

**1. Policy Name** : **NATIONAL WATER SAFETY POLICY**

**2. Effective Date (Target)** : **March 2024**

### **3. Introduction**

#### **I. Background**

Sri Lanka is a country abundant in water resources. There are 103 river basins across the island out of which about 18 are perennial while the rest remain as seasonal rivers. The mean annual rainfall of the country varies from 900 mm in the driest parts to 5000 mm in the wettest parts. This fact, combined with other factors such as evaporation and contamination leads to seasonal water scarcities due to uneven distribution of access to water for consumption. At present, about 60% of the population has access to pipe-borne water while the rest have access to water through protected dug wells, rainwater harvesting systems, and various point sources. However, waterborne diseases such as bacillary dysentery (shigellosis), cholera, other diarrheal diseases, hepatitis A & E, and typhoid fever occasionally emerge highlighting the need for a reliable and systematic approach to achieve water safety. Hence, the Water Safety Plan (WSP) is identified as a tool for making the limited water accessible for drinking, safely managed, and sustainable for usage by the community.

The WSP framework (<https://www.who.int/publications-detail-redirect/9789240067691>) is built upon a rich history of best management practices, designed to address and mitigate risks at every stage of the water supply system, spanning from the catchment to the eventual consumers. The WSP draws upon key principles and concepts derived from various risk management methodologies, embracing the multiple-barrier approach, which serves as a tool for ensuring the delivery of safe drinking water.

Fundamentally, the WSP approach necessitates the proactive identification, prioritization, and systematic management of potential risks to drinking water safety, including climate change and disaster-related risks before they can materialize into critical health issues. The WSP approach is widely acknowledged as the most effective strategy for safeguarding public health through the management of drinking water supplies. The adoption of WSPs by Sri Lanka in 2013 under the expert guidance of the World Health Organization (WHO), underscores the initiation of the country's proactive commitment to ensure the delivery of safe drinking water to its population. This concerted effort aligns with international best practices, further solidifying Sri Lanka's position at the forefront of water safety management and public health protection.

By the end of the year 2023, WSP has been successfully integrated into over 95% of the urban water supply schemes across the country. Moreover, dedicated endeavors are underway to extend the incorporation of WSPs to a greater number of Rural Water Supply Schemes.

Simultaneously, WHO has now incorporated consideration of equity and climate resilience into the WSP approach. These aspects support access to safely managed and resilient

drinking water supply systems for all users despite future uncertainties arising from climate variability and disasters.

The National Water Safety Policy focuses on establishment of an accepted mechanism to implement WSPs in Sri Lanka with due recognition and empowerment of the tasks defined.

## **II. Need**

The establishment of a National Water Safety Policy is crucial to ensure comprehensive coverage of the water safety pertaining to the drinking water, encompassing both urban and rural pipe borne, bowser supplied, membrane treated, bottled water, other special suppliers, vendors, rainwater, and other point source users.

Based on insights gathered from prior experiences in WSP implementation, it has become evident that there is a pressing requirement to improve the WSP process through the introduction of a robust policy. Such a policy is expected to streamline and reinforce the necessary measures and framework, ensuring a more effective and cohesive approach. A comprehensive survey focusing on the assessment of the need and gaps for a Water Safety policy has further emphasized the crucial need for the development and implementation of a dedicated Water Safety Policy tailored to the specific requirements of Sri Lanka.

Moreover, such a policy is needed to effectively implement actions towards climate resilience and adaptation including Disaster Risk Reduction.

## **III. Purpose & Context**

The primary objective of this policy is to establish a robust and authorized framework that provides essential support for the seamless execution of WSPs. This need arises within the global context of WSPs gaining recognition as a crucial tool in ensuring drinking water quality, acceptability, and quantity as advocated by the WHO and widely adopted worldwide. Notably, in the specific context of Sri Lanka, the WHO has extended its WSP training program to the South Asian region, acknowledging the country's proactive stance in embracing and implementing WSP practices.

Furthermore, Sri Lanka in the swift adoption and implementation of WSP protocols has attained a commendable level of proficiency in WSP practice and achieved audit compliance within a remarkably short timeframe, in comparison to its regional counterparts in South and South-East Asia. Against this backdrop, the policy seeks to enhance the WSP framework in Sri Lanka, by ensuring its alignment with global standards and reinforcing Sri Lanka's position as a frontrunner in the comprehensive deployment of water safety measures.

