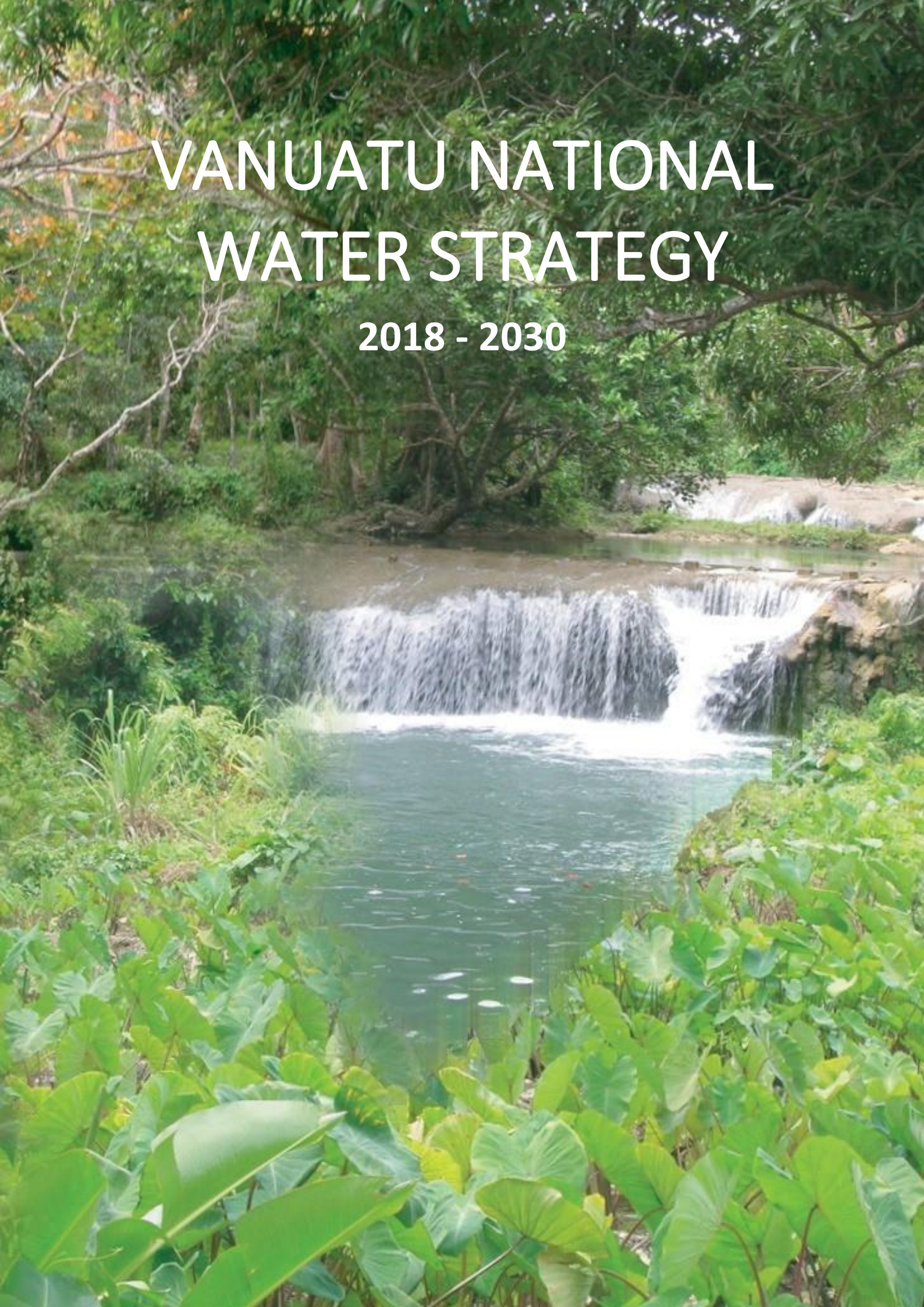


VANUATU NATIONAL WATER STRATEGY

2018 - 2030



GOUVERNEMENT
DE LA
REPUBLIQUE DU VANUATU

DEPARTEMENT DES RESSOURCES EN EAU

SAC POSTAL RÉSERVÉ 9001, PORT VILA
VANUATU
TÉLÉPHONE: (678) 33435 / 5333820
VOIP: 3932



GOVERNMENT
OF THE
REPUBLIC OF VANUATU

DEPARTMENT OF WATER RESOURCES

PRIVATE MAIL BAG 9001, PORT VILA
VANUATU
TELEPHONE: (678) 33435 / 5333820
VOIP: 3932

Vanuatu National Water Strategy (2018 – 2030)

