

**THE GOVERNMENT OF THE
DEMOCRATIC SOCIALIST
REPUBLIC OF SRILANKA**

**NATIONAL RAINWATER POLICY
AND STRATEGIES**

**Ministry of Urban Development and Water Supply
“Sethsiripaya”
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National Rainwater Policy and Strategies

1.0 Introduction

Presently Sri Lanka ranks high in the world in the annual renewable quantity of water, the rainfall volume being about 5900 Cu.m/Capita, from which the annual discharge Volume to sea about 1400 Cu.M/Capita, based on a population of 20 million.

By its Geographical position and the location of its Central hills, it is blessed with two monsoons, namely the South-West from May to September, and the North-East from December to February, interspersed by two inter monsoons. All areas receive some amount of rain annually, which though varying in intensity, never fails entirely. However the effects of impending extreme climatic changes of natural phenomena, being observed and predicted both globally and locally, should not leave any room for complacency in this regard.

Due to seasonal and regional disparities, improper land management practices such as unrestrained filling up of low lands and restriction of natural drainage paths, the insufficiency in the mechanisms of storage and gradual release of this asset, along with other acts of willful commission and careless omission by humans, a substantial amount gets converted to surface water quickening its path to the sea, evaporating en route, and sowing the seeds of water stress in the process.

The dearth of rain causes droughts, in some parts of the country, while at times simultaneously, in other parts, the excess cause floods, compelling management of large quantities of storm water, the failure of which results in flooding of low lying areas and wastage of substantial amounts of water by unutilized run-off, into the Indian Ocean.

The challenge of supplying adequate water and disposal of its excess to meet the societal needs and ensure equitable water access throughout the year, for citizens, both rural and urban, all fauna and flora, and other living forms, has been identified as one of the most critical problems facing the decision makers of Sri Lanka.

The Government of Sri Lanka, has recognized the negative social and environmental implications caused by developments that diminishes the nations soil capacity to store rain water. This has resulted in hardship to people, multitude economic losses and costs of consequent relief efforts due to recurrent droughts and floods. Much attention had been paid to conventional, centralized approaches thus far, with limited attention paid to alternatives. It has therefore acknowledged the importance of bridging the gap between the dearth and excess, using harvested rainwater, as an integrated mitigatory measure, in the light of high average rainfall, ranging from 750-6000 mm per annum across the country.

Therefore bold policies for planned actively intrusive human intervention, will be considered essential for rainwater, in order to make use of its fullest potential, and to minimize its adverse effects.

2.0 Principles of Rainwater Harvesting and Utilization

- All current water sources on earth originated from rainwater.
- Rain water harvesting is the revival of an age old technology, of catching it where it falls, and a form of water and soil conservation .
- Rainwater is a universal resource, harvested from roofs and ground catchments, safely stored and/or infiltrated, treatable as required for its end use. It has potential energy and, capability of supplementing other sources currently used..
- Rainwater harvesting en masse compares on a micro scale to the wealth and workings of our Ancient Irrigation systems..
- The continuous Sun powered purification and delivery process of the hydrological cycle, makes rainwater the most naturally purified among all forms of available water sources, and being independent of market forces of any form, portrays life, hence priceless.

3.0 Rainwater Management Policy Objectives

In the light of increasing operational and maintenance costs to, rationalize investments ,both by Government and non Government sectors, in the field of pipe borne water supply, drainage, flood control, soil conservation etc, and promote the practice on a Regional Community and family basis, in order to ensure that the ‘City of tomorrow’ applies Rain water harvesting broadly ,by the control of water near its source, in its pursuance of becoming a ‘Green city’ in the future.

3.1 Policy Statement

Rainwater harvesting shall be made mandatory, yet introduced in phases, in all areas under Municipal and Urban council jurisdiction within a prescribed time period, as will be prescribed in law, for certain categories of buildings and development works, and shall be strongly promoted in all Pradeshiya Sabha areas.

Investments in this underutilized asset would be for life, and a gift to be bestowed for the future. Hence its economic benefits far outweigh its costs

Negotiations will be initiated with both internal and external lending Institutions for funding to carry out Rainwater Harvesting projects en masse, and to facilitate concessionary loans through banks and revolving micro credit schemes for the provision of Rainwater structures to house builders.

Necessary Legislative amendments and concessions will be made to facilitate Rain Water Harvesting

Harvested Rainwater is for the benefit of all, to be held on the custodianship of the collector, in the eco-system, as a service to the public

3.2 Desired Benefits

Both voluntary and mandatory measures would be used individually and collectively, in order to;

