



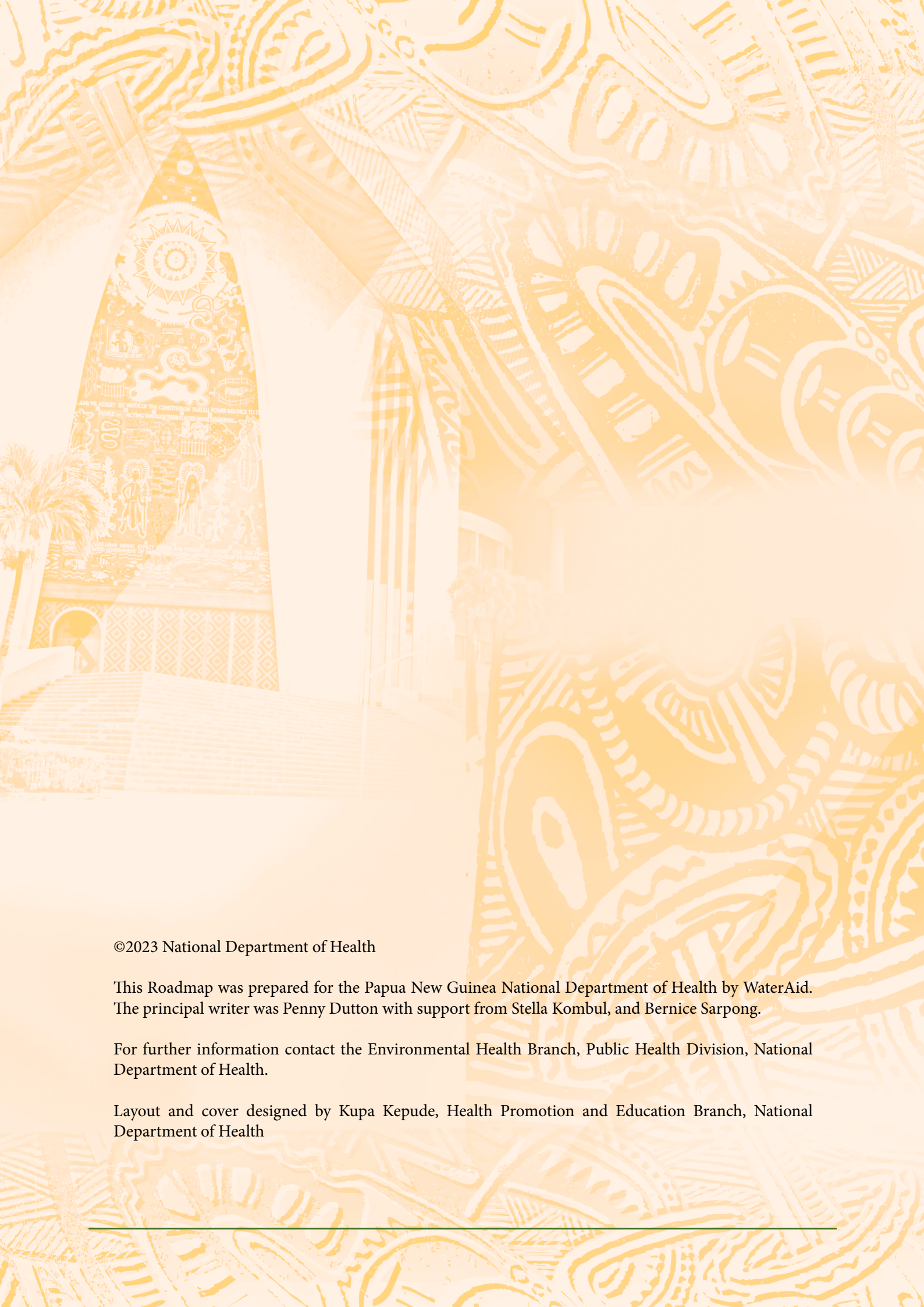
NATIONAL DEPARTMENT OF HEALTH

National Roadmap for Improving WASH in Healthcare Facilities



Papua New Guinea 2023-2030

PREPARED BY
National Department of Health
May 2023



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This Roadmap was prepared for the Papua New Guinea National Department of Health by WaterAid. The principal writer was Penny Dutton with support from Stella Kombul, and Bernice Sarpong.

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FROM THE MINISTER

No one goes to a healthcare facility to get sick. People go to get better, to deliver babies or to get vaccinated. Yet hundreds of millions of people face an increased risk of infection by seeking care in health facilities that lack basic necessities, including water, sanitation, hygiene, health care waste management and cleaning (WASH) services. Not only does the lack of WASH services in healthcare facilities compromise patient safety and dignity, it also has the potential to exacerbate the spread of antimicrobial-resistant infections and undermines efforts to improve child and maternal health.

The Sustainable Development Goals (SDGs) place a new emphasis on universal health coverage, including access to WASH services. They also reflect a shift in thinking that recognizes the importance of quality care and an integrated, people-centered approach that enhances the experience of care.

Healthcare facilities (HCFs) should be safe and hygienic places for people to visit and seek quality healthcare. However, this is not always the case in Papua New Guinea (PNG). Findings of a Situation Analysis of water, sanitation, hygiene, waste management, and cleaning (WASH) in HCFs in PNG in 2022, paint a troubling picture. There are reports of our HCFs running without adequate water supply, sanitation, and hygiene facilities. Many HCFs have regular water shortages, lack sufficient water storage, or use unimproved water sources of poor quality. To hear of women who must bathe in a nearby river after giving birth because the WASH facilities at the health centre are not functioning, must stir us into urgent action.

In addition, lack of regular maintenance of water, sanitation, and hygiene facilities means some toilets are unusable, and handwashing is not possible. HCFs have inadequate hygiene facilities at points of care, poor environmental cleaning practices, and unsafe waste management practices. These deficiencies in HCFs will have a wider impact on the Papua New Guinean healthcare systems, working environment of healthcare providers, and the overall wellbeing of patients and communities.

Ensuring the availability of adequate, reliable and quality WASH services in every HCF will prevent transmission of pathogens such as cholera, diarrhoea and COVID-19, support core universal healthcare aspects of quality, equity, and dignity for all people, make childbirth and primary care safer, and stop the spread of anti-microbial resistance.

The Government of Papua New Guinea has committed to attaining universal access to water and sanitation in HCFs by 2030 in the National WASH Policy 2015-2030, and to improving WASH in HCFs in the National Health Plan 2021-2030. As a signatory to the World Health Assembly resolution WHA72.7 in 2019, PNG made an international commitment to develop and implement a road map so that every HCF across the country has safe, and reliable water supplies; safe and accessible toilets; good hand hygiene infrastructure and practices; routine, effective cleaning; and safe and environmentally sustainable waste management systems.

Ensuring universal access to WASH services in healthcare facilities is a solvable problem with a return on investment. We are committed to supporting this effort by working with partners to deliver quality WASH services in healthcare facilities and to improve monitoring

and data management for WASH.

