Module 3- WASH in Emergencies

Assignment 3:

*Water Hygiene and Sanitation (WASH)*

BY

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SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF A DIPLOMA IN WATER SANITATION AND HYGIENE TO STRATEGIA NETHERLANDS

31 March 2019

**Introduction:**

As stated by the World Health Organisation (WHO) in its “Guide to equitable water safety planning: Ensuring no one is left behind”: “The lack of access to safe drinking water is felt disproportionately by those who are disadvantaged socially, economically, demographically or geographically, and explicit consideration of these groups is required to understand and address disparities.” (WHO, 2019, p.1). This quote denounces the well-known problematic of the poor access to safe-drinking water in developing countries and the necessity, even today, to ensure the provision of safe and reliable sources of water to un-served segments of the population. The main focus of these operations being always, and as promoted by Sphere Project guide, “Humanitarian Charter and Minimum Standards in Disaster Reponses”: alleviating suffering, meeting essential human needs and restoring life with dignity for populations in need (The Sphere project, 1998, p. 1). This research paper while still being centred on Water, Hygiene and Sanitation (WASH) aspects of disaster response, focuses on community empowerment and health maximisation (acquired through the synergic integration of water supply, sanitation, health and education programmes) in order to attain self-sufficiency and self-management of their water supply schemes (Strategia Netherlands, 2018, p. 3). This paper will therefore pivot between five central questions, namely: Why is a community-based managed essential in management of water resource? What is the difference between Community management and Community Participation? What are five maintenance problems and difficulties and how can you overcome maintenance difficulties in the water supply system management? What are Water technologies available in your area (5)? How do you ensure cost effectiveness in supply of water?

1. **Why is community-based management essential in management of water resources?**

As previously stated in the introduction, this third assignment puts an accent on Water, Hygiene and Sanitation (WASH) aspects of disaster response but with a particular focus on community empowerment and health maximisation (acquired through the synergic integration of water supply, sanitation, health, education and training programmes) in order to attain self-sufficiency and self-management of their water supply schemes. Community management therefore implies the optimal use of resources available within a community with support from government agencies, NGOs, the private sector, and potentially, other communities (Strategia Netherlands, 2018, p. 37). Due to the importance of pushing communities towards self-sufficiency and self-management, it is absolutely crucial that we, as humanitarian helpers, accept the postulate of “cultural distance” with the community we are trying to reach since the most effective/successful interventions are based on the experiences of the concerned community (traditional knowledge of the land, it’s people, etc.); this necessarily passes by recognition of their ability to assert themselves, to respond to their needs, to improve their living conditions (taking their experience as a source of learning without arriving with the Western bias of the "ready-made answer") through mutual exchanges (RÉFIPS, 1994, p.8). Furthermore, community-based management of water resources cannot be achieved without the community empowerment (through decentralisation and free decision-making regarding their natural resource management: land, water, livestock and forest) (Strategia Netherlands, 2018, p. 5). Actions, wherever possible, should therefore be community-based. This involves drawing personnel and other resources from the affected community (as much as possible); ensuring that the design, implementation and evaluation is carried out by community members (as far as possible); ensuring that decisions are based on the community’s cultural and traditional coping mechanisms; and decentralising as much authority as possible for decision-making and resource use to the community (United Nations Children’s Fund, 1986, p.388). In fact, as stated by McCommon in Strategia Netherland’s Manual, "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” (Strategia Netherlands, 2018, p. 38). Furthermore, and as stated by the ICRC’s Handbook on War and Public Health, lack of involvement of the community (ex: supplying ready-made technical set-ups without prior consultation) dooms such projects to failure due to the lack of ownership/responsibility resulting from these unilateral (“Top-Down”) decisions (Perrin, 1996, p.102). Community management therefore also becomes a matter of efficiency and cost effectiveness since the involvement of the community in every stage (from planification to operations/maintenance) creates a real sense of proprietorship of the systems therefore ensuring its member’s use and maintenance (Strategia Netherlands, 2018, p. 54). Lastly, the community’s management of water resources (through acquisition of tools and knowledge of local water resource management) will increasingly allow them to advocate on external measures/factors/events/decisions taken outside their community which directly affect their water balance (in order to achieve equitable balance between competing consumers: e.g. Companies, etc.) (Strategia Netherlands, 2018, p. 4).

