

Technology Fact Sheet

Harvesting rain water from rooftop for household usageⁱ

1) Technology description

- A local traditional technology in developing countries to supply water for domestic activities to local communities when there is no central water supply system. In developed countries, people store harvested rain water in tanks for gardening, toilet flushing, or washing. This technology is being developed in Germany, the Netherlands and the US.
- In Vietnam, people have been storing rain water from rooftop in cement tanks or barrels for domestic usage.

2) Social-economic benefits

- Diversifying water supplies for households.
- Meeting water demand in dry periods.
- Cutting costs on water purchase and saving time to transport water from long distance.

3) Environmental benefits

- Reducing flood risks in the wet season, supporting adaptation to climate change.
- Reducing pressure on water to avoid surface and ground water degradation.
- Preventing water-borne disease.
- Reducing energy consumption and GHG emission.

4) Status of technology

- It is the endogenous technology and used as a source of water supply of the traditional rural communities. Farmers have long-known taken rainwater from the roof patio area in concrete tanks, water jars for daily use.
- In urban areas there has been research on collecting rainwater for garden irrigation, toilet and laundry.

5) Application potential

- Traditional technologies: it has high potential in rural areas, where there is no central water supply system.
- Harvesting rainfall from rooftop for watering, toilet use, or washing: under research for application in house designing and construction in urban areas.

6) Contribution for adaptation

It diversified sources of water supply for households and reduced floods by collecting runoff from the rooftop during storms.

7) Barriers

- Rooftop materials, house design and rooftop are not suitable for collecting and storing rainfall; lack of space for storing collected water.
- Air pollution affects rainfall water quality.

8) Costs

Implementation and technology application costs

- Capital invested about 200 USD/ water tank (for households in remote areas). For urban areas the cost depends on the cost of terrace design, construction and size of the project.

Incremental costs to adapt to climate change (compared to conventional technology)

- It will increase operating costs and maintenance collection systems and rain water tanks.

ⁱ **This fact sheet has been extracted from TNA Report - Adaptation for Vietnam. You can access the complete report from the TNA project website <http://tech-action.org/>**