The National Department of Health has diligently enacted this commitment through this National Roadmap for Improving WASH in Healthcare Facilities 2023-2030. This Roadmap helps define the pathway to achieve better WASH in our healthcare facilities with priorities linked to the National Health Plan, and objectives, and key actions to be taken

As Minister for Health, I request the support of all partners and stakeholders to coordinate and contribute to implementing the key actions contained in this Roadmap.



Hon. Dr Lino Tom, MP
Minister for Health

PREAMBLE

The National Department of Health is mindful that adequate water, sanitation, hygiene, healthcare waste, and environmental cleaning (WASH) services and infrastructure in healthcare facilities (HCF) are necessary to achieve quality health outcomes and Universal Health Coverage (UHC). WASH underpins the National Health Service Standards, and is fundamental to achieving the National WASH Policy and our commitments to the Sustainable Development Goals (SDGs).


The National Department of Health, through the National Technical Working Group on WASH in HCF, has prepared this Roadmap to set out a vision for change for WASH in healthcare facilities from the current low levels.

The Roadmap is the culmination of a series of field visits and consultations with a broad range of stakeholders, held between January and October 2022. More than 20 healthcare facilities, ranging from health posts to district hospitals, were visited across all four regions to understand the real challenges and needs for WASH on the ground. Consultations with Provincial Health Authorities, District Authorities, and partners implementing WASH improvements in HCFs contributed unique perspectives on these challenges and needs.

This Roadmap goes beyond the need for better infrastructure in HCFs. It addresses the underlying causes of poor WASH in HCFs and recommends action on: governance and leadership, workforce, financing, information and innovation. As such, the Roadmap aligns with the National Health Plan Key Result Area 5: Strengthen Health Systems 2023-2030.

Realizing the importance of WASH in the delivery of quality health care, the National Department of Health has developed this roadmap, which calls for collective efforts from all stakeholders in prioritizing WASH interventions in all health care facilities of different levels in Papua New Guinea.

I would like to acknowledge the support and efforts of all the stakeholders involved in drafting the Roadmap including the Technical Working Group, WHO, and WaterAid PNG. I look forward to working with everyone involved to ensure the priorities and actions outlined in this document are achieved, resulting in real and positive changes in the role of WASH in health service delivery in Papua New Guinea and quality services for all.


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Dr Osborne Liko
Secretary for Health



ACKNOWLEDGEMENT

The National Department of Health (NDoH) through the Public Health Division, Environmental Health Branch would like to thank stakeholders who technically and financially contributed to the development of the “Water, Sanitation, Hygiene, including waste management, and environmental cleaning (WASH) in Health Care Facilities Roadmap” for Papua New Guinea. In particular, these partners include WaterAid through funding from the Australian Department of Foreign Affairs and Trade (DFAT) Water for Women Program, and the World Health Organization (WHO).

The NDoH extends its appreciation to all the stakeholders, including the WASH PMU within the National Department of Planning and Monitoring (NDPM), Central, East Sepik, Jiwaka, Morobe, New Ireland and Western Highlands Provincial Health Authorities and respective health facilities, civil society organisations and development partners for their technical inputs and contributions towards the development and completion of this roadmap.

Lastly, the NDoH acknowledges technical inputs and guidance from members of the WASH in Health Care Facilities Technical Working Group (TWG) throughout the development process.

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ABBREVIATIONS AND ACRONYMS

AMR	Antimicrobial Resistance
CHW	Community Health Worker
DNPM	Department of National Planning and Monitoring
EHO	Environmental Health Officer
GESI	Gender equality and social Inclusion
HCAI	Healthcare acquired infection
HCF	Health Care Facilities
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IPC	Infection, Prevention and Control
JMP	Joint Monitoring Programme of the WHO and UNICEF
MRSA	Methicillin Resistant Staphylococcus Aureus
NDoH	National Department of Health
PHA	Provincial Health Authority
PPE	Personal Protective Equipment
SDG	Sustainable Development Goal
SOP	Standard Operating Procedure
UHC	Universal Health Coverage
UNICEF	United Nations Children’s Fund
VHA	Village Health Assistant
WASH	Water, sanitation, hygiene (waste management, environmental cleaning)
WASH-FIT	Water and Sanitation for Health – Facility Improvement Tool
WHO	World Health Organisation

EXECUTIVE SUMMARY

Improving WASH in healthcare facilities is a key objective of the PNG National WASH Strategy 2030, and contributes towards achieving Papua New Guinea's Sustainable Development Goal (SDG) 3 (ensure healthy lives and promote well-being for all at all ages) and 6 (ensure availability and sustainable management of water and sanitation for all).

Papua New Guinea has more than 4,500 healthcare facilities. Most of these are rural facilities providing primary healthcare for 80-85% of PNG's 10 million population. Many healthcare facilities in PNG do not have adequate water, sanitation, hygiene, waste management and environmental cleaning infrastructure and services. Specifically:

- Water is either not available at the health care facility, or is from an unimproved source
- Water shortages occur regularly during the dry season, due to inadequate storage, broken infrastructure, or lack of electricity
- Toilets either do not exist or are insufficient in number for patients and staff
- Toilets are not cleaned or properly maintained
- Toilets are not accessible for people with disability, pregnant women, or elderly
- Handwashing facilities do not function or lack water, and there is no soap
- Healthcare waste is not properly segregated or safely disposed
- Cleaning is not prioritised, as many facilities lack dedicated and trained staff.

It is critical that collaborative action is taken to address these WASH limitations as they: pose an infection risk to patients, carers, workers and the neighbouring community; are not inclusive of vulnerable people; make delivering health services difficult and demoralising for staff; and result in reduced services as healthcare facilities simply cannot function properly. All of these factors affect the quality of health service delivery and undermine attempts to attain National Quality Standards.

As a signatory to United Nations, Papua New Guinea is committed to undertake concrete actions as stipulated in the World Health Assembly Resolution 72.7 on WASH in healthcare facilities and United Nations General Assembly. These actions include establishing national roadmaps and targets, implementing standards, integrating WASH and IPC indicators into health programming and monitoring, and increasing domestic funding.

The National Roadmap for WASH in Healthcare Facilities is aligned to the National Health Plan 2021-2030. It sets out a vision for a targeted set of actions across the health system to ensure that Papua New Guinea effectively and quickly improves WASH services and infrastructure.

The key objectives of the Roadmap are to:

- Increase the number of healthcare facilities with reliable and inclusive WASH services
- Strengthen the maintenance and management of WASH infrastructure and services

-
- ❑ Increase the priority for WASH within the health system.

The Roadmap has a strong focus on capacity building and improving understanding of all stakeholders in the importance of WASH. Strengthening the communication between health professionals and patients is also critical.