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Background

The ending National Water Strategy (2008-2018) proposed a major change in the role of the Department of Geology, Mines and Water Resources from that of service provider to that of a regulator through the progressive devolution of responsibility, authority and resources for water management down to provincial government level and the increased community involvement in planning, management and monitoring of water use. This National Water Strategy (2018-2030) continues to pursue these previous strategic objectives:

- *Building on the achievements over the previous period vis-à-vis:* the attainment of Millennium Development Goal 7 successfully halving those without access to an improved water facility since 1990; the amendments to the Water Supply Act bringing together the responsibility and capacity for urban and rural water management within a single Department and clarifying the authority to let private sector water contracts in urban centres beyond Port Vila; revisions by the Public Service Commission transferring all staff and the Finance Division transferring all budgets from the Public Works Department to the Department of Water Resources; amendments to the Water Resource Management Act establishing provisions for water-use permits, water-works permits and the Provincial Water Resources Advisory Committee; the establishment of Provincial offices and the engagement of Departmental staff within the Provinces;
- *Responding to challenges in the future period vis-à-vis:* the establishment of the 2030 Sustainable Development Goal 6.0 prioritising the universal and equitable access to safe and affordable drinking water for all and the integrated management of water resources; the growing recognition that exposure to bacterial contamination in drinking water has chronic consequences (i.e. gut infections and stunting in children) in addition to the acute consequences (i.e. diarrhoea and wasting in children); the limitations of the community management of drinking water supply in bearing the liabilities of failure in the management of drinking water safety and security; the recognition of the opportunities presented by market mechanisms given the risks of the underpricing of water on the safe delivery and sustainable management of water resources.

Strategic Priorities

The Vanuatu National Water Strategy (2018 – 2030) has been developed to follow the ending National Water Strategy (2008-18) within the policy priorities established in the Vanuatu National Water Policy (2017-2030). The strategic priorities elaborated within this document mirror those already defined in the Vanuatu National Water Policy (2017-2030) giving greater detail on the strategic actions necessary to achieve the national policy objectives.

1. Water Safety & Security

Understanding the appreciable gains that have been made by Vanuatu in achieving high levels of proximate access to an improved drinking water source; *the Strategy elaborates how to address the premier SDG challenges of drinking water safety and security*

The Challenge: While access to a proximate source of drinking water is high (94% access to an improved drinking water source and 86% access on the premises), the safety and reliability of the water consumed by most people in Vanuatu is not known. While it is well understood that unsafe drinking water can lead to diarrhoea and sickness, it is less well known that the constant exposure to faecal bacteria leads to stunting of the villi in the lower intestine inhibiting the ability of the body to absorb nutrients and contributing to chronic undernutrition. The absence of limits on the use of water resources and inadequate water storage compromise the future security of a sufficient quantity of water.

What to do: The government prioritize water safety and security for all citizens via a three-prong approach targeting (1) the water safety and security risk management by providers & consumers (2) the water quality testing to assess & reduce exposure to faecal bacteria & (3) the assessment and investment in water storage and water protection zones

How to do: To strengthen the focus on the safety and security of water services the Strategy proposes the actions on DWSSP, endpoint testing and water resource management.

