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Article

Measuring the Impacts of Water Safety Plans in the Asia-Pacific Region

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Abstract: This study investigated the effectiveness of Water Safety Plans (WSP) implemented in 99 water supply systems across 12 countries in the Asia-Pacific region. An impact assessment methodology including 36 indicators was developed based on a conceptual framework proposed by the Center for Disease Control (CDC) and before/after data were collected between November 2014 and June 2016. WSPs were associated with infrastructure improvements at the vast majority (82) of participating sites and to increased financial support at 37 sites. In addition, significant changes were observed in operations and management practices, number of water safety-related meetings, unaccounted-for water, water quality testing activities, and monitoring of consumer satisfaction. However, the study also revealed challenges in the implementation of WSPs, including financial constraints and insufficient capacity. Finally, this study provided an opportunity to test the impact assessment methodology itself, and a series of recommendations are made to improve the approach (indicators, study design, data collection methods) for evaluating WSPs.

Impact Assessment of 99 WSPs in Asia-Pacific Region revealed significant improvements

1.	Infrastructure improvements	86 % of sites
2.	Improvement in operation and management	95 % of sites
3.	Leveraging of donor funds	39 % of sites
4.	Increased stakeholder communication and collaboration	66 % of sites
5.	Reduction in unaccounted-for water (UFW)	21 % of sites
6.	Increased water quality testing	65 % of sites
7.	Increased monitoring of consumer satisfaction	33 % of sites

Impact Assessment also identified areas for strengthening

- **Disparities between urban and rural** water systems (poor record keeping, less water quality testing).
- Many water systems were unable to implement risk mitigation measures due to **financial constraints or insufficient staff**.
- Infrastructure improvements focused on **water quality rather than water quantity**.