An extensive consultation process was undertaken to develop the Roadmap. The National Department of Health consulted: patients and users of health care facilities; medical staff, managers, and cleaners at government and church-run health facilities; Provincial Health Authority Chief Executive Officers, Directors of Public Health and Curative Services, Environmental Health Officers; Nursing Schools tutors; National Department of Health staff in curative and public health fields; development partners UNICEF, WHO, DFAT, ADB, and World Bank; NGOs including Live and Learn, Plan International, WaterAid, and World Vision.

Visits to healthcare facilities occurred in six provinces across all of PNG's regions.

Valuable additional feedback was obtained from the National Workshop to validate the Roadmap in April 2023, attended by 18 of the 22 PHAs in PNG.

The actions prioritised in the Roadmap lay out an ambitious but necessary agenda for improving WASH in healthcare facilities. Implementing many of these actions will require significant commitment and cooperation from the national and provincial governments, provincial health authorities, district authorities, health care providers and professionals, development partners, and other stakeholders.

The National Department of Health governance group to oversee and provide advice on the implementation of the Roadmap throughout its lifespan is the WASH in HCF Technical Working Group, which includes health and WASH sector stakeholders.

1. OVERVIEW

The importance of WASH in Health Care Facilities

Achieving and maintaining WASH services in health care facilities is critical for universal quality health coverage, infection prevention and control (IPC), patient safety, and child and maternal health, in particular the time around child delivery. WASH also extends beyond health impacts to issues of dignity and respect, staff morale, and performance and safety.

Figure 1: Benefits of WASH in Healthcare Facilities



*WASH in health care facilities includes water supply, sanitation, hygiene, health care waste management and environmental cleaning.

Source: WHO/UNICEF, *Water, Sanitation and Hygiene (WASH) in Health Care Facilities Global Action Plan Factsheet 2015*
<https://www.wsscc.org/sites/default/files/uploads/2015/11/WASHinHCFGlobalActionPlanOct20151.pdf>

Making water, sanitation, hand hygiene, health care waste management, and environmental cleaning facilities and practices available in HCFs, is at the heart of counter-preventive measures for thwarting the spread of COVID-19, healthcare associated infections (HCAI), antimicrobial resistance (AMR), and reducing newborn and maternal deaths. Yet in many low and middle-income countries (LMICs), WASH is non-existent or inadequate. HCAI's are a constant risk to care seekers, health staff and communities. Unhygienic environments are usually the result of chronic, sub-optimal investment, lack of and under-resourced water and sanitation services, cleaning and action. Weak, poorly functioning WASH and IPC programmes result in a vicious cycle of widespread infection, antibiotic use and misuse and spread of AMR.¹

WASH in health care facilities is part of the 2030 Sustainable Development Goal (SDG) targets related to WASH. The SDG targets 6.1 and 6.2 refer to universal and equitable access to drinking water, sanitation and hygiene for all. The term 'universal' implies all settings, including households, schools, health care facilities, workplaces and public spaces. Target 3.8 aims to provide access to quality essential health-care services for all. Moreover, WASH in health care facilities is directly related to a number of other health goals, namely reducing maternal mortality, and under-five and neonatal mortality (SDG targets 3.1 and 3.2).²

WASH in HCFs requires functioning, safely managed water and sanitation services, hygiene facilities, products and practices, health care waste management and environmental cleaning products and behaviours.

Why is a Roadmap needed?

The United Nations (UN) Secretary General's global Call to Action on WASH in health care facilities in 2018, urged all Member States, UN agencies and partners to commit leadership and resources to addressing the fundamental challenge of improving WASH in HCFs. In response, WHO and UNICEF developed a global vision with targets, including a framework for national and local level action detailing eight 'practical steps' that countries might take. (Figure 2).

¹ WHO, UNICEF, WaterAid. n.d. Combatting Antimicrobial Resistance through water, sanitation, hygiene and infection prevention and control in health care. https://washinhcf.org/wp-content/uploads/2021/07/WASH_IPC_AMR_techbriefOct2020.pdf

² UNICEF, WASH in Healthcare Facilities. August 2022. <https://data.unicef.org/topic/water-and-sanitation/wash-in-health-care-facilities/> Visited 10/1/2023

Figure 2: Eight practical steps to improve and sustain WASH in HCFs



Source: WHO, UNICEF. 2019. *Practical steps to achieving universal access to quality care*

At the 2019 World Health Assembly (WHA) all 194 WHO member states resolved (WHA Resolution 72.7) to ensure that every healthcare facility in the world has adequate water, sanitation, and hygiene services, waste management, and environmental cleaning practices. Ministries of Health committed to set, implement, and regularly monitor standards, as well as to empower the health workforce to improve WASH and waste management practices.

A National Roadmap is needed to set priorities, targets, actions, and responsibilities to improve WASH in HCF in Papua New Guinea. The Roadmap takes as a starting point, the situation of WASH in healthcare facilities in PNG in 2022 and sets out the critical activities that need to be taken to improve WASH in healthcare facilities by 2030. The Roadmap should be used by all stakeholders as a living guide to achieving WASH in HCF targets.

Methodology for developing the Roadmap

The Roadmap has been developed under the leadership of the WASH in HCF Technical Working Group, and has been refined in a series of consultations and targeted discussions held between January and November 2022.

Groups and organisations consulted include patients; managers, medical and non-medical staff at health care facilities; District Development Authorities and health managers; Provincial Health Authorities (PHAs) including CEOs, Directors of Public Health and Curative Health, Environmental Health Officers; training institutions; senior managers at the NDOH; NGOs, and development partners. The Roadmap has been informed by visits to 20 healthcare facilities and one nursing school in 6 provinces, the PNG WASH in Healthcare Facilities Situation Analysis, and recommendations and proposed actions put forward during the consultation process.

A draft of the Roadmap was presented at the WASH in HCF TWG meeting in November 2022.

Valuable additional feedback was obtained from 18 of the 22 PHAs who attended the National Validation Workshop held in Mt Hagen 18-20 April 2023.

Figure 3: Consultation process for the Roadmap



Outline of the Roadmap

This Roadmap provides the objectives, course of actions, the timeframe, and identifies collaborating partners for a programme of implementation from 2023.

The following sections of the Roadmap are organised as follows:

- **Situation in Papua New Guinea** – briefly outlines PNG’s health status, the status of WASH in HCFs, an analysis of the effects and causes of poor WASH in HCF in PNG (problem tree), and opportunities to build on to improve WASH in HCFs.
- **The Roadmap** – sets out the vision, targets, priorities, key actions required to improve WASH in HCFs in PNG by 2030. The priorities are aligned to the National Health Plan KRA5 Health Systems Strengthening.
- **Implementation arrangements** – describes how the Roadmap will be carried out and by whom, as well as how progress of the Roadmap implementation will be monitored.
- **Annex 1** – provides a summary of the Roadmap with indicative timeline for carrying out the key actions and the collaborating partners involved.
- **Annex 2** – presents recent WHO data from 40 least-developed countries on indicative capital and recurrent costs to improve WASH services.