## **IV. Rationale**

The introduction of a Water Safety policy is imperative, driven by the essential requirement for a comprehensive policy framework to guide its effective implementation. The WSP has been identified by the WHO in its third and fourth revisions of Drinking Water Quality Guidelines as a flexible and adaptable tool that could be implemented not only for large water suppliers but also point source users to ensure drinking water safety consistently. This WSP policy is in line with WSP principles and is intended to address the gaps identified during the WSP implementation process. Nevertheless, the implementation of WSP assists in acquiring ISO 9001: 2015 as WSP process produce all evidences and procedures required in the ISO process.

The WSP framework at present consists of a 10-step process for urban water supplies and a simplified 6-step process tailored for rural water supplies. Any country-specific changes to the WSP steps shall adhere to the fundamental principles of risk reduction embedded within the WSP process. This policy highlights the critical necessity for a robust framework considering each step of the WSP, ensuring a systematic and holistic approach to drinking water safety.

Consequently, the rationale behind this Water Safety policy stemmed from the past WSP experience, audit outcomes, and a need-gap analysis conducted to highlight the urgent need to formalize and implement strategic guidelines to strengthen the ongoing WSP process.

### **4. Policy Principles**

- I. The Water Safety policy, based on the fundamental WSP principles outlined by the WHO in its WSP manual 2<sup>nd</sup> edition (regarding water quality, acceptability, quantity, equity, and climate resilience), is to be implemented by the relevant service providers, vendors, consumers, and point source users and stakeholders.
- II. Given that insufficient water quantity can drive consumers towards sources with compromised water quality and could be subjected to contribute to crises stemming from either excessive or inadequate water availability or accessibility, the incorporation of Integrated Water Resources Management (IWRM) is crucial in the WSP process.
- III. Principles embedded in the National Water Resources Policy (NWRP) are pivotal in the WSP process, with Water Safety policy positioned underneath the overarching framework of the NWRP.
- IV. Principles identified in the National Policy on Drinking Water are crucial for the implementation of WSP process.

- V. Considering the majority of risks associated with water are anthropogenic in nature, fostering awareness and promoting a shift in attitudes shall play a critical role within the WSP framework.
- VI. Preservation of the quality of the available water resources in watersheds becomes even more important as climate change will lead to an intensification of the water stresses with impact on the availability, quality, and distribution of water resources.

## **5. Policy Statements**

- I. The WSP process primarily encompasses crucial domains such as formulating WSP teams, system understanding, comprehensive risk assessment, effective risk mitigation strategies, efficient system management and monitoring, rigorous system validation, verification as well as proactive management and supportive measures during normal and emergencies with a strong emphasis on continual review and revision.
- II. The Line Ministries in charge of Water Supply, Health, Water Resources, Environment, Land, and Local Authorities will assume the pivotal roles as the principal authorities responsible for both the development and implementation, guidance for monitoring, and verification of the WSP process in Sri Lanka in accordance with the WHO guidelines.
- III. A regulator shall decide on making WSP mandatory for the service providers, vendors, consumers, and point source users. In case of no regulator the supplier or user as applicable shall decide on a formal WSP implementation based on justification of the benefits and costs involved. However, the water supplier shall complete the WSP implementation process as per the guidelines set by the WHO manual to the maximum level of satisfaction within a timeframe stipulated by the line ministry, since the date this policy become effective.
- IV. Verification of the WSP by independent authorities together with accredited laboratories on a regular basis is an essential management requirement, thus ensuring its efficacy and adherence to the established standards.
- V. The WSP process integrates measures for climate resilience, and disaster management including disaster risk reduction and disaster preparedness, emphasizing the adherence to IWRM principles through the NWRP while supporting the achievement of sustainable development.
- VI. The Water Safety policy shall be a sub-policy of NWRP of Sri Lanka (Under items 5 & 6 of NWRP).

- VII. The WSP implementation framework shall be strengthened with awareness and training. Special consideration shall be given to the end user concerns as behaviors of end users can have serious consequences for the safety of drinking water.
- VIII. WSP advocacy and capacity building shall be continued under the line Ministries for Drinking Water Supply and Health.
- IX. WSP framework shall include mechanisms for maintaining environmental flows and ambient water quality.