1.1 Water safety risks	<p>Extend drinking water safety and security planning to all drinking water asset owners (i.e. departments, private, communities, schools, health facilities, households).</p> <ul style="list-style-type: none"> • DoWR to issue the national Drinking Water Safety and Security Planning (DWSSP) guidelines, train provincial government staff, executing NGOs & concessionaires • All Provincial Governments to ensure all Rural Water Committees implement their DWSSP and any future water asset investments are preceded by a DWSSP • All Rural Water Committees to use the DWSSP findings to notify consumers of the water safety and security risks to be managed at the household level
1.2 Water quality testing	<p>Expand access to drinking water testing and treatment services raising awareness on the link between faecal coliforms and chronic undernutrition.</p> <ul style="list-style-type: none"> • DoWR to legally issue the national Drinking Water Quality Standards • DoWR to extend the requirements for end-point-testing to all significant public, private & community providers of drinking water • DoWR to establish a publicly accessible database of water quality test results and develop an annual report analysing the status of water safety in Vanuatu • DoWR and MoH to develop communication materials highlighting the chronic and acute effects of exposure to faecal bacteria in drinking water
1.3 Water resource risks	<p>Strengthen water resource data management to identify the priority areas to invest in the diversification, storage and regulation of water resources.</p> <ul style="list-style-type: none"> • Develop a national surface and ground water resource inventory to identify priority areas for the investment in water storage and water restrictions • Identify and enforce water protection zones to ensure the safety and security of water catchment areas • Provinces to work with rural water committees to embed scheme DWSSPs into Watershed Management Plans in high risk catchment areas identified by DoWR • Identify areas to strengthen demand management in reducing water wastage

2. Water Supply Markets

Recognising that the movement up the drinking water ladder from basic to safely managed water services is more efficiently undertaken by market mechanisms; the Strategy elaborates how to shift from public departmental and community service provision models to market based service delivery

The Challenge: Public water utility and rural water committee service provision in Vanuatu is characterized by an inefficient build-neglect-rebuild model of asset management. This management model delivers a low-quality service at low-cost to consumers but at a high cost to citizens (either as taxpayers or citizens not receiving quality water services). Under this public delivery model, a weak commercial orientation, poor O&M and the delivery of low quality services is rewarded with new asset investments.

What to do: As most of the population of Vanuatu already have access to a proximate improved water facility, the Strategy seeks to enable the revenues from the high levels of access to water assets to generate the savings necessary to cover the costs of O&M and asset replacement to move up the quality of service ladder from basic water access to a safely managed and secure water service.

How to do: To move up the quality of service ladder by promoting market based structures and incentives, the Strategy prioritizes the following urban, rural and common actions.

2.1 Urban cost recovery	<ul style="list-style-type: none"> • Establish a state-owned Water Company with the ability to own public urban water assets and retain revenues / cost savings from efficient O&M • Engage the private sector (potentially via a Joint Venture Management Contract) to establish modern corporate systems (culture and processes) to oversee public urban water assets & generate data to allow deeper private contracts to be let • Contract private operators (under concessions where viable) to generate the revenues to operate, maintain and upgrade publicly owned urban water assets • Work with the URA to establish full cost recovery tariffs in all urban centres for efficient operators that fully comply with all water service standards
2.2 Rural cost recovery	<ul style="list-style-type: none"> • Establish performance incentives for Rural Water Committees to develop efficient management systems for the operation and maintenance, billing and collection, replacement and expansion of public funded rural water assets • Assist Rural Water Committees to establish performance contracts with operators to professionally operate & maintain high quality water services and generate the revenues to sustain the service from consumers • Work with Rural Water Committees to introduce water meters & volumetric tariffs on all piped water systems to regulate consumption & enable full cost recovery
2.3 Access to water markets	<ul style="list-style-type: none"> • Strengthen access to high quality water market services in the form of: <ul style="list-style-type: none"> ○ personnel (i.e. engineers, plumbers, drillers, hydrogeologists, chemists) by extending support to vocational and professional training in water disciplines ○ products (i.e. tanks, pipes, meters) by lowering the local barriers to market entry potentially posed by remoteness, taxes, warehousing. ○ techniques (i.e. drilling rigs, HDPE welding, water quality testing) by facilitating the entry of private sector innovations • Improve access to finance for households (via loans, rebates, consumer cooperatives) to access higher quality drinking water products (i.e. water supply meters, first flush systems, rainwater tanks, household filters)