2. SITUATIONAL ANALYSIS

Health services and status

Table 1 Key Health Indicators

- ✦ Total Population: 10 142 000
- ✦ Life expectancy: 65.3
- ✦ Maternal Mortality Ratio (maternal deaths per 100,000 live births): 145
- ✦ Neonatal Mortality Rate (Deaths per 1,000 live births, first 28 days): 21
- ✦ Infant mortality rate (Deaths per 1,000 live births, between birth and 1 year): 35
- ✦ Universal Health Service Coverage Index: 36
- ✦ Total number of HCFs: 3,756

Source: UNICEF <https://data.unicef.org/country/png/>

Status of WASH in HCFs

A recent Situation Analysis of WASH in HCF for PNG, using data from the National WASH Management Information System (MIS)³, and backed up by visits to more than 20 Level 1-5 facilities in NCD, Central, New Ireland, East Sepik, Western Highlands, Jiwaka, and Morobe provinces, provides the data for the status of WASH in HCF described in this section.

PNG has low levels of access to basic WASH services across health facilities (Figure 4). Of the approximately 3,756 functional healthcare facilities, most are level 3 and below. The majority of these are in rural and often remote areas, which creates logistical and cost challenges of maintaining, equipping, and staffing HCFs.

Figure 4: Access to basic WASH services in HCFs



Source: Papua New Guinea WASH Situation Analysis, 2022, using National WASH MIS data.

³ National WASH Management Information System, WASH PMU.

Water supply

Few HCFs (43%) have an improved source of water within the HCF premises. Over half the facilities rely on rainwater (52%) but this means water runs out in the dry season. Without adequate back up storage, working pumps or electricity or fuel, HCFs go without water or have to manually collect water from unsafe sources such as rivers. This risks infection of patients, but also creates a burden in staff time to fetch and carry water.

A reliable, safe, and continuous supply of water is fundamental to many other services in HCFs including washing hands after using a toilet, before and after treating patients, or after disposing of healthcare waste; cleaning, mopping floors and wiping surfaces; flushing toilets; and patient bathing. Water is also essential in HCFs where services such as meals and laundry are provided.



Water is not connected to the health facility



Storage facilities are not enough during the dry season



Patients and staff have to carry water for toilets

Sanitation

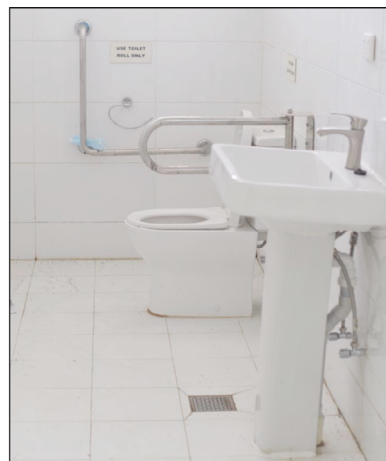
About 53% of HCFs have toilet facilities but do not have all the requirements for a basic service, such as separate male and female and staff toilets or enough toilets. If there is a toilet present it is not always usable, while 42% of HCFs have no toilet. Lack of water is a constraint to using septic tank toilets, and accessing services to empty septic tanks in remote areas is impossible. Pit latrines do not meet basic levels of service. Only the most recently built Community Health Posts have toilets that are accessible to people with disabilities, with hand rails and space to accommodate a wheelchair.



Cleaning and maintenance of toilets is important



Too few toilets are available for staff, patients and guardians



Accessible toilets are only in the most recently built facilities

Hand Hygiene

Only 28% of HCFs have functional hand hygiene stations at points of care. 24% of HCFs have hand hygiene stations but these are not functional, and 48% of HCFs do not have hand hygiene stations at points of care. Only 19% of HCFs have handwashing facilities with soap and water at toilets. COVID-19 increased the availability of alcohol-based hand rub at point of care. Sustainability concerns exist for the supply of hand rubs and soap as HCFs are unable to procure these items.



ABHR at points of care



Handwashing facilities installed during COVID but lack soap



Reliable handwashing facilities are essential for staff

Healthcare Waste Management

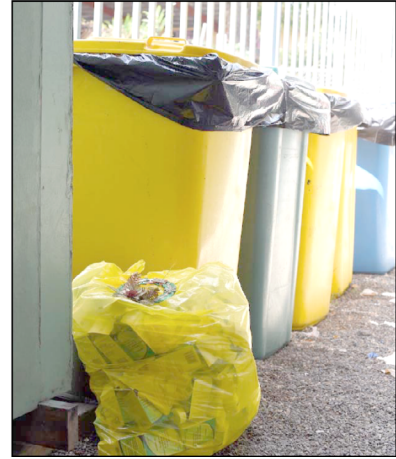
Only 28% of HCFs correctly segregate medical waste, and safely treat and dispose of infectious and sharps waste. Frequently waste is burnt in unlined pits, with basic incinerators seldom available. High-temperature incinerators were observed to be unused due to a lack of fuel, electricity, or expertise to run them. The presence and use of placenta pits varies regionally based on whether the pit is lined or unlined and staff familiarity with how to use the pits, and their proximity to water sources.



Dumping and burning of waste is common



Incinerators are low temperature and lack fuel



Waste sorting is not practiced routinely

Environmental Cleaning

The availability of protocols for environmental cleaning is limited (32%). Often there are no dedicated cleaning staff and where they do exist they have not been trained. Health staff are often responsible for cleaning of facilities which is an added burden to a busy workload. While mops and buckets are readily available there is often no place to dispose of slops or safely store cleaning equipment and chemicals. Cleaners observed in HCFs were not equipped with or did not wear PPE, risking contamination to themselves, their families, and between patients.