1. Minimize usage of piped potable water on secondary purposes.
2. Manage demand for water and rationalize new investments
3. Reduce storm water runoff, caused by unrestrained hard ground cover construction, thereby mitigating localized flood damage, soil erosion and consequent land degradation.
4. Minimize unregulated stagnation of water over prolonged periods, causing spread of disease.
5. Prevent depletion of groundwater, by recharge and preserve it at higher levels and quality, minimizing water stress during droughts, and enhancing the vitality of all life forms.
6. Increase decentralized water security and local self reliance whilst encouraging family level operation and maintenance.
7. Reduce National Energy consumption and water loss in the Treatment and conveyance of water
8. Facilitate Urban Home gardening and small holder food production, supplement rural Irrigation and stimulate income generation.
9. Minimize the consequences of increased salinity intrusion, due to Sea level rise, and the threat caused from pollution to traditional sources of water ,by planned infiltration.
10. Reduce costs of recurrent road-rail maintenance, and consequent economic losses of transportation, and that of remedying loss of integrity of buried utilities caused by submergence.
11. Offset increase in costs, and defer high investments in the provision of piped water..
12. Reduce conflictive invasion of rural water sources to cater for Urban demand, by meeting requirements close to the point of harvesting.
13. Change radically, the prevailing paradigm of ‘quick disposal’ when dealing with rainwater.
14. Assist in reduction of Urban thermal pollution effects, and cooling.
15. Assist in meeting the Millennium Development Goals on water & sanitation.
16. Enable wider access to additional sources of water during natural disasters such as fire, flood, droughts etc.
17. Increase domestic water security, by reducing the unproductive labour, time and hazards ,faced mainly by women and children, in fetching water from a distance.
18. Improve access to safe water to many marginalized communities.

4.0 Strategies for Implementation of Rainwater Management

1. Use the vast underground storage capacity of Earth along with the ‘Wewa’, ‘Kulam’ to enhance the water levels of the ‘Pathaha’, ‘dug or tube well’, spring, river, or any other water source, using traditional wisdom, acceptable participatory mechanisms, and by appropriate combinations of available methods such as, Storage structures, Contour Bunds and Drains, Sub-surface cut off walls, mulch , contour tree planting etc.

2. Issue of circulars through relevant Ministries and line agencies, to make rainwater harvesting techniques standard in all building Designs and Bills of Quantities, in all future new Government buildings, as utility and demonstration purposes, within a prescribed time. Simultaneously fund allocation through the Provincial Councils, on an annual basis to incorporate and monitor such measures in all existing structures with roof potential, at central locations, for public awareness.
3. Encourage the practice of Rainwater Harvesting on a mass scale, as cost cutting measures in liaison with the Private sector, Property Developers, Chamber of Construction, Industrial Estates, and Investors of BOI projects,.
4. Liaise with the Universities, Technical Colleges, National Institutes of Education and Health, and Government Training Institutions, to include Rainwater Harvesting in their Curricula training people in the design, construction, research & development, and maintenance of such systems.
5. Set up a unit to collect information on worldwide trends, current practices, drawings, Legislation etc, by linking up with Global networks, monitor & evaluate policy implementation, and, with the assistance of mass and electronic media, disseminate to all stakeholders who require such information, and educate others currently unaware.
6. Propagate the message through religious institutions, by incorporating Rain water harvesting practices in their establishments, in order to minimize the present subsidies currently afforded to supply of piped water.
7. Identify and conduct awareness programmes for categories of bulk consumers on the economical gains of Rain water harvesting, both for the consumer, and the National Budget.
8. Identify and Rehabilitate existing abandoned rainwater harvesting collection and storage systems in old Government buildings.
9. Utilize the existing facilities of the N.G.O. Forum network along with the knowledge of professionals and grass root practitioners..
10. Publish a 'Rain water guide for Sri Lanka' for designers, practitioners and lay people, giving design concepts, parameters ,layouts, maintenance routines ,first flush systems, Mosquito and dust elimination systems etc.
11. Amend by laws, taking cognizance of the Rainfall zones and intensities, roof or hard paved areas, micro catchments, permeability and transmissivity of soils, topography, geological conditions, ratios of infiltration to storage etc.
12. Upgrade the status of Rain water harvesting from a supplementary to an optional source, in all rural based water supply projects
13. Encourage the practice of Rain Water Harvesting with appropriate incentives in the Agricultural and Plantation sector, minimizing runoff, serving to improve yields.
14. Introduce a budgetary component for Rain water Harvesting in all water supply projects.

5.0 STAKEHOLDERS

All Households/Institutions, Government/Private entities, Lay/Religious establishments, Centres of Learning & Research, Industrial & Farming establishments et al, shall be stakeholders, making it everybody's business, under the motto of King Parakramabahu the Great, 'Let not even a drop water that comes from rain flow into the Ocean without being made useful to man'

6.0 LEGISLATIVE SUPPORT

1. Amendments to Municipal Council / Urban Development Authority (UDA) by-laws on drainage, in order to accommodate Rainwater Harvesting as a strategy for localized flood mitigation, infiltration facilitation, and improved sanitation, in both existing and future construction.
Amendment to include as a requirement in the Building application and link the 'Certificate of conformity' of future new buildings to incorporate rainwater harvesting facilities, along with provision of discounts in the annual rates for such.
2. Amendments to Road Development Authority (RDA) by-laws on drainage in the construction of roads, in order to allow for soft paving and the construction of swales and porous drains to increase ground infiltration.
3. Amendments to National Water Supply & Drainage Board (NWSDB) by-laws to incorporate harvesting rainwater as a source of domestic water with equal status to that of other traditional sources..
4. Amendments to Apartment Ownership Act for provisions on rainwater ,over and above that would be required by amended Municipal Council /Urban Development Authority) UDA bye-laws.