3. Water Services Compliance

Cognisant of the fact that a greater reliance on market mechanisms can lead to exploitation of the quality and quantity of water; *the Strategy identifies key actions to strengthen the regulation of drinking water services requiring all water asset managers to be bound by 'quality of service' agreements with the government*

The Challenge: The Water Resources Management Act (2002) empowers the government to declare water protection zones (clause 26), introduce a system of penalties (clause 32) and fees (clause 36), require any non-customary users of water to apply for the right to undertake waterworks (clause 7), the right to use water (clause 8) and require all Rural Water Committees to register with the government (clause 19). While the government has developed a water-inventory detailing all existing drinking water assets and a 4W matrix (i.e. who, what, where, when) detailing water project implementation progress by NGOs, there is currently no system within the Department of Water Resources for granting water-works or water-use permits or the registration of Rural Water Committees.

What to do: Given the weakness of the systems in Vanuatu for extending permits for the use and penalties for the misuse of water, despite legislation requiring the registration of all water users and authorization for any non-customary water users, the Strategy targets the compliance of high risk users of water in obtaining the required water-works and water-use permits.

How to do: To introduce a two-step permit system the Strategy will prioritize actions to develop a one-off permit system for new water-works, coupled to a routine user permit system for water-use, coupled to a water quality management system.

3.1 Water-works	<ul style="list-style-type: none"> - Expand & simplify the web based 4W system that tracks the NGO subcontracted construction of rural water drinking schemes to include high risk waterworks by any public or private agency that either uses or affects water resources - Develop, issue and continue to refine waterworks permit application procedures - Animate the waterworks permit system deploying a billing and collection system backed by a dashboard allowing data submitted by applicants to be collated
3.2 Water-use	<ul style="list-style-type: none"> - Expand & simplify the Akvo water inventory to enable the operational status of all water assets to be updated through the renewal of water-use permits - Link the 4W system tracking all water asset creation to the Akvo water inventory tracking all wateruse - Develop, issue and continue to refine wateruse permit application procedures - Prioritise the annual renewal of wateruse permits against the submission of essential water use data for high risk users of water
3.3 Water quality	<ul style="list-style-type: none"> - Replace the SOPAC supported water quality database with a web based system enabling the GPS referenced entry of water quality results - Link the water quality database to the wateruse & waterworks databases to enable water quality data submitted for permit processes to be collated - Foster the 3rd party monitoring of drinking and environmental water quality on a routine basis or in response to requests of citizens - Facilitate water quality testing training and database entry for government departments, private providers, laboratories, NGOs and regulators

4. Formalize Water Providers

Realizing that rural water committees are not legal entities that cannot be held to account for ‘quality of service’ standards; *the Strategy identifies steps to improve accountability for compliance to ‘quality of service’ standards by seeking to vest public water asset ownership with a legal entity*

What exists: The Water Resources Management Act (2002) recognizes the powers of the government to transfer water schemes to Rural Water Committees (clause 20) that report to the Provincial Water Resources Advisory Committee. When water assets are transferred to Rural Water Committees they are ‘written off’ in the public asset register as having zero value and the government relinquishes the ability to ensure that the water assets are maintained or the quality of water services are sustained. This is because Rural Water Committees in Vanuatu are not legal entities which cannot own assets or incur expenses, sue or be sued and cannot be held responsible by an external agent for any quality of service failures. As the liability for the water assets are not owned by anyone and as the transactions (i.e. joint bank accounts) are owned by individuals on behalf of the community, unregistered Rural Water Committees are poorly motivated to save water tariff revenues to invest in the replacement and expansion of water facilities.

What to do: The ability of the government to ensure service delivery and asset management standards will be significantly enhanced if Rural Water Committees are registered as not-for-profit organizations under either the Cooperative Societies Act (1982), the Charitable Associations Incorporation Act (1982) or the Companies Act (1986).

