

Expert Note
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SUMMARY ACCORDING TO THE GRID

a. Conceptualization of Multiple-Use water Services (MUS), from your own perspective and experiences

Starting from the well established concept of multiple-use services (MUS), “based on the truism that people use water from multiple sources for multiple uses” (Van Koppen et al., 2009), we worked mainly analyzing water services and water demand in the domestic sector of rural South Africa. Unlike many studies in developing countries looking at multiple uses of agricultural water (Renwick, 2001; Renault, 2008) we focused our analysis on possible multiple uses of water delivered for domestic purposes (Kanyoka et al., 2008).

b. Operationalization or specification of that conceptualization in terms of Cost-Benefit Analysis and performance, and related scientific methodologies

Cost-Benefit Analysis (CBA) requires quantitative monetary values. In developing countries, especially in rural areas, households fetch water directly from public sources at no cost other than their time or receive water from collective village taps where a fixed rate is charged. In both cases price data necessary for measuring and studying water demand behaviour are either missing or do not contain sufficient information to support CBA.

Stated preference methods (contingent valuation, choice modelling, etc.) and revealed preference methods (travel cost, hedonic price, etc.) can provide useful information to feed CBA models in terms of stakeholders preferences and willingness to pay (WTP) for water.

Choice modelling, particularly, provides in-depth information about water users’ preferences and WTP for different characteristics of water services and uses. This information is crucial for water service authorities and providers in order to tailor the provision of these services and the corresponding price based on the local water demand.

c. Evidence and/or hypotheses of the superior performance of MUS compared to single-use approaches with related performance indicators (or be the devil’s advocate on any lack of proof and hypothesized disadvantages)

According to Van Koppen et al. (2009) “Multiple water uses has the potential to enhance health (through drinking, washing, bathing, hygiene), food security, animal health, cash generation, women’s empowerment and alleviate domestic chores or cattle herding to water points.” Other indirect benefits can be added to the above direct benefits, including farming with re-use of water and nutrients around homesteads, the diversity of homestead-scale productive activities and consequent increased flexibility and resilience, etc.

Quantitative analyses and calculations of net benefits were provided by Renwick et al. (2007). A thorough research program implementing CBA analysis in accurately selected case studies in different countries can provide a scientifically sound argument to this supposed superior performance, based on a well established and recognized methodology.

d. Three most promising next steps to tap the untapped opportunities of MUS for practical change in design and implementation

Use CBA to prove/challenge MUS superiority over SU in terms of economic efficiency;

Analyze positive (or negative) externalities deriving from MUS: e.g. improved health/bhn satisfaction through the domestic use of agricultural water, improved livelihood through productive uses of domestic water; =>ways of internalizing these externalities (see following point); but also potential pollutions and negative consequences of multiple uses;

Explore potential in terms of water tariffs payment by water users for multiple uses and consequent possibilities to cover partially the investments and O&M costs of water provision and sanitation infrastructures/services.

e. Related to priority research topics and methodologies that corroborate advocacy to promote MUS (or challenge the expected superiority of MUS).

CBA as indicated in point d.

When local stakeholders are involved in the valuation of water and in negotiations around water management, including MUS, other methods such as multi-criteria analysis (MCA) provide a more flexible and sometimes user friendly framework. MCA can be a valuable alternative or a complementary method for CBAs in the study of MUS efficiency.