1. **What is the difference between Community management and Community Participation?**

As stated in the REFIPS practical guide “intervening in health promotion with the help of the ecological approach” (traduced from French here),   
a central condition to the success/sustainability of a program, with regards to cultural distance (etc.) is the involvement of potential stakeholders of the program in order to judge their level of support/opposition and predict their behaviour in relation to the program (among other things; e.g. religious/cultural constrains, determining the type of training necessary, etc.) (Renaud & Lafontaine, 2011, p.31). Moreover, due to the fact that such stakeholders (communities, local organisations, NGO’s, etc.) constitute the main target audience, it is central to “create”/encourage/maintain their implication/engagement/motivation to ensure the perennity and perpetuity of the program (Renaud & Lafontaine, 2011, p.33). From this point on, the biggest challenge therefore becomes maintaining cooperation and dynamism between the mentioned stakeholder. This explains why “Top-Down” decision-making has increasingly been replaced by more inclusive “Bottom-Up” strategies since experience showed it led to poor behavioural changes from beneficiaries (e.g. maintenance and use of pumps) resulting from the lack of feelings of ownership (absence of personal responsibility/attachment to outcomes) (Smith, 2018). This brings us to the differences between community participation and community management in such a context. As stated in the IFRC “Handbook on War and Public Health”, communities should be involved at all stages of a WASH project (choosing the source, technical set-up decisions; e.g. pumps, distribution systems, etc.) (Perrin, 1996, p.102). Srinivasan, in the Strategia Netherlands Manual, advances that community participation involves helping community members to develop the outlook, the competence, the self-confidence and the commitment which will ensure a sustained and responsible community effort in the sector (rather than solely doing basic training - e.g. teaching people how to function in a committee or how to fix a pump, etc. -). Moreover, following the idea of behavioural predictions in relation to a program, community participation (through sensitive/facilitative approaches -e.g. including community leaders, traditional chefs, educators, women, etc.-) has been demonstrated to be a potentially vital tool to “distil”/diminish problematics (fears, doubts, suspicions, etc.- linked to poor/absence of behavioral changes, use, etc.) that run against a proposed change/program (Strategia Netherlands, 2018, p. 46). Community management, on the other hand, goes beyond the prior postulates of community participation. As stated in the Strategia Netherlands Manual, while still involving skill development (etc.), community management is a process by which the community members take charge of their own water supply improvements and acquire/have the capacity to control/strongly influence decision regarding the development of their water and sanitation systems. Furthermore, it involves three postulates which include that communities take responsibility (ownership leading the acceptance of attending to obligations linked to the system -e.g. maintenance, etc.), have authority (legitimisation of the community’s rights regarding the system) and control (ability to carry out and determine the outcome of its decisions) over projects/systems put in place in partnership with actors involved (government, humanitarian, etc.) (Strategia Netherlands, 2018, p.38).

1. **What are five maintenance problems and difficulties and how can you overcome maintenance difficulties in the water supply system management?**

