Chapter 92

Promoting Rainwater Harvesting (RWH) in Small Island Developing States (SIDS):
A Case in the Grenadines

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ABSTRACT

A sustainable development path is critical to most small island developing states, which are often environmentally fragile and have little natural resources. For decades, the small Grenadine islands in the Eastern Caribbean have depended on rainwater harvesting (RWH) for water supply. The RWH systems have improved from the use of household drums and communal cisterns to individual cisterns such that water per capita use at some households is at a similar level to that of developed countries. This improvement was brought about through self-financed projects and the use of local construction know-how. A small project to promote RWH in Green St. Vincent was reviewed to procure an appreciation of the diffusion process. The RWH experiences in these islands as they relate to quality, design, and cost can be relevant to the regional efforts of promoting RWH. The chapter proposes a framework for enhancing the promotion of RWH. The chapter recognizes the importance of RWH in disaster management in the islands.

ORGANIZATIONAL BACKGROUND

Freshwater, which is fundamental to life and health, is a diminishing natural resource. Currently, access to freshwater in many parts of the world is limited. The Dublin Statement on Water and Sustainable Development recognized that the scarcity and misuse of fresh water pose a serious and growing threat to sustainable development and to the protection of the environment. Sustainable development, which was first conceptualized as a solution to environmental problems, has been defined in many ways. The most notable defini-
sions and seeking financial support for meeting the MDGs. Nonetheless, achieving the MDGs remains a challenge for many countries in the face of small state budgets and limited donor support. The Caribbean and Latin America, however, are on track to meeting the MDGs (WHO and UNICEF, 2004). In preparation for the 20th anniversary of the formulation of Agenda 21 or the Rio+20 UN Conference on Sustainable Development (20-22 June 2012), world leaders intend to secure renewed political commitment for sustainable development, assess current progress and the remaining gaps in the implementation of the outcomes of the major summits on sustainable development, and address new and emerging challenges.

In Latin America and the Caribbean (LAC), over 75 million people have no access to safe drinking water (IADB, 2005). In the Caribbean Community (CARICOM), access to freshwater is better than that for the rest of the LAC. However, population growth, rural to urban migration and environmental issues such as climate change and sea level rise are expected to negatively impact water quality in the future. Therefore, the overall sustainability of access to safe freshwater will be a future challenge for planners and policy makers in their quest to promote sustainable development. In small island developing states (SIDS), policy makers and managers in the water sector are being challenged to meet the MDGs given the increasing trends of extreme events, limited freshwater availability and demands for competitive water uses. This challenge is most evident in the very small Grenadine islands of the Eastern Caribbean where surface water is non-existent and poor quality groundwater is limited. In these islands, rainwater harvesting (RWH) is the main source of potable and non-potable water supply.

In many small islands, a total annual rainfall of 1000 mm (40 inches) is generally sufficient for RWH. However, the seasonality of the rain can raise concerns about the reliability of RWH, particularly during the dry season. In some islands, RWH has not generally been given the attention