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SUSTAINABLE DEVELOPMENT OF WATER RESOURCES, WATER SUPPLY AND ENVIRONMENTAL SANITATION

Sustainable water supply solutions for tsunami affected small islands, Republic of Maldives

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The Maldives is an isolated chain of 26 atolls, made up of over 1110 islands of which approximately 200 are locally inhabited. The tsunami of 26th December 2004 caused variable amounts of damage to approximately 79 islands, claiming 82 lives with 26 still missing, affecting livelihoods, damaging and destroying houses and deleteriously impacting island fresh water supplies. As part of the Maldives tsunami recovery programme, the International Federation of Red Cross and Red Crescent Societies (IFRC), together with over 80 small island communities are working together to restore, rebuild and improve drinking water supplies for both households and communities.

The implementation of two IFRC water programmes; the distribution of rainwater harvesting kits and the installation of supplementary water supply systems will be the focus of this visual and informative poster. Both of these programmes are on-going and are integrated into the wider Maldives rebuilding and development programme. This poster presentation aims to explore the appropriateness of the water supply solutions currently being implemented in the Maldives, to investigate the successes and the challenges related to the IFRC water programmes and to propose some ideas for future sustainable fresh water solutions in the Maldives.

The primary source of drinking water for the people in the Maldives is rainwater. Due to widespread contamination primarily from leaking septic tanks, the island groundwater is only suitable for non-potable uses. The key objective of the rainwater harvesting programme was to increase the primary drinking water storage capacity, whilst involving the communities (households are responsible for installation of the kits). The programme has successfully distributed over 15,000 rainwater harvesting kits to 79 small islands. Follow up works to increase installation rates and raise awareness on safe water storage, water and health and water conservation is ongoing.

Rainwater harvesting is traditionally thought of as the most appropriate, cost effective and sustainable water supply option for small island nations. In the Maldives, however, many islands do not receive adequate rainfall throughout the entire year to ensure continuous supply of safe drinking water. To meet this need, the government of Maldives selected 46 islands that were in need of an alternative water supply for present and future demand. IFRC are involved in the installation of supplementary water supply systems (using reverse osmosis treatment) on 15 of these islands. The programme has been developed to ensure that communities have access to safe drinking water, to diversify the water supply options for increased security of supply, to build the knowledge and technical capacity of the island community to operate and manage their own community water systems.