

## ***Interactive comment on “Preventive strategy in response to climate change and infrastructural failures for Jakarta slum dwellers” by V. Pooroe and I. Prabaharyaka***

**Anonymous Referee #1**

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The paper focuses on the provision of drinking water through a dedicated pipe network to the urban poor in Jakarta. Supply is hazarded by water shortages in both the wet and dry season for various reasons, and the situation is becoming worse as global warming takes its effect on rainfall. Infrastructural failures are however the main reason for the inadequate supply. Also many slum dwellers are not on any existing water supply network because they are unable to convince the city authorities of their ownership of the land they occupy. For these and other reasons a community-based organization (Jaka Tiria) uses, operates and maintains an existing supply system in the largest slum area in Penjaringan in North Jakarta. The local network receives water from Jakarta's private water company (PALYJA). The water to the local network is

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metered and stored, and then distributed to the houses on the local network. The paper explores ways of adapting the local system to climate change and infrastructural failures, while discussing the socio-technical improvements to the design, implementation and sustainability of a community-based supply system in a dense, low-income urban settlement. Recommendations are made on improving slum area water supply systems in order that they may adapt to climate change.

The authors address a vitally important problem for many cities around the world. They have the advantage of considering an existing supply system in Jakarta, and the benefits of interviews with local customers and suppliers. In particular, the system in Penjaringan is operated by Jaka Tiria, which is a community-based organization. This appears to imply that customers are directly involved in its decision making. Such an arrangement strengthens community involvement and ownership of the supply system, which is more likely to be successful in the longer term. Whereas rainfall harvesting and storage is introduced as being the solution to counter infrastructural failures, it would be helpful to have estimates of the likely costs of the scheme, and whether such costs are likely to be acceptable for government support and funding. The paper covers a number of issues in supplying water to the urban poor, but the analysis and conclusions could be developed more rigorously. From the reviewer's perspective the paper contributes some important ideas that deserve wider debate, not simply by engineers but involving a range of professionals. Therefore the reviewer supports the publication of the paper. The paper however needs some careful editing

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