

The Water Policy for the Republic of Palau

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1. Background

1.1. Importance of water: Clean and safe water is essential for the health of Palau's people, ecosystems and economy. Inadequately treated water can lead to disease outbreaks that can overwhelm Palau's health care sector and restrain Palau's workforce. Inadequately treated water can also harm the health of Palau's marine and terrestrial ecosystems, which are sources of food and tourism for Palau. Disruptions to the health of Palau's workforce or ecosystems could cause major disruptions to Palau's economy. For these reasons, it is essential that Palau ensures that its waters are safe and clean.

1.2. Multiple challenges: There are a number of challenges facing Palau's goals to ensure clean and safe water. Increases in Palau's population and tourists and an acceleration of Palau's development are increasing the demands on Palau's water supply and wastewaters¹ management systems. Those systems are aging and vulnerable to inconsistent operation and management. Different systems and practices across different states have resulted in unequal quality and standards for water supply and wastewater management. Finally, climate change poses a number of threats to Palau's water systems as a result of changing weather patterns and rising sea levels.

1.3. Policy responses: in the face of these challenges, Palau needs a strategic and coordinated approach to water sector management. Palau's Water Policy outlines Palau's goals and actions to ensure safe and clean water for all.

2. Vision: Palau's water policy works to achieve the following vision:

2.1. Belau a betok e ulekidaki a lmel.

2.2. Loosely translated, this means "**Palau has safe, affordable, sustainable water for all.**"

2.3. In particular, this means that:

2.3.1. Palau provides safe, affordable, sustainable water for all people;

2.3.2. Palau's water supports productive and valuable ecosystems; and

¹ The term "wastewater" means any water that has been affected by human use. This includes liquid waste discharged by domestic residences, commercial properties, industry, agriculture, leachate from sea waste management, used water from power plants, runoff from roads and fields, etc.

2.3.3. Palau's water is used sustainably² both today and for future generations.

3. Scope

- 3.1. Overall Guidance:** Palau's water policy sets the overall vision, goals and principles for the management of Palau's water resources, and outlines the policy elements to achieve them. The specific plans and actions to support these policy elements will be developed and implemented by individual organizations. These organizations, plans and actions may change over time, but the overall vision, goals and principles of Palau's water policy should remain as overall guidance.
- 3.2. Entire Water Cycle:** Palau's water policy covers the entire water cycle in Palau, from ridge to reef. This includes rainfall, water flow through upstream watersheds, groundwater, lakes and streams, water supply and wastewater infrastructure, and water flow through downstream rivers, mangroves and reefs.
- 3.3. All Stakeholders:** Palau's water policy sets the goal of providing safe, affordable, sustainable water for all. This includes all people in Palau: citizens, residents, and visitors, both today and in the future. The policy is intended to reflect and guide the goals and principles of all stakeholders involved in and affected by water management in Palau. This includes Palau's national and state governments, Palau's businesses (particularly those involved in treating and providing water), and all the people and ecosystems that depend on Palau's waters.

4. Goals: There are three overall goals of Palau's water policy:

- 4.1. The protection and conservation of Palau's water resources;
- 4.2. Access to safe, affordable, sustainable water supply and wastewater services for all Palau's population; and
- 4.3. Effective and sustainable planning, managing, and operation of water supply and wastewater services.

5. Principles: Palau's National Water Policy is based upon, and seeks to promote, the following principles:

- 5.1. Management of Palau's water resources should aim to maximize benefits and efficiency and minimize waste and harm from the use of water resources.
- 5.2. Fresh water should be managed as a finite, vulnerable and valuable resource, essential to sustain life, development and the environment. Water resources and their related human and ecological services have intrinsic economic, environmental, social and cultural values, and these should be considered in all management and planning decisions.
- 5.3. Management of Palau's water resources should strive to provide equal access to safe, affordable, sustainable water resources to all users, at all locations, and at all times.
- 5.4. Water development and management should be based on a participatory approach, fostering and encouraging participation and collaborations from users, planners and policy-makers at all

² The term "sustainable" is used here to mean that the ways in which Palau uses water today will allow continuous use in that same way for generations to come. This includes both environmental and financial practices.

levels. Decision-makers should strive to ensure effective communication across all stakeholders, encompassing multiple sectors and different levels of various organizations.

