for low water use. Provide specific advice to commercial and industrial customers on how to reduce water wastage