Cleaners lack PPE and training



Cleaning protocols are missing



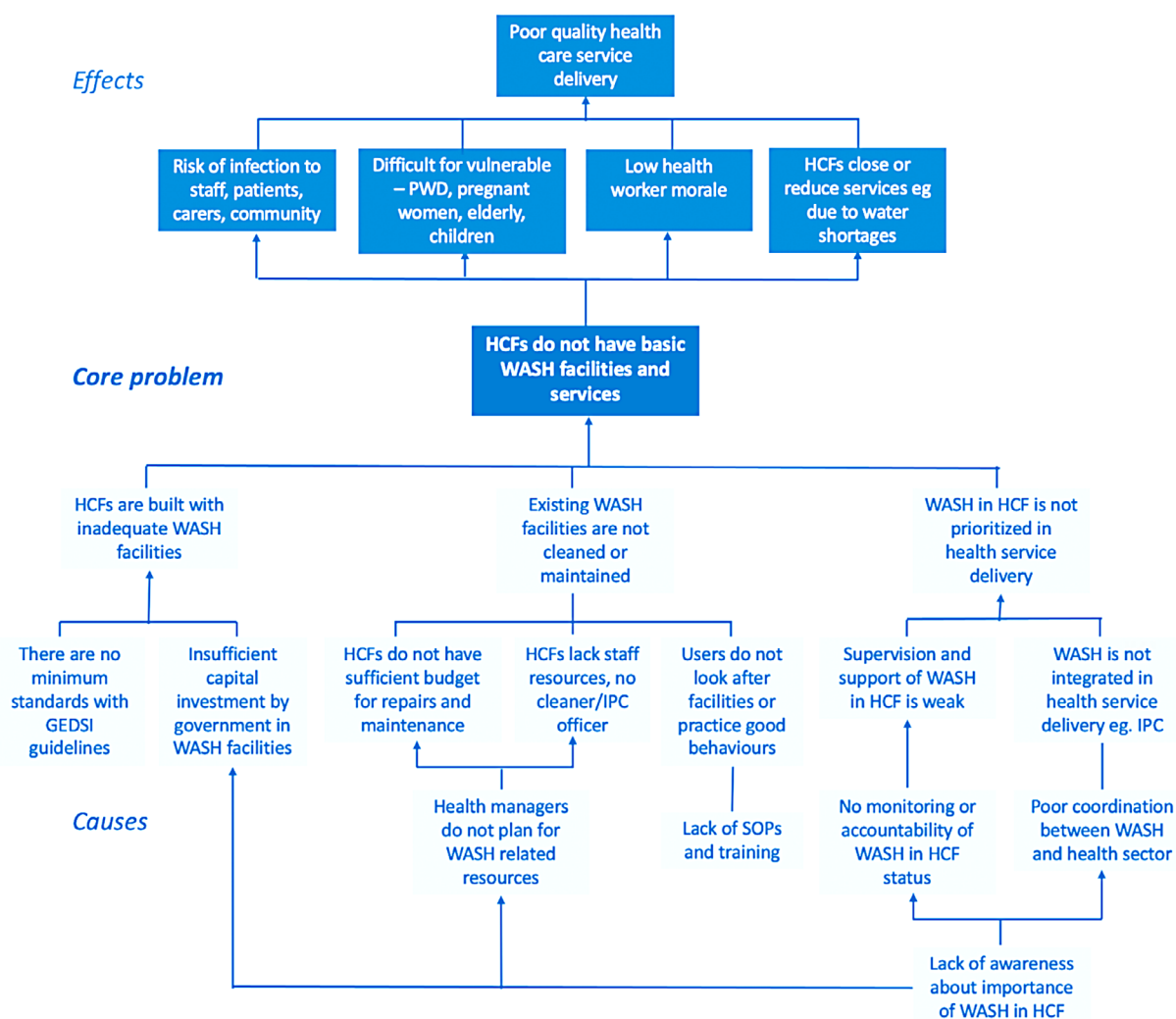
Low priority given to cleaning equipment and storage

Effects and Causes of Poor WASH

The complex issues around WASH in HCFs in Papua New Guinea are set out in Figure 5.

The core problem is that most HCFs do not have basic WASH facilities and services. The effects of this are conditions that risk infection of staff, patients, carers and the wider community around the HCF. The most vulnerable patients – disabled, elderly, pregnant women, people in pain – experience difficulty using toilets or accessing water for drinking and bathing. Inadequate WASH services create a workplace in which is difficult for professional health personnel to deliver services, resulting in low worker morale. HCFs often have to close or reduce the services provided due to inadequate WASH. For example, if the water supply runs out or is unavailable for some hours or days then services are usually pared back to the minimum. This results in an ineffective health service that is unable to safely treat those in need, and does not deliver preventative services such as well baby, or family planning.

Figure 5: PNG WASH in HCF Problem Tree



Source: Authors, based on observation and consultations

The main causes for the state of WASH conditions in PNG's HCFs are the lack of WASH infrastructure, lack of maintenance, and the lack of priority given to WASH as a core component in health service delivery.

Factors affecting the functioning and management of WASH services include: no standards or guidelines for WASH, no standard operating procedures (SOPs), lack of integration of WASH into health programming, and planning and budgeting for WASH are not fully integrated into the routine health care systems. Most HCFs do not have funds, and lack human resources and capacities to maintain infrastructure for delivering quality WASH services. Community participation in decision-making, and monitoring of WASH indicators by HCFs is non-existent.

Opportunities

Papua New Guinea already has in place some critical building blocks and structures which provide a platform to improve WASH in HCFs. These opportunities are the starting place from which to improve WASH in HCFs.

Policies and Strategies

The **PNG WASH Policy 2015- 2030** stipulates a national goal of 100% of HCFs to have access to safe, convenient, and sustainable water supply and sanitation facilities, and 100% have handwashing facilities with running water and soap by 2030. While these targets are ambitious, given the state of WASH in PNG's HCFs, the policy highlights the importance of WASH in the national development agenda, and provides clear targets to aim towards.

The **National Health Plan 2021-2030** aims to strengthen primary health care and improve access to the rural majority in a "back to basics" approach, through building capacity of PHAs, and revitalising Village Health Assistants. The NHP explicitly refers to the need for all health facilities to have readily available clean and safe water, sanitation and hygiene facilities by 2030, and hygiene is promoted and practiced. The Roadmap supports the NHP Program goal 4.6. Strengthen Environmental Health to ensure the right to an environment that is conducive to health and wellbeing, and is framed around KRA 5 Health Systems Strengthening.

The **National Health Service Standards for PNG 2nd Edition 2021-2030** outlines a system of health facility governance, and broad Quality Standards for Health Care including toilets, handwashing, water, IPC, and healthcare waste. The Health Service Standards provide a framework for a quality improvement approach to WASH in HCFs which is adopted in this Roadmap.

Role of Provincial Health Authorities

Each PHA is accountable for health performance outcomes in the province, including responsibility for the quality of public, private and faith-based HCFs. This responsibility provides an opportunity for local level leadership to improve and maintain WASH services and practices at all HCFs within a province. The PHA can strengthen coordination of all stakeholders within the province.

Role of Environmental Health Officers

PNG has a growing cadre of trained EHOs with WASH knowledge. With management and logistics support, there is an opportunity to fully utilise the skills and training of EHOs to address WASH in HCFs.

District WASH coordination and plans

Since the development of the 2015 PNG WASH Policy, several districts have piloted and refined improvements to WASH governance arrangements at district level. The agreed approach has been to establish district WASH coordination bodies to improve coordination, planning, finance and build approaches to inclusive and climate-resilient WASH service delivery. These district WASH coordination bodies are chaired by the District Administrator, and include the participation of the Provincial Health Authority, District Environmental Health Officer, and the District Health Manager. Outputs of this coordination are Five-year District WASH plans, which include improvements to healthcare facilities. This approach can build district support and coordination on improvements to WASH in HCFs.

COVID

COVID has been a significant driver of better hand hygiene, Infection Prevention and Control, and the use of PPE. The momentum and lessons learned from improving IPC practices can be drawn upon to sustain IPC and hygiene practices.