How to do: To enable Rural Water Committees to own water assets and their associated liabilities by establishing Rural Water Committees as not-for-profit organizations, the following actions to promote registration, capacity and compliance have been prioritized.

4.1 Registration	<ul style="list-style-type: none"> • DoWR to establish MoUs with the relevant Departments to meet the necessary requirements to register Rural Water Committees as not-for-profit organizations • Direct the government and NGO support to assist existing Rural Water Committees to register as not-for-profit organizations under any of the Acts • Direct new government and NGO investments to communities willing to register as not-for-profit Rural Water Committee to hold water assets & their liabilities
4.2 Capacity	<ul style="list-style-type: none"> • Extend training to all registered Rural Water Committees on legal governance, financial management and submission compliance requirements • Extend training to all Rural Water Committees on the design & installation, operation & maintenance of their rural water supply schemes • Transfer the legal rights to the land (land title, lease, easement) and water assets (along with any liabilities) to registered Rural Water Committee • Support registered Rural Water Committees to obtain the necessary permissions (i.e. building permits, trade licenses) from the appropriate authorities
4.3 Compliance	<ul style="list-style-type: none"> • Follow-up with government registrars to ensure the annual auditing of the financial accounts and governance systems of Rural Water Committees • Work with the government registrar to ensure the application of the mandated dispute resolution and any failure to comply procedures • DoWR and the Provincial Governments to ensure compliance against national water construction and safety standards, waterworks and wateruse permits

5. Rights of the Pipes

Knowing that the placing of public water assets on unsecured land undermines the security and safety of drinking water services; the Strategy identifies actions to secure the land prior to the approval of any public water scheme

The Challenge: Most of rural public water assets managed by Rural Water Committees are placed on donated private land, while most urban drinking water assets managed by the DoWR are installed on state-owned land. The failure to secure the rights to the land with the water asset owner, or adequately secure the rights of the water assets with the owner of the land, means that the security of the water assets is compromised. This means that it is not uncommon in Vanuatu for public water assets to be captured (i.e. access to water outlets denied), or public water networks to be disrupted (i.e. pipes deliberately or accidentally cut), or public water systems to have their integrity compromised (i.e. drainage pipes to be placed too close to water pipes) without any consequences.

What to do: Water insecurity is associated with a failure to secure the land on which public water assets are installed. Securing of the land rights of water assets is a key component of ensuring water security. This Strategy will seek to ensure that the ‘rights of the pipes’ of public water assets are secured against tampering, safety risks and denial of access.

How to do: To enable the ‘rights of the pipes’ to be secured the following actions to secure land rights with water assets in rural and urban areas have been prioritized.

5.1 All land	<ul style="list-style-type: none"> • Recognize the easement rights of all existing public water assets in legislation irrespective of whether the land is custom, state or privately owned • Provincial Governments to develop By-laws and Area Councils to develop Rules to establish ‘<i>the rights of the pipes</i>’ located on custom, state & private land
5.2 Custom land	<ul style="list-style-type: none"> • Require the rights of any new public water assets placed on custom land to be secured by the Rural Water Committees to the satisfaction of DoWR <ul style="list-style-type: none"> ○ Where possible any compensation should be borne in the form of future revenues or shares in Rural Water Committees ○ The land rights of water assets are to be defined in a legal agreement and if possible in land documents and Rural Water Committee asset registers
5.3 Private land	<ul style="list-style-type: none"> • Assist registered Rural Water Committees to enter formal agreements (i.e. ownership, lease, easement) with private land owners to secure and detail the form of the rights to the land of the public water assets • Require that the ownership, or lease, or easement rights of any public water assets are bound in an agreement and registered on land title deeds plus the asset register of the Rural Water Committee
5.4 State land	<ul style="list-style-type: none"> • Strengthen the management of state owned land by empowering an agency (i.e. municipality, Province, PWD) to undertake coordination to protect the easement rights of all public assets (i.e. water, gas, electricity, telecommunication, drainage, sewerage) on state land • Support the municipality to strengthen the enforcement of spatial zoning plans, planning approval processes and building code compliance in municipal areas • DoWR to work with the Ministry of Lands for the mandatory acquisition of water protection zones or the declaration of conditions on water catchment zones and the prioritization of areas for implementing watershed management plans