## **6. Policy Goals**

- I. Facilitate the comprehensive and efficient implementation of the WSP across all regions of Sri Lanka, by ensuring the bridging of gaps through the establishment of a robust policy framework aligned with the principles of IWRM through NWRP.
- II. Establish and maintain a reliable and safe drinking water supply consistently by minimizing the detrimental effects of human activities that contribute to the deterioration of water quality and depletion of water quantity throughout the entire system.
- III. Foster and support initiatives aimed at enhancing climate resilience and adaptation with respect to water resources concerning the sustainable management of drinking water supply systems.
- IV. Strengthen the country's disaster preparedness capabilities, particularly in the context of drinking water management, through the implementation of strategic measures and protocols that effectively mitigate risks and ensure the continuous supply of safe drinking water during times of crises and emergencies.

## **7. Scope & Applicability**

The scope of the Water Safety policy encompasses the comprehensive establishment of a country-specific framework tailored to facilitate the effective implementation of WSP throughout all drinking water supply systems, starting from the catchment area and extending it to the point of consumption by end-users. This holistic approach is aimed at ensuring the careful and precise safeguarding of water quality and quantity across all stages of the supply chain regardless of normal or emergency situations.

This policy will be applicable to all service providers, vendors, consumers, and point source users, verified by independent authorities together with accredited laboratories regularly. The

policy applicability will be extended to all relevant stakeholders to ensure sustainable management of all drinking water supply systems.

## **8. Policy Implementation**

The policy implementation strategies, the responsibility and authority of implementation, and details pertaining to implementation and monitoring are stipulated in Table 01 below. The implementation process shall not be limited to the responsible ministries and organizations mentioned below but there could be additions as needs arise in the future. The relevant stakeholders shall be prioritized subjected to the requirements of each system as there is no logical basis for a generalized prioritization.

**Table 01:** Key strategies for WSP policy implementation in Sri Lanka

<b>Item No</b>	<b>Action Needed</b>	<b>Policy Implementation Strategies</b>	<b>Responsibility &amp; Authority</b>	<b>Monitoring &amp; Evaluation</b>
1	Gazette the roles and responsibilities of relevant stakeholders.	Ensure collective responsibility of stakeholders.	Line Ministries of Health, Water Supply, Environment, Mahaweli, Irrigation, Local Government & Provincial Councils, Disaster Management and Wild Life & Forest Resources Conservation. Agrarian Department, Central Environmental Authority (CEA) and Water Resources Board.	Water quality Surveillance and District/Provincial Environmental Committee Meetings and WSP Verification, Central/Regional Disaster Management meetings, Institutional Disaster Management Plan (IDMP) of NWSDB, Disaster Management Center, and Department of Meteorology.
2	Declare application of WSP as a national priority which is to be counted in all development activities. Mainstream WSP application in all water-supplying organizations.	Encourage commitment and awareness from the top management of relevant organizations.	Ministries in charge of Finance, Provincial Councils and Local Government, Health, Environment, and Water Supply.	National and Regional Development plans, Corporate plans, KPIs, Project reports, EIAs, etc.
3	Conduct advocacy, capacity building, training, and awareness on WSP process.	Enhance technical knowledge and experience of the WSP Team members	Ministries in charge of water supply and Health.	National and Regional Development plans, Corporate Plans, KPIs.
4	Gazette the close proximities of water abstraction areas as environmentally most	Implement catchment protection and land use management.	Ministry of Environment, Central Environmental Authority, Ministry of Health, and Ministry of Lands including the Department of Land Use	Provincial Coordination Committee Meetings and WSP verifications, District Environmental Committee empowerment.