- 5.5. Decisions on water and wastewater issues should be based on the best available knowledge, including local knowledge, sound science, technical advice and best management practices. Where information is insufficient, uncertain or unavailable, policies and decisions should seek to take the approach that poses the least risk and greatest assurance that Palau's water resources are safe, clean, and sustainable.
- 5.6. Management of Palau's water resources should respect and incorporate the important and different roles and perspectives of men and woman in the provision, management and safeguarding of water.
- 5.7. Water standards will be established, applied and enforced in ways that are appropriate to specific uses of water. For example, the water quality standards for drinking water will require a higher level of purity than the water quality standards for treated wastewater.
- 5.8. Management of Palau's water resources should take an adaptive approach to enable the incorporation of new information and methods. Palau's water policies, laws, regulations and practices should be regularly reviewed to ensure their effectiveness and implementation.
- 5.9. Palau's water resources should be managed in ways that incorporate environmental and financial sustainability. This means that the Palau's waters are managed in ways that will continue to support healthy ecosystems, and that the finances of Palau's water management will support adequate investment, operation, and maintenance, and that the environmental and financial health of Palau's water systems are maintained for generations to come.

6. Issues and Threats

- 6.1. **Issues:** Palau's water policy is concerned with two main issues: 1) water quality, and 2) water supply.
 - 6.1.1. **Water quality:** Palau's Water Policy seeks to ensure that Palau's waters are of good quality, primarily as measured by low levels of contamination. The Policy seeks to ensure that Palau's sources of water supply are largely free from pollution, and the systems used to treat water supply and wastewater are adequate to keep contaminant levels low, in accordance with the appropriate standards for the water's intended use or disposal. The policy seeks to ensure that these quality levels are maintained consistently on both a time-to-time and location-to-location basis, and that corrective actions are taken immediately when standards are not met.
 - 6.1.2. **Water supply:** Palau's Water Policy seeks to ensure that Palau's water supply remains sufficient to meet the needs of Palau's people, ecosystems and businesses. The policy seeks to maintain an adequate water supply in the face of increasing demand due to rising population and tourism levels, and threats to reduce water supply such as climate change.
- 6.2. **Threats:** Palau's water policy is concerned with three main threats: 1) contamination, 2) scarcity, and 3) climate change.
 - 6.2.1. **Contamination:** Palau's water management must address various threats to Palau's water quality, such as runoff and sedimentation from agriculture and construction,

pollution from overflows of untreated wastewater, and contamination from seawater intrusion.

6.2.2. Scarcity: Palau's water management must ensure that Palau's water supply remains adequate to meet demand. Palau's water management must track and ensure adequate balance between Palau's water demands and supply. Ongoing management must consider both increases in demand due to population and tourism levels, and reductions in supply due to changing weather patterns and increases in contamination.

6.2.3. Climate Change: Palau's water management must address, through mitigation and adaptation, various effects and threats stemming from climate change. Rising sea levels threaten some freshwater supplies and some agricultural areas. Changing rainfall patterns are increasing drought frequency and severity during dry months, while increasing runoff and sedimentation in wet months.

7. Elements: Palau's Water Policy has two main elements: 1) Planning & Coordination and 2) Safe, Effective & Sustainable Systems.

7.1. Planning & Coordination

Policy Summary: Palau's water resources will be managed using the best available Information, comprehensive planning, inclusive consultation, and coordinated action.

7.1.1. Build and maintain capacity: Build, upgrade, and maintain Palau's physical and organizational capacity for Palau's water supply and wastewater management. Ensure that Palau has the personnel, certification, technical abilities, supplies and equipment needed for proper management of Palau's water resources. Regularly assess Palau's physical and organizational capacity and performance and take steps to improve such capacity or performance when they are not sufficient to achieve Palau's vision for water management.

7.1.2. Collect information: Support Palau's water resource management with the best available information, which should be regularly collected and updated. This information should include geographic information such as elevation and slope; legal information such as ownership, restrictions, and zoning; planning information such as development plans, infrastructure availability; ecological information such as rainfall amounts and trends; environmental and health constraint information such as would affect wastewater disposal sites and methods; and financial information such as costs and funding.

7.1.3. Share information: Share information on Palau's water resources with relevant and interested stakeholders to the greatest extent possible in order to inform beneficial and efficient planning, use and monitoring of Palau's waters.

7.1.4. Promote awareness: Support public education and awareness on links between water quality and health and best practices for water conservation and wastewater management.

7.1.5. Planning: Establish management plans (including capacity development, maintenance, protection), and emergency plans (including plans to address drought events, contamination events, and infrastructure breakdowns, and plans to address the impacts of and build resilience to climate change) for Palau's water resources.