First and foremost, it would be senseless to address the issue of maintenance problems and difficulties without primarily offering a definition of what constitutes Operation and Maintenance (O&M) activities in water supply system management. As stated in the International Rescue Committee’s (IRC) briefing notes on the “Operation and maintenance of water facilities in Uganda – a case for increased funding”, an appropriate definition of O&M would be “the sum of activities required to achieve smooth running and continuous sustenance of a water facility to ensure long-term service” which allow community benefits on multiple levels (from reduced water collection time to increased health or diminishment of dependency towards external organisations, etc.) ; poor O&M therefore constitutes one of the first potential problems encountered in such programs as it may undermine the goal of improving the quality of life through provision of safe and clean water (IRC, & UWASNET, 2015, p.2). Therefore, and as previously stated in the paragraphs above, it goes without saying that the first step to ensure the control of potential maintenance problems in water supply systems is community participation and management (as soon as possible) since they will both ensure sustained and responsible community effort in the sector (resulting from the feeling of ownership – e.g. three postulates: communities take Responsibility, have Authority and Control). Unfortunately, and as stated by the Strategia Netherland Manual, appropriate/functional maintenance programs (with particular focus on special considerations as: location, education/training/specialisation, material/equipment scarcity and access difficulties, etc.) often represent bigger challenges that the installation water systems themselves (Strategia Netherlands, 2018, p. 110). Another maintenance problem which may arise if not dealt with appropriately is inadequate technical support from the district/sub county staff, inadequate numbers of Pump Mechanics and lack of tools for them (IRC, & UWASNET, 2015, p.2). Due to the fact that all water systems require maintenance and occasional repairs, the very often poor access to technical professionals tends to become a central problem in communities. A number of institutional arrangements can therefore be advanced in order to mitigate the mentioned problematics - the selection of hand-pump caretakers in the village to insure adequate maintenance and routine of the systems, regular inspections from subdistrict level pump mechanics to ensure minor repairs when necessary, and provincial/state level highly trained mechanic teams with adequate material access to insure major repairs, replacements (etc.) – which will in turn ensure the appropriate maintenance of the site and address potential problematics which may arise in time (Strategia Netherlands, 2018, p. 103). Furthermore, despite the necessity for occasional repairs and maintenance, appropriate selection of specialised materials for water supply systems (e.g. pump selection, etc.) is a central solution to overcoming potential difficulties and problems which arise from frequent, heavy intense use (as it is the case in communal facilities). It is therefore important to ensure the potential standardisation of a small number of models which are locally appropriate (proximity to access/manufacturers, simple to use, which require minimum amounts of tools/training in order to ensure maintenance capacity from community members) (Strategia Netherlands, 2018, p.106). Moreover, following the above-mentioned potential need for locally appropriate standardisation of a small number of pump models, it is crucial to guarantee access to the chosen types of models. Ensuring that communities have “immediate” (as much as possible) access to adequate types and quantities of spare parts to ensure maintenance should therefore be another focus point of any operations. Due to the fact that this assignment puts an accent on the importance of community management and spare part availability/replacement training, it goes without saying that such programs imply that stocks should be held by the communities themselves (necessity for additional planning, financing and the creation of storage facilities), by caretakers/mechanics or potentially by private merchants (granting access to the materials when required) (Strategia Netherlands, 2018, p. 109).

1. **What are Water technologies available in your area (5)?**

First and foremost, it goes without saying that as a Canadian citizen, living in a developed (economically, technologically, etc.) country, my “reality” in terms of water access and technological access (etc.) is extremely different from individuals living in countries “in development” where access to clean water (which some people here consider a wasteful commodity – e.g. car wash, garden watering, etc.) is often scarce and equipment to attain it is often expensive and hardly accessible. This section will therefore cover five types of water technologies available in my area, namely, the Province of Quebec. The most obvious and omnipresent Water technology in Quebec is “Household connection” which is a piped-based water delivery system which grants us access to what seems like “almost unlimited” amounts of water in every household and in most municipalities. Another very common technology present in our province is standpipes, mostly used in national parks to the often-high distances with municipalities pipes systems. The use of Single Point systems is still up to date in some national parks and in some villages (e.g. Gaspé, etc.) where individuals prefer to consume water that comes from their own land/mountain springs (this obviously implies very strict standards of treatment to ensure control over possible contamination related to fecal coliforms -animals and humans-, chemicals, etc.). Furthermore, it is quite common for individuals from those regions (as myself – Gaspé) to use elevated tanks in which they store rainwater which is collected by roof catchments and ground catchments. It goes without saying that such systems in Quebec do not serve the same “survival” purpose as they do in developing countries but rather as a tool of “guilt reduction” for some (in the context of the pro-environment movement which has recently become very strong in Quebec) or as a tool for farmers to water their crops and hunters to have access to water in their “huts” during the hunting period (very popular sport in Quebec; unfortunately, Quebec is sadly internationally renowned for its great hunting areas, etc.). Lastly, dug wells or small-diameter drilled wells from which water is drawn using a hand pump are also used by hunters in their “huts” during the hunting period (this being in the particular case where they own the mentioned hunting ground or if they have an "ancestral right" on the ground in question – native: e.g. Micmac’s, etc.- due to Quebec’s strict laws on the use of one’s subsoil/basement).