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	sensitive zones under respective custodian, source-based protection methods and regulations.		Planning.	
5	Establish regulatory standards for existing and emergent risks and empower the application of existing standards.	Maintain regulatory standards for source water by CEA and drinking water by Ministry of Health.	Ministry of Health, Ministry in charge of water supply, Ministry of Environment & CEA. Sri Lanka Standards Institution, Atomic Energy Authority of Sri Lanka.	Water Quality Surveillance Meetings at national and provincial/district levels, Ministry of Health, National Water Supply & Drainage Board, National Department of Community Water Supply (NDCWS), Central Environmental Authority, WSP Verification.
6	Recognize implementation of WSP as a requirement in the National Drinking Water Policy ensuring accessibility to safe drinking water.	Obtain stakeholder support for assessing hazards & hazardous events and controlling them.	Ministry of Health, Ministry in charge of water supply, Local Authorities (Ministry of Local Government and Provincial Councils), CEA, NDCWS, Atomic energy authority, Relevant custodian of water as applicable (Mahaweli Authority, Irrigation Department, Agrarian Development Department, etc.)	Water Quality Surveillance Committee meetings among the Ministry of Health, the Ministry responsible for Water Supply, NWSDB, NDCWS, Local Authorities, and relevant stakeholders.
7	Establish a centralized database at the National Water Resources Secretariat (NWRS) related to water quality and WSP implementation. Research & Development on risk management.	Establish a database for hazard identification and risk assessment including climate change-related risks.	Ministry of Environment, Ministry in Charge of Water Supply, Ministry of Health, Ministry of Higher Education, and NWRS.	Water Quality Surveillance Meetings, Provincial Coordination Committee Meetings and WSP verifications, Ministry of Health, Meteorological Department, Department of Irrigation, Mahaweli Authority, Disaster Management Center, National Building Research Organization.
8	Develop an independent	Functionality of a	Ministry in charge of water supply,	Water Quality Surveillance Meeting,



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	<p>agency as the regulatory body to verify the implementation of WSP under NWRS.</p> <p>Make all the public and private drinking water suppliers to get verification via water quality testing at least twice per year.</p>	<p>regulatory agency for application of WSP</p>	<p>Ministry of Health, and the Regulatory Agency.</p>	<p>Relevant National Level Director and Provincial Director of Health, National Water Supply and Drainage Board, NDCWS and WSP Verifications.</p>
9	<p>Identify climate-resilient WSP as a national priority.</p>	<p>Implement climate resilient WSPs</p>	<p>Climate Change Secretariat, Disaster Management Center, Ministry in charge of water supply, Ministry of National Planning, Department of Meteorology.</p>	<p>NDCs, Corporate plans of water suppliers, Disaster management plan/IDMP, WSP Advocacy Unit of NWSDB, Department of Census and Statistics.</p>
10	<p>Establish national guidelines for future project planning and evaluation.</p>	<p>Achieve national priority for climate adaptation</p>	<p>Ministry of Environment, Department of National Planning.</p>	<p>Project appraisal reports, Department of National Planning, Department of Census and Statistics, Department of Meteorology, Climate Change Secretariat.</p>

## **List of related policies**

1. National Drinking Water Policy (2024)
2. National Sanitation Policy
3. National Physical Planning Policy
4. National Policy on Protection and Conservation of Water Sources, their Catchments and Reservations in Sri Lanka (2014)
5. National Rain Water Policy and Strategies (2005)
6. National Water Resources Policy & Institutional Arrangements (2000)
7. National Policy for Rural Water Supply and Sanitation Sector
8. National agricultural policy
9. National Biosafety Policy (2005)
10. National Fisheries & Aquatic Resources Policy (2006)
11. National Land Use Policy
12. National Watershed Management Policy (2004)
13. National Policy on Wetlands
14. National Forestry Policy
15. National Policy on Wild Life
16. National Physical Planning Policy and Plan – 2030
17. Siting of high-polluting industries
18. National Strategy for Solid Waste Management
19. National Plantation Industry Policy Framework
20. National Policy for Disaster Management (2013)
21. The National Climate Change Policy of Sri Lanka (2012)
22. National Climate Change Adaptation Strategy for Sri Lanka
23. National Water Resources Policy (2023)

## Acronyms

CEA	-	Central Environmental Authority
EIA	-	Environmental Impact Assessment.
HACCP	-	Hazard Analysis Critical Control Point
IDMP	-	Institutional Disaster Management Plan
IWRM	-	Integrated Water Resources Management
KPIs	-	Key Performance Indicators
NDCs	-	Nationally Determined Contributions
DNCWS	-	Department of National Community Water Supply
NWRP	-	National Water Resources Policy
NWRS	-	National Water Resources Secretariat
NWSDB	-	National Water Supply & Drainage Board
WHO	-	World Health Organization
WSP	-	Water Safety Plan