6. Provincial Council Authority

Understanding that ensuring drinking water services for all has been clearly assigned to the provincial governments; *the Strategy identifies actions to separate the regulation of failure (by the central government) from the licensing of compliance (by the provincial governments)*

The Challenge: The Public Health Act [CAP 234] assigns the responsibility to the Provincial (Municipal) Councils to ensure (enforce) sufficient & safe water for all (clauses 42, 43 & 44). The Decentralization Act [CAP230] empowers Provincial Councils to pass by-laws for constructing, maintaining and managing water supply (clause 20). The Water Resources Management Act [CAP 281] establishes Provincial Water Resources Advisory Committees to advise provinces and draft by-laws for the consideration of the Provincial Council. However, provincial governments play a negligible role in service provision with almost all provincial funds and functionaries managed by central departments.

What to do: Despite this neither the central or provincial government exert any significant influence at the community level, where the Chiefs of custom tend to define community rules and practices. With limited appetite for the decentralization of funds or functionaries, it is possible to meet the legislative assignment of functions by decentralizing the ensuring functions (i.e. licensing of compliance) to the Provinces.

How to do: Licensing of compliance by provinces requires the passing of water by-laws that ideally empower Area Councils to develop local rules that ensure compliance. To strengthen the licensing of compliance by the provincial governments the following actions have been prioritised at the central, provincial, municipal and area council level.

6.1 Central	<ul style="list-style-type: none"> • DoWR to develop model water by-laws for Provincial and Municipal Councils • DoWR to develop, issue, regulate and update national water standards (i.e. drinking water quality; drilling; design & construction; tariff standards) • DoWR to develop national policies & strategies for water with the NWRAC
6.2 Province	<ul style="list-style-type: none"> • Decentralization of functions & capacity to the Provincial Water Resources Advisory Committee to undertake their role • Support Provincial Water Resources Advisory Committees to develop water by-laws and Water Master Plans for consideration by the Provincial Councils
6.3 Municipal	<ul style="list-style-type: none"> • Extend support to Municipalities to incorporate water management supply and demand considerations into urban zoning plans • Extend support to Municipal Councils to amend & issue model water by-laws • Assist Municipalities to strengthen their planning approval process for development works with respect to potable water requirements • Assist municipalities to strengthen building permit monitoring particularly in respect to the quality of plumbing materials and workmanship • Assist municipalities to issue trade licenses to certified plumbers and builders
6.4 Area Council	<ul style="list-style-type: none"> • Require Area Councils to develop & apply infrastructure zoning rules prior to the approval of public water supply projects within their jurisdiction. • Strengthen customary decision making and arbitration practices in developing integrated water resource management rules by Area Councils • Work with Area Councils to raise public awareness on the chronic implications of unsafe drinking water on the intellectual and physical development of children

7. Secure Water Future

Recognizing that water is the primary medium through the impact of Climate Change is mediated and that the vulnerability to disasters significantly impacts the safety and security of water; *the Strategy identifies actions to strengthen coordination with other sectors and partners to understand, predict, design and invest to secure Vanuatu’s water future.*

The Challenge: Vanuatu ranks amongst the world's most disaster-prone countries being vulnerable to volcanic eruptions, earthquakes, tsunamis, cyclones, storm surge, landslides, droughts and flooding. The severity and unpredictability of many of these risks is anticipated to increase with global Climate Change. While the impacts of climate change on agriculture, energy, industry and urbanization will be primarily mediated by changes in water patterns, there is little engagement between the Ministries on the long-term prediction, planning and investment to respond to changes in rain, ground and surface water resources.

What to do: The prediction of changes in future water rainfall patterns and hydrogeological patterns, the proposed investments by other sectors in water storage or water usage must be coordinated with water resources planning, investments and regulations. This requires increased engagement between DoWR and other sectors to predict and reduce the impact of changes in water resources or consumption to safeguard sufficient water for all.

