

Impact of Rural Water Supply and Sanitation in Punjab, Pakistan

This impact evaluation study assesses the performance of Punjab Rural Water Supply and Sanitation Project (PRWSSP), and Punjab Community Water Supply and Sanitation Project (PCWSSP) in Pakistan and identifies lessons for maximizing the development effectiveness of rural water supply and sanitation interventions by conducting a rigorous impact evaluation and sustainability analysis.

Globally, 1.1 billion people live without access to safe water supply, and 2.4 billion live without adequate sanitation. Of these numbers, approximately 64% (700.0 million) and 83% (2.0 billion) respectively are in the Asia-Pacific region. The situation is particularly severe in the rural areas, home to 70% of the world's poor.

While the importance of government support for WSS is growing across developing member countries, a disproportionate share of the ADB's WSS resources is allocated to urban areas (86%) largely because of high urban demand for WSS. Rural areas have been comparatively disadvantaged in attracting resources. Similarly, very little is known about the sustainability of community-managed rural WSS subprojects, including financing modalities.

This evaluation aimed to quantify the impact of WSS assistance on health, education and labor force participation. The sustainability analysis focused on the technical and physical status of subprojects, and the capacity assessment of community-based organizations (CBOs) responsible for the operation and maintenance (O&M) of infrastructure.

Findings

The study shows that the projects significantly improved households' access to water supply, reduced drudgery among the lowest socioeconomic group, improved high school attendance of the girls in middle socioeconomic group, and increased leisure time for female members of the households.

Overall, the project interventions had no significant impact on primary health such as the incidence and intensity of diarrhea; significant reduction in incidence was found in the middle socioeconomic group. Similarly, at the aggregate level, the projects had no impact on labor force participation and hours worked, although disaggregated analysis showed a significant but negative impact in the middle socioeconomic group. Thus, the increase in high school attendance rates either came from the withdrawal of working children from the labor force, particularly in the middle socioeconomic group, or from the reduction of time spent in fetching water. The lack of impact on labor force participation and work hours indicates that the time saved from fetching water documented in the study had not been translated into more income generation, contrary to expectations of the project.

Limited project assistance for sanitation, facilitating access to credit and improving hygiene education also had no significant impact on households. Overall, 80% of the subprojects were functional and had no problem with presence of heavy metals, but the majority of them had bacteriological contamination and sanitary hazard problems, both at the source and distribution points. Similarly, only 43% of the CBOs managing these subprojects were partly or fully functional. They had low functional maturity and reflected weak capacity in managing WSS systems.



QUICK LINKS

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www.adb.org/Documents/IES/PAK/IES-PAK-2009-26.asp

Punjab Rural Water Supply and Sanitation Project (PRWSSP)

www.adb.org/Projects/project/asp?id=23221

Punjab Community Water Supply and Sanitation Project (PCWSSP)

www.adb.org/Projects/project/asp?id=35314

ADB Management Response

www.adb.org/Evaluation/Management-Response/IESs/IES-PAK-2009-26-MR.pdf

Chair's Summary of the Development Effectiveness Committee (DEC)

www.adb.org/BOD/DEC/DEC-ChairSum-23Sept2009.pdf

Similarly, while several CBOs could meet O&M costs from user charges, the majority of them lacked resources for capital replacement and routine maintenance work.

Overall, ADB assistance to rural WSS projects has been rated *successful*, but at the low end of the scale. This is based on the findings of this study, assessments reported in the project completion reports of the two projects, and validation by the Independent Evaluation Department of the PCWSSP project completion report. The projects were rated *relevant, effective, efficient* at the low end, and *sustainable* at the low end. In aggregate terms, the projects had positive impact on local communities and people, and project impacts are likely to be sustained with required technical support and the strengthening of the CBOs responsible for managing the respective subprojects.

Lessons

- Female household members significantly benefit from the projects especially in reducing drudgery and increasing high school attendance.
- Design focus of WSS projects needs to extend beyond improving access to water supply, and include wastewater and solid waste management; increased role of nongovernment organizations and private sector in supporting CBOs responsible for subprojects, improving water quality, and additional provisions for improving access to WSS for the poor and other disadvantaged groups who cannot afford piped water connection to their homesteads.
- To maximize benefits from WSS investment, ADB needs to collaborate with other development partners in the areas it does not have core strength.
- Valid baseline data based on relevant indicators with relevant counterfactuals are crucial for results monitoring and evaluation and, hence, efforts are required to collect such data prior to project commencement.
- It is essential to safeguard and maximize project benefits by undertaking post-project monitoring and corrective measures on time. Such measures may include, but not limited to, assistance to bridge finance O&M in the initial years of operations even after project completion; strengthening the CBOs' capacity to address technical, managerial, and financial management issues; and strengthening linkages between CBOs and provincial, district, and local level agencies involved in WSS delivery and services.



Recommendations

- Provide prominence to gender benefits from rural WSS projects.
- Address wastewater and solid waste management concurrently with improving access to safe water in future project designs.
- Strengthen existing collaborations and partnerships and foster new ones in WSS with other development partners in developing member countries.
- Include baseline studies as a requirement in project designs and establish a user-friendly depository of all available baseline studies and associated databases for results monitoring, evaluation, and future project designs.
- Follow-up with relevant agencies so that required actions are taken on time to ensure the sustainability of project benefits.

Feedback

ADB Management Response and the Chair's Summary of the Development Effectiveness Committee (DEC) appreciated and endorsed the recommendations of the study. The DEC also underscored the importance of health and water supply in ADB operations and saw further scope to improve the health benefits from water supply schemes including the need for post-completion monitoring to ensure sustainability even after project completion.

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