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

A central aspect of cost effectiveness in any type of projects (this reality is just as true for water supply projects) which involves communities and partners (local/extraterritorial NGO’s, Organisations, private sector, etc.) is adequate coordination – defined by the United Nations Disaster Assessment and Coordination (UNDAC) field handbook as: “ International/National actions to harmonise individual responses to maximise impact and achieve synergy; a situation where the overall effect is greater than the sum of the parts” – since the absence of coordination is characterised by (just to name a few): gaps in services to affected populations, duplication of efforts, inappropriate assistance, insufficient use of resources, frustration of relief providers, officials, survivors and in general, an unsatisfactory response to the emergency (UNDAC, 2006, p. 1). Moreover, due to the fact that this paper gives a particular focus on to strategies as community participation and community management, it seems like cost effectiveness cannot be correctly analysed without observing what I feel should be the central aspect of any intervention of this type: the system’s use. As advanced by the IFRC’s Handbook on War and Public Health, one cannot judge a water supply system’s performance and cost effectiveness on the sole base of its capacity to provide water but by the extent to which it is used by beneficiaries and consequently by its impact on a population’s health status (Perrin, 1996, p.102). Furthermore, as pointed out by the Strategia Netherlands Manual, cost establishment and effectiveness depend on a number of variables which, if managed effectively, can dramatically affect the overall cost of a project since inadequate management of expenses and overheads can easily add 25 percent -or even more- to the total project cost (Strategia Netherlands, 2018, p. 54). These variables are : adequate technology choice (based on the level of service desired, the type of source accessible, adequate coordination -government and donor agency preferences- and the availability or unavailability of alternatives), adequation with level of service required/desired (indicators such as quantity of water per person per day, respect of minimal distance from a water point affects use a lot and therefore cost since absence of use equals to wasted money), choosing the right material and labor (cost of local laborers tends to vary greatly between country/regions, degree of use of highly skilled national/expatriate technicians and the amount of material/equipment which must be imported from abroad versus produced in the area can cause overall cost to rise exponentially), choosing the water sources on the base of accessibility/quality (will have a high influence on technological choices -need for particular materials for deep drilling versus use of shallow-to-medium depth water ground water sources- and therefore cost, need or not for decontamination, etc.), women involvement (traditionally influential and being the primary stakeholders in the area of domestic water supply, household keeping -etc.- women involvement will result in lower/absence of costly errors in system design and ensure effectiveness of system/community management and therefore cost effectiveness) and Community Participation/Management with adequate capacity building (ownership resulting from involving communities at every levels of the creation, maintenance and overall management insures the minimisation of money waste and the elimination of various costs) (Strategia Netherlands, 2018, p. 55). Moreover, and as mentioned in the paragraphs above, due to the fact that non-standardisation of drilling equipment, materials and hand pumps increases spare part requirements and therefore operation costs, it is crucial that project managers with the help of community members, put in place the standardization of a small number of models which are locally appropriate (proximity to access/manufacturer, simple to use, which require minimum amounts of tools/training in order to ensure maintenance capacity from community members) (Strategia Netherlands, 2018, p. 106). Moreover, due to the need for occasional repairs and maintained guaranteeing access to the chosen types of models should be a priority. Cost effectiveness of a project therefore involves ensuring “immediate” (as much as possible) access to adequate types/quantities of spare parts (held by communities themselves, caretakers/mechanics or potentially by private merchants -granting access to the materials when required) and community training (through capacity building -e.g. replacement, etc.-) (Strategia Netherlands, 2018, p.109). Lastly, in countries where local production of spare parts cannot take place, cost effectiveness includes advocacy with the local government in order to reduce or eliminate tariffs on import of spare parts (Strategia Netherlands, 2018, p. 60).

**Conclusion:**

In conclusion, while this paper, with regards to this course, still focuses on Water, Hygiene and Sanitation (WASH) aspects of disaster response, it gives a particular focus on promoting what now seems (poste module three), the obvious strategy to adopt in any field intervention, namely: Community Participation and Community management. These very inclusive strategies, also known as “Bottom-Up” strategies, represent optimal guidelines which should be followed by rescue/development teams (International Organizations, local and extra-territorial NGO’s, Partners, Government, etc.) in order to ensure not only adequation with the community’s needs (water access, quantity wise, quality wise), but also community empowerment. Furthermore, this assignment also focuses on determinant factors such as community capacity building and training which together promote sustainable development rather than short-term development through strategies aimed at decreasing the population’s dependency towards outside help and promoting ownership (therefore ensuring communities will not only use and take care of the systems put in place but also have the capacity to repair/replace elements which may deteriorate in time due to frequent use -e.g. pumps, etc.). Last but not least, this paper also puts a particular focus on cost-effectiveness of projects which in this case promotes not only ensuring money is not used inadequately but also, trough community management, that communities are able to invest/repair problematics which may occur by themselves (standardization of pumps/equipment’s, lower the need for equipment which needs to be imported, etc.).

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