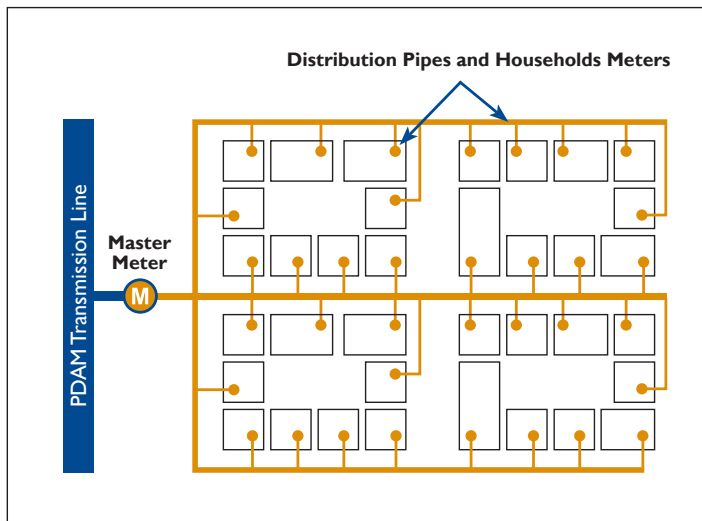


Increasing Access to Water for Low-Income Communities while Improving Water Utility (PDAM) Performance



An illustration of a 'Master Meter' system.

In urban areas across Indonesia, poor and low income households have disproportionate difficulty in obtaining piped water supply services. Oftentimes, water utilities simply do not have enough “raw” water supply to take on new customers. However, in many other cases, there are other barriers to their ability to access service. Such households may be located in an informal settlement without land title and where water utilities are not legally permitted to develop infrastructure; they may be living in very densely populated, unplanned areas where water distribution systems are difficult to develop and maintain; or they may simply be unable to afford the cost of establishing the initial connection (which generally costs around \$150).

In place of piped water services, poor and low income households often obtain water from a combination of sources. These include: public taps that can be difficult to access or may be under the control of local water “mafia”; water vendors that haul water in 20 liter “jerrycans”; shallow wells that are often polluted and brackish; and neighborhood water shops that sell unregulated “treated” water for drinking at a premium cost. As a result and in comparison to residents that do have access to piped

water service, poor and low income households often pay 20 to 30 times more for water that is more costly, more difficult to obtain, and of questionable quality.

In addition to the burden on poor and low income households, the above situation also negatively impacts on water utilities through increased rates of Non-Revenue Water (NRW). In brief, without authorized access to a utility’s water, some residents or vendors will resort to tapping into water lines “illegally”. Not only does the utility lose out on the revenue from such connections, but as such connections are generally improperly installed, poorly maintained, and wholly unregulated, the utility further loses water to leaks.

As one response to the above, USAID in Indonesia has promoted the establishment of “Master Meter” community water supply systems that usually serve 80 to 100 households. These systems draw water from a primary water utility (PDAM) connection adjacent to the community and from which point the community itself develops its own internal distribution system that includes water meters at each beneficiary house.



A newly installed Master Meter in Kapatang Village, Sibolga City of North Sumatra.



Technical training on Master Meter operation and maintenance (O&M) for CBO members in Surakarta, Central Java.



A Master Meter beneficiary in Rajeg, Tangerang District.

A local Community-Based Group (CBO) is established to:

- Maintain the system,
- Keep track of household-level water use,
- Collect fees based on the amount of water used by each household, and
- Pay the monthly water bill.

The average cost of a Master Meter system that serves 100 households (500 people) is about \$50,000 (including the water utility connection and meter, the internal distribution system and meters, and community organization work). Households themselves can pay a portion of this amount, but

As a result of joining a Master Meter system, the monthly water bill for low income families can plummet from as much as \$30 per month to just a few dollars. This is a major savings to those already struggling to get by, not to mention improved health and less time spent on managing water.

For its part, the utility also reaps benefits. These include: decreased rates of NRW (from less theft of water and fewer leakages); easy billing and

collection because they are dealing with just one customer; and lower maintenance costs because the distribution is managed by the CBO. Importantly, they also have no legal issues as “informal” households are not direct customers and can thus provide piped water to all areas.

While Master Meter systems are an excellent approach to service provision in some areas, it is important to remember that any increase in customers requires that the utility have sufficient supplies of raw water and adequate treatment (which is a major issue for many utilities). Master Meter programs also require the active support of utilities and local government, and strong community-level communications and capacity building.

USAID/Indonesia contributes to Master Meter development under the USAID-funded Indonesia Urban Water Sanitation and Hygiene (IUWASH) Project which builds on earlier experiences under the USAID Environmental Services Project (ESP). Through these projects, USAID has facilitated the development of Master Meter systems in DKI Jakarta, Medan, Tangerang, Surakarta, Sidoarjo, Surabaya, and Jayapura.

Technical Notes

MASTER METERS

Indonesia Urban Water, Sanitation and Hygiene (IUWASH) is a five years development project funded by U.S. Agency for International Development (USAID) and implemented by Development Alternatives, Inc. (DAI).

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