How to do: To strengthen investments in securing Vanuatu’s water future the Strategy prioritizes actions that strengthen risk management; improve disaster preparedness, response and recovery; and low carbon development.

7.1 Risk management	<ul style="list-style-type: none"> • Work with MoCC in the development of comprehensive databases and models combining ground, surface and rain water resources to enable: <ul style="list-style-type: none"> ○ the prioritising of investments in the diversification of water resources and increasing of water storage capacity ○ the identification of water scarcity ‘risk areas’ requiring strengthened water regulations or the imposition of water restrictions ○ the prioritising of the consumption of rain & ground water for drinking and surface water for agriculture, industry and other uses ○ the identification of priority areas to work with water users to aggregate scheme based DWSSP into Watershed management plans
7.2 Risk response	<ul style="list-style-type: none"> • Use water resource prediction data to strengthen the ability of rural and urban water providers to integrate disaster risk reduction into their DWSSP • Work with NDMO through the WASH Cluster to strengthen coordination in disaster response through improved data management • Strengthen lesson learning and the sharing of knowledge in disaster risk reduction to enable WASH response activities to build back better
7.3 Risk mitigation	<ul style="list-style-type: none"> • Prioritise the use renewable energy sources (i.e. hydro-schemes and solar pumps) for the generation of power • Undertake actions to improved water pumping efficiencies including the storage of water to smooth the peaks and troughs of energy demand relative to supply • Identify Climate Change financing opportunities associated with improved water management that also reduces carbon emissions

8. Capacity for Reform

Cognisant of the necessity of Departmental Capacity to drive the reform processes proposed in the Policy; *the Strategy identifies priority actions to strengthen the capacity of the Department of Water Resources to implement the proposed Policy reforms.*

The Challenge: Following the passage of the amendments of the Water Supply Act (CAP 24) and the Water Resources Management Act (CAP 281) in December 2016, the Public Service Commission approved the transfer of urban water responsibilities, assets and staff from the Public Works Department to the newly established Department of Water Resources on December 23rd, 2016. This has consolidated the responsibility for rural and urban water supply under the Department of Water Resources however there is still a shortfall in the capacity of the Department to implement the reforms defined in the Policy.

What to do: The Department of Water Resources will need to continue to reform its organizational structure and develop its capacity to deliver the objectives defined in the National Water Policy.

How to do: The policy proposes a separation of the roles of the regulation of failure with the central government, the licensing of compliance with the provincial governments and service provision with the urban and drilling staff. Implementation of the Strategy requires the strengthening of capacities to regulate at the central level; to license at the provincial level; and to provide services at the urban utility level.

8.1 Central capacity	<ul style="list-style-type: none"> • Undertake sub-sector assessments and develop medium term strategic plans and proposals for the requisite government and donor funding • Review & develop annual business plans & prepare annual water sector reports • Recruitment of the staff necessary to perform core departmental functions • Develop individual workplans for staff and performance appraisals • Undertake training needs assessments and develop funded annual training plans • Build, repair or renovate the provincial offices & warehouses of DoWR
8.2 Provincial capacity	<ul style="list-style-type: none"> • Procure stock of essential spare parts for water supply systems • Procure tools & equipment to enable the repair of water supply systems • Purchase diagnostic equipment for assessing the chemical and bacterial quality, the depth and drawdown, the elevation and flow of water supply systems • Train provincial staff to monitor water systems and manage the necessary government information systems • Build, repair or renovate the provincial offices & warehouses of DoWR
8.3 Urban/drilling capacity	<ul style="list-style-type: none"> • Invest in upgrading local transport and stock for essential repairs • Engage the staff and equipment to run urban water systems / drilling rigs • Train staff in modern water drilling & urban system management strategies • Establish modern data collection & management systems to enable the operation of the urban water system & drilling rig to be optimised • Introduce modern asset management information systems to enable the maintenance of urban water systems & drilling rig to be optimised • Develop modern billing & collection systems for urban water & drilling • Build, repair or renovate urban water supply offices & warehouses