Health staff motivation

Staff at HCFs are acutely aware of the WASH situation and want improvements to occur to make their work better and reduce infections. This high level of support and commitment to sound health practices and the delivery of quality health care means that any efforts to improve WASH will be supported by health staff. They need to be given the tools, information, and infrastructure to improve and sustain WASH.

Monitoring

The WASH Management Information System (MIS) uses JMP indicators for monitoring WASH in HCFs in alignment with SDG reporting. Training in mWater data collection platform has already begun and can be expanded to other key people such as EHOs, in order to collect WASH in HCF baseline data for planning and prioritisation, incorporation into 5-year District WASH plans, provincial updating on progress on WASH in HCFs, and national level reporting against the WHA resolution and SDGs. The HMIS also collects information on HCFs but WASH information needs alignment with the JMP indicators.

Sector Coordination

The recently formed WASH in HCF Technical Working Group is a platform for stakeholder coordination on WASH in HCF which can be expanded in scope and membership. NDoH encourages and has issued instructions to several provinces to set up Provincial WASH committees which bring together stakeholders at the provincial level to coordinate WASH, including in HCFs.

WASH Cost estimation

WHO has established a WASH in HCF cost estimation tool which can be adopted and tailored for the PNG context to help estimating the cost of meeting basic WASH standards. Data is based on cost information for 40 less-developed countries (see Annex 2). PNG costs could be four or more times above cost norms in other developing countries.⁴

⁴ Based on consultations with World Bank on the cost of implementing water supply projects in PNG in 2020

3. THE ROADMAP

To address the current issues and gaps in the WASH sector, the NDOH developed a ‘National Roadmap for Improving WASH in Health Care Facilities 2023-2030’. This supports the objectives of the National Health Plan, National WASH Strategy, and PNG’s SDGs.

Vision

Safe and quality health care for every Papua New Guinean through establishment of WASH in all health care facilities.

National target

In accordance with the National WASH Policy, by 2030:

- 100% of Level 6 facilities National Referral Hospital
- 100% of Level 5 facilities Provincial Hospitals
- 100% of Level 4 facilities District Hospitals
- 100% of Level 3 facilities Health Centres – Rural / Urban Centres
- 100% of Level 2 facilities Community Health Posts
- 100% of Level 1 facilities Health Posts ⁵

Have appropriate and quality WASH services, which are equitably accessible to all, including children, women and persons with disabilities.

Key intended beneficiaries

This Roadmap covers all levels of healthcare facilities, inclusive of public, faith-based, and private services. The Roadmap will benefit all within and outside the healthcare environment including all healthcare providers; patients, guardians/carers, visitors; non-clinical staff; and community members.

Outcomes of the Roadmap

- Reduced rates of healthcare-associated infections (linked to NHP KRA 4)
- Facilities that are inclusive of and meet the needs of the most vulnerable (people with a disability, elderly, pregnant women, children, people in pain) (linked to NHP KRA 3)
- Improved occupational health and safety and morale for healthcare workers (linked to KRA 4 and 5)
- Fully functioning and operational healthcare facilities which deliver uninterrupted health services. (linked to NHP KRA 3)






Priorities of the Roadmap

The priorities identified in the RoadMap are linked to KRA5 Strengthen Health Systems in the National Health Plan shown in Figure 6. All priorities are equally important for improving WASH in HCF. The Key Actions may be dependent on other Key Actions, or occur simultaneously, or independently.

⁵ This target refers to Health Posts that are currently functional.

Figure 6: Roadmap priorities, key actions and links to KRA5

KRA 5: Strengthen Health Systems 2023-2030vv WASH in Healthcare Facilities

				
Priority 1 Governance and Leadership	Priority 2 Health Facilities	Priority 3 Workforce	Priority 4 Financing	Priority 5 Information, Research & Innovation
<p>Improved governance, management and coordination of WASH in HCF</p>	<p>Increase the number of healthcare facilities with reliable and inclusive WASH services</p> <p>Strengthen the maintenance and management of WASH services and practices</p>	<p>Empower healthcare workers, users, and the community to maintain WASH facilities, services and practices</p> <p>Improve capacity of HCFs for WASH operation and maintenance, cleaning and IPC</p>	<p>Increase capital investment in WASH facilities that are inclusive and equitable and sufficient for needs and consider climate change</p>	<p>Strengthen WASH in HCF information and research</p>
<p>Key actions:</p> <p>Strengthen multisectoral coordination through the National WASH in HCF Stakeholder Group.</p> <p>Improve provincial-level coordination and leadership.</p> <p>Strengthen PHA role and responsibilities in WASH in HCF planning, monitoring and reporting.</p>	<p>Key actions:</p> <p>Develop Minimum Standards for WASH in HCF which are gender equitable, disability and socially inclusive.</p> <p>Disseminate, socialise and train stakeholders in the Minimum Standards for WASH in HCF.</p> <p>Rehabilitate existing WASH infrastructure.</p> <p>Model WASH facilities in selected provinces and scale up.</p> <p>Integrate WASH and IPC needs into HCF monthly supply chain planning.</p> <p>Explore alternative water sources in water-stressed areas.</p> <p>Develop operation and maintenance plans for WASH in all HCFs.</p>	<p>Key actions:</p> <p>Provide in-service training for health professionals and non-health personnel on WASH standards, IPC, and cleaning protocols.</p> <p>Train HCF staff and communities on operation and maintenance of WASH infrastructure.</p> <p>Incorporate WASH and IPC standards and guidelines into pre-service curricula</p> <p>Develop behaviour change resources on WASH and IPC behaviours and practices for use at HCFs.</p> <p>Develop human resource plans and budgets for maintenance workers, cleaning staff, IPC officers to ensure adequate resourcing for operation and maintenance of WASH and IPC.</p>	<p>Key actions:</p> <p>Improve cost estimation and processes for accessing funding sources for WASH improvements.</p> <p>Develop guidelines for HCF OIC and Board of Management to budget for WASH operations and maintenance.</p>	<p>Key actions:</p> <p>Contextualise WASH-FIT for facility assessments and scale up use.</p> <p>Build capacity of HCF staff, District and Provincial health teams in WASH data collection and analysis.</p> <p>Strengthen reporting on WASH in HCF including aligning reporting systems.</p> <p>Improve learning on WASH in HCFs.</p> <p>Integrate WASH into nutrition and maternal, child and newborn health programs delivered through HCFs.</p> <p>Develop an advocacy strategy for WASH in HCFs.</p>

The key actions under each priority are expanded in the next section.