- 7.1.6. Consultation:** Consult with stakeholders before making decisions or taking new actions that affect Palau's water resources. Stakeholders include the public, traditional leaders, government, and business.
- 7.1.7. Coordination:** Before taking actions that will affect Palau's water resources, inform and coordinate with other organizations as appropriate to ensure maximum benefit and minimize potential harm to Palau's water resources.
- 7.1.8. Permitting:** Master plans, land use plans, zoning systems and permitting practices (including environmental and health impact assessments) should consider and reflect water supply capacity and effects on water supply sustainability, water quality and water safety needs, especially regarding placement and management of activities likely to affect water resources.
- 7.1.9. Review:** Policies, standards and practices will be regularly reviewed to ensure that they provide adequate review and protection of Palau's water resources.

7.2. Safety, Effectiveness & Sustainability

Policy Summary: *Palau's water resource management practices will strive to ensure the safety, effectiveness, and sustainability of Palau's water resources.*

- 7.2.1. Safe Supply:** Establish, maintain and implement security plans to minimize the danger of contamination of Palau's water supply resources. Establish, maintain and implement emergency response plans to address instances where contamination does occur (for example, from spills or overflows).
- 7.2.2. Minimize Contaminants:** Establish, review and promote best practices to minimize contaminants to Palau's water supply resources. Such best practices should include practices for agriculture, aquaculture, construction, forestry, waste disposal, chemical management and wastewater management.
- 7.2.3. Quality Standards:** Establish, review and enforce appropriate standards for water quality (ambient, drinking, agricultural, wastewater, stormwater, etc.) and thresholds for action. Such standards should address water quality, operations, performance, and best practices. Such standards should reflect the best available and most appropriate science and technology. Such standards should be established, reviewed and enforced by appropriately qualified personnel.
- 7.2.4. Monitoring and Testing:** Conduct appropriate monitoring and testing to ensure adequate water supply, water quality, and wastewater management. Monitoring and testing should be established both on a system-wide basis (such as water source quantity and quality) and on a project-specific basis (such as wastewater discharge monitoring). Such monitoring and testing should review both processes and results and should address quality standards referenced in 7.2.3. Share monitoring and testing data and results with relevant and interested stakeholders.
- 7.2.5. Enforcement.** Establish and implement enforcement processes to review and ensure compliance with relevant and appropriate standards and practices, to address violations of such standards and practices, and to appropriately penalize parties responsible for such violations. Establish monitoring systems and practices to identify sources of

contamination to Palau's waters, address such contamination, and penalize responsible parties.

- 7.2.6. Consistency:** Ensure that standards are applied and met equally from location to location and time to time.
- 7.2.7. Reliability:** Establish systems and practices to ensure that Palau's water supply and wastewater management systems are reliable. Such systems and practices should include infrastructure assessment, investment, maintenance, upgrades, replacement, and planning, as well as personnel training, review, performance standards, and enforcement.
- 7.2.8. Sustainability:** Review and ensure that the systems for managing Palau's water resources are both environmentally and financially sustainable. Environmental sustainability review should address long-term supply and quality and ecosystem health and productivity. Financial sustainability review should address current and projected balance of costs, fees, affordability, funds and levels of service.
- 7.2.9. Efficiency:** Monitor and promote water use efficiency. Establish measures to quantify and track water use efficiency. Set targets and report on water use efficiency rates. Promote practices to improve water use efficiency rates. Where appropriate, promote water reuse and recycling as a means of increasing water efficiency.
- 7.2.10. Transparency:** To the greatest extent possible, ensure that relevant and interested stakeholders are provided with information on the safety, efficiency and sustainability of Palau's water resources and their management.
- 7.2.11. Innovation:** Review and adopt as appropriate the latest advances in water resource management standards, technology, and practices.

8. Appendix - Responsible, Implementing and Partner Organizations: Palau's water policy sets the overall vision, goals and principles for the management of Palau's water resources, and outlines the policy elements to achieve them. The specific plans and actions to support these policy elements will be developed, implemented, and supported by individual organizations. These plans and actions can be classified among six types of activities: 1) Resource Management; 2) Infrastructure Management 3) Monitoring and Testing; 4) Enforcement; 5) Use; and 6) Education and Awareness. The organizations involved in these activities include those in the following list (as well as others not listed here). These organizations should work together to clarify the specific roles, responsibilities, activities and timelines to implement and support the national water policy.

8.1. Resource Management - PWSC, EQPB, State governments, Public Land Authorities, traditional leaders, private landowners, conservation organizations, community members

8.2. Infrastructure Management - BPW, PWSC, Association of Water Operators, state governments

8.3. Monitoring and Testing - PWSC, BPW, EQPB, DEH, Association of Water Operators, conservation organizations

8.4. Enforcement - EQPB, the national congress, state governments, MOJ/OAG, traditional leaders, community members

8.5. Use - Governments (national and state), businesses, public

8.6. Education and Awareness - MOE, BOA, EQPB, DEH, PWSC, conservation organizations, traditional leaders, community groups