

GEOG 371 Rural Water Supply and Sanitation

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Dr. Mohamed Babiker Ibrahim

Final exam Q(4)

Write an essay about the factors that should be considered when building sanitary facilities. Give 4 examples from articles published in peer reviewed journals.

- There are many problems pertaining to the introduction of sanitation services to an area.
- These include: **Community acceptance and participation, Costs and funding, Religion and cultural beliefs** as well as the **Physical and Environmental factors**.
- 1- **Community acceptance and participation** in selection and implementation of the sanitation facilities is thought to be the mainstay of social development.
 - As we know, community participation is an important element of sustainable development.
 - Community must be involved in the selection of Latrine sites,
 - also the organization of hygiene education programs and lectures in order to improve living conditions.
 - One main problem facing community participation is that sanitation is not a popular topic for conversation because it is sometimes connected with inhibitions, superstitions and plain embarrassment.
- 2- **low cost technologies**. Because of the high cost of implementing sanitation, low cost technologies are becoming the concern and worries of decision makers.
- Introducing latrines must be cost effective to enhance community participation.
- Programs of improving sanitation should be of a low cost by using local manpower and materials.
- It will become very dangerous if the system is centrally operated without a local input.
- Therefore, community, **self financing** in introducing water and sanitation is very important.
- 3- **Religion and cultural beliefs**. In many countries, it is considered as a taboo for men and women to share the same latrines, where they believe that women's (menstrual) blood will be sterilizing men.
- Also, there seems to be a widespread perception that children feces (waste) are harmless.
- Therefore, they are often found on floors, or even worse, cloth diapers are washed with dishes. To improve public health children must be encouraged to use latrines.
- Also in some cultures people believe that small water bodies such as ponds and wells are the habitations of spirits and thus should not be disturbed or covered.
- There are many examples where new technologies have been introduced, but the behavior of the villagers has remained unchanged. Thus, facilities have become abandoned and disease rates have increased.

- **4 - Physical environment, geology and climate** should carefully be considered when supplying sanitary facilities to different communities.
- Transmission of disease depends upon how long the disease organisms can live and thus depend upon the physical environment.
- The physical environment includes availability of moisture, temperature, soil acidity and soil permeability.
- Therefore, an accepted form of sanitation in one area does not mean it is suitable for another. For example, many communities in the developing countries do not have an adequate water supply; therefore, they require facilities that are not dependent on water.
- When constructing latrines, it is important to know the local condition of **soil quality** and the **water table** location.
- Surface water is contaminated by microorganisms washed in from the soil that was contaminated by human and animal **excreta**.
- Groundwater sources can be protected. Studies showed that pollution from latrines does not extend further than 1-5 feet in dry or slightly moist soil.
- If this pollution came into contact with groundwater source, it could travel to 232 feet away or more.