PRIORITY 1: GOVERNANCE AND LEADERSHIP

Objective

- **Improve governance, management and coordination of WASH in HCF (NHP KRA 5.1)**

Key Actions

- **Strengthen multisectoral coordination through the National WASH in HCF Stakeholder Group.** Support the ongoing functioning of the national WASH in HCF Working Group including with the Department of Finance, Conservation and Environment Protection Authority, Climate Change Development Authority, Water PNG, PNG Power, and development partners.
- **Improve provincial-level coordination and leadership.** Establish and maintain Government-led Provincial WASH Committees whose scope includes coordination of WASH in HCF. Ensure representatives from Women's groups and Disabled People's Organisations. Strengthen partnerships with WASH in HCF stakeholders such as NGOs, churches, DDA, LLG. Agree partner roles and scope for WASH in HCF and create service agreements with partners.
- **Strengthen PHA role and responsibilities in WASH in HCF planning, monitoring and reporting.** Familiarise PHAs on the scope of WASH in HCF and their roles and responsibilities. Align WASH in HCF improvements with five-year Health Improvement Plans and District WASH Plans. Include WASH in PHA's 5-year health infrastructure and maintenance plan. Strengthen PHA reporting on WASH through the inclusion of WASH in HCF actions in corporate plans, and reporting on progress of all new and/or refurbishments of WASH facilities to PHA Board meetings. Include WASH in HCF indicators in PHA KPIs, and PHA Board and executive reports.

PRIORITY 2: HEALTH FACILITIES

Objective

- **Increase the number of healthcare facilities with reliable and inclusive WASH services (NHP KRA 5.2)**
- **Strengthen the maintenance and management of WASH services and practices (NHP KRA 5.2)**

Key Actions

- **Develop Minimum Standards for WASH in HCF which are gender equitable, disability and socially inclusive.** Minimum standards and guidelines for WASH in HCFs are developed so that there is clarity on the requirements to ensure a basic level of WASH is achieved consistently across all HCFs. PHAs, NGOs, development partners, politicians, DDAs, and other implementers of WASH improvements use a common set of minimum requirements. Gender equity, disability and social inclusion is reflected in the WASH designs and facilities to ensure everyone is able to access and use the WASH facilities and services.
- **Disseminate, socialise and train stakeholders in the Minimum Standards for WASH in HCF.** PHAs, Environmental Health Officers, health managers and HCF staff are trained on WASH in HCF standards to provide a common understanding and application of the standards. Development partners including Development Finance Institutions, NGOs, mining companies, churches and private sector providers are aware of the standards and ensure that new and upgraded facilities and WASH practices are carried out to the Minimum Standards.
- **Rehabilitate existing WASH infrastructure.** Improvements are made to existing healthcare facilities to achieve a basic standard of WASH which meets the WHO/ UNICEF Joint Monitoring Program requirements and National Minimum Standards. Improvements are made on a case-by-case basis, including increasing the number of toilets, accessibility modifications to toilets, increasing the number of handwashing facilities (with soap and water), increasing water storage capacity, improving waste collection, storage, and disposal. Improve WASH facilities at staff housing.
- **Model WASH facilities in selected provinces and scale up.** Establish model healthcare facilities which demonstrate fully functional and maintained WASH infrastructure and services. Model facilities demonstrate to other HCFs, district health managers and PHAs how to replicate.
- **Integrate WASH and IPC needs into HCF monthly supply chain planning.** Develop checklists, tables, ordering guides for consumables such as soap, fuel, paper towels, cleaning products, and PPE for HCFs. Allocate responsibility for ordering.
- **Explore alternative water sources in water-stressed areas.** Different options (eg. boreholes, protected springs, surface water collection and treatment) are investigated

to provide sustainable water supply in high-priority areas in PNG which are water-stressed and which are vulnerable to climate change. The most water-stressed areas and the most water fragile healthcare facilities are prioritised. Alternate water supply models are developed for all of PNG.

- **Develop operation and maintenance plans for WASH in all HCFs.** PHAs support HCFs to develop and document plans and Standard Operating Procedures for daily operation, and routine planned and unplanned maintenance, and supply of spare parts for WASH in HCFs. Link O&M plans with WASH-FIT assessments at the HCF level. Include WASH technicians, and Environmental Health Officer from the PHA on the WASH-FIT committee. Put in place facility management processes to manage PHA WASH infrastructure and equipment at each level of care.

PRIORITY 3: WORKFORCE

Objective

- **Empower healthcare workers, users and the community to maintain WASH facilities, services and practices (NHP KRA 5.4)**
- **Improve the capacity of HCFs for WASH operation, maintenance, cleaning and IPC (NHP KRA 5.4)**

Key Actions

- **Provide in-service training for health professionals and non-health personnel on WASH standards, IPC, and cleaning protocols.** Use a Train the Trainer model to cascade training from NDoH to PHAs (Health Training Unit) and to individual healthcare facilities. Ensure cleaning staff and caretakers are included in the training. Pilot the TEACH CLEAN package in selected HCFs, review, and scale up. Improve WASH supervision and management skills of facility managers.
- **Train HCF staff and communities on operation and maintenance of WASH infrastructure.** Ensure HCF staff know how to correctly use and operate WASH equipment and facilities within their HCFs. EHOs provide instruction to HCF staff to build competency and provide written instructions as back up. Develop a reporting process for Healthcare workers to report WASH issues to the facility manager. Train Village Health Assistants and Community Health Workers to provide advocacy and awareness to communities and Village Health Committees about the proper use and care of HCF WASH facilities, patient rights, duties and expectations. Include patient feedback on quality, cleanliness, and suitability of WASH facilities in feedback forms and processes. Involve communities in HCF governance committees.

⁶ TEACH CLEAN is a practical, participatory training package for health workers and non-health workers whose main responsibility is to clean the environment in healthcare facilities. TEACH CLEAN also helps to raise awareness of the importance of cleaning in healthcare settings, and provides guidance on improving hygiene standards-preventing infections and supporting the strengthening of quality of care. WHO leads this initiative.

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- **Incorporate WASH and IPC standards and guidelines into pre-service curricula.** Conduct a review of existing CHW, nurse, and medical school curricula and strengthen modules on WASH and IPC where appropriate or provide additional resources.

 - **Develop behaviour change resources on WASH and IPC behaviours and practices for use at HCFs.** Research and develop resources which are culturally relevant for patients, guardians and the public to promote positive hygiene behaviours such as handwashing with soap after using the toilet or before caring for a patient, proper use of a toilet, and safe water practices. Develop specific behaviour change resources for staff to reinforce the National IPC policy and model good WASH behaviours to patients.

 - **Develop human resource plans and budgets for maintenance workers, cleaning staff, IPC officers to ensure adequate resourcing for operation and maintenance of WASH and IPC.** Specify minimum requirements for cleaning staff per facility level in the NHSS Staffing Standards. Support PHAs to identify skills required and plan resources at provincial, district and HCF level. Improve communication between HCFs and PHA maintenance team. Develop models for multiple or shared functions among staff, engagement of preferred local contractors (eg. local plumbers, builders, electricians), or other ways of resourcing operation and maintenance resources such as pooled (eg. Department of Works) or mobile resources.

PRIORITY 4: FINANCING

Objective

- **Increase capital investment in WASH facilities that are inclusive and equitable and sufficient for needs and consider climate change (NHP KRA 5.4)**

Key Actions

- **Improve cost estimation and processes for accessing funding sources for WASH improvements.** PHAs and individual HCFs have the tools to plan for WASH improvements. Indicative costs are available to estimate the cost of WASH improvements and make budget requests from various funding sources. Cost norms and budgeting guidelines are developed for WASH improvements, and processes for accessing funding sources for WASH improvements are streamlined and documented. WHO costing tool is adopted and modified for PNG. PHA Budget and Finance Committee coordinates inputs and requests for WASH in HCF. WASH expenditure is tracked in the NHSS Average Cost of Health Facility Infrastructure and Maintenance Services Delivery indicator.
- **Develop guidelines for HCF OIC and Board of Management to budget for WASH operations and maintenance.** Develop guidelines on how to include the WASH budget in HCF budgets and make requests for finance.

PRIORITY 5: INFORMATION, RESEARCH, AND INNOVATION

Objective

- **Strengthen WASH in HCF information and research (NHP KRA 5.6 and 5.7)**

Key Actions

- **Contextualise WASH-FIT for facility assessments and scale up use.** Adapt WASH-FIT for PNG. Train EHOs to guide HCFs how to use the tool for HCF self assessment.
- **Build capacity of HCF staff, District and Provincial health teams in WASH data collection and analysis.** Train and build capacity of Environmental Health Officers to be proficient in mWater. Train health teams in data collection and analysis using mWater. Use data collected to establish provincial baselines for WASH in HCF and update the National WASH in HCF MIS. Analyse data to develop prioritised improvement plans, advocate for more funding, and keep track of progress in WASH implementation. Link to training of key health staff/capacity development plans.
- **Strengthen reporting on WASH in HCF including aligning reporting systems.** Align health systems reporting eg. SPAR with JMP indicators and the National WASH MIS indicators. Integrate WASH standards in the accreditation process for National Quality Standards. Report to Minister for Health on progress and costs of WASH in HCF.
- **Improve learning on WASH in HCFs.** Conduct annual multi-stakeholder Joint Sector Reviews on the progress of WASH in HCFs and lessons learned. Conduct additional research on WASH in HCF as needed. Use learning and research activities to bring together HCFs, District Health Managers, PHAs, and the Technical Working Group to share experiences from different perspectives.
- **Integrate WASH into nutrition and maternal, child and newborn health programs delivered through HCFs.** Investigate the linkages between health programs and improving WASH outcomes for HCFs and users and patients of these facilities,
- **Develop an advocacy strategy for WASH in HCFs.** Advocate to Health Minister on need for WASH, political commitment, and for additional resources to improve WASH in HCFs. Advocate to District Development Authorities and Open Members on the importance of WASH in HCFs and the need for a coordinated and sustainable approach.

4. PUTTING THE ROADMAP INTO ACTION

Stakeholder Roles

NDOH's role is to develop policy, standards, and guidance at the national level to support the improvement of WASH in HCFs throughout PNG. Various divisions within NDOH will have specific roles to play during the implementation of the Road Map. Leadership will be through the Environmental Health Division which will coordinate technical and other inputs as required.

Provincial governments are required to coordinate all WASH in HCF through WASH committees which are intended to coordinate stakeholders and WASH projects in the province. Provincial Health Authorities are responsible for all HCFs within the province and ensuring that budget and resources are available to meet the minimum WASH requirements, and WASH in HCF is monitored and reported to NDOH.

EHOs play a key role in promoting WASH, monitoring WASH in HCFs, and building the WASH capacity of HCF staff.

District Health Managers have an oversight role for HCFs within their area, and manage OICs and for promoting rehabilitation of WASH services and new facilities which meet the minimum requirements.

OICs manage HCFs and staff located in LLGs and wards and can have a direct influence on WASH standards and practices in individual HCFs.

Faith-based service providers (management and HCF level) play a critical role in health services delivery and are equal implementing partners in health services. They are fundamental partners to improving WASH in HCF.

Partners including NGOs and development agencies, particularly WHO and UNICEF, have an important role to support and advance the Roadmap through the delivery of HCF infrastructure and services upgrading, staff training, monitoring, sharing learning, and sector coordination.

Monitoring of Progress

Implementation of the Roadmap will be overseen by the WASH in HCF Technical Working Group, under the leadership of the NDoH and the DNPM-PMU.

The Technical Working Group will develop detailed plans and identify key stakeholders and funding sources for implementation on an annual basis, with six-monthly updates as circumstances change. Progress on the Road Map will be reported to the Secretary for Health annually.

ANNEX 1. ROADMAP TIMELINE, BUDGET ITEMS, AND PARTNERS

Priorities and objectives	Key Actions	Timeline			Budget items	Collaborating partners/ agencies
		2023-2024	2025-2027	2028-2030		
Priority 1: Governance and Leadership						
Improve governance, management and coordination of WASH in HCF	Strengthen multisectoral coordination through the National WASH in HCF Stakeholder Group	X	X	X	Meetings, travel	NDOH, TWG, WaterAid, PHAs, EHOs, DDA, NGOs, DPOs, Women's Groups
	Improve provincial-level coordination and leadership	X	X		Meetings, Partnership Agreements	
	Strengthen PHA role and responsibilities in WASH in HCF planning, monitoring and reporting	X	X		Training, workshops, mentoring, travel	
Priority 2: Health Facilities						
Increase the number of healthcare facilities with reliable and inclusive WASH services	Develop Minimum Standards for WASH in HCF which are gender equitable, disability and socially inclusive	X			Consultant, travel, meetings and workshops, printing	NDOH, TWG, WaterAid, PHAs, EHOs
	Disseminate, socialise and train stakeholders in the Minimum Standards for WASH in HCF	X			Training venue, travel	
	Rehabilitate existing WASH infrastructure	X	X	X	Design and construction of infrastructure	
Strengthen the maintenance and management of WASH services and practices	Model WASH facilities in selected provinces and scale up	X	X	X	Infrastructure, training, travel	NDOH, PMU, DOF, CEPA, CCDA, Water PNG, PHAs, NGOs, WHO
	Integrate WASH and IPC needs into HCF monthly supply chain planning	X			Forms	
	Explore alternative water sources in water-stressed areas	X			Technical consultant, travel, drilling, water quality testing,	
	Develop O&M plans for WASH in all HCFs	X	X	X	Consultant, engineer, travel	

Priority 3: Workforce						
Empower healthcare workers, users, and the community to maintain WASH facilities, services and practices	Provide in-service training for health professionals and non-health personnel on WASH standards, IPC, and cleaning protocols	X	X	X	X	Training, workshops, demonstration, travel, SOPs
	Train HCF staff and communities on operation and maintenance of WASH infrastructure	X	X	X	X	Training, documentation
	Incorporate WASH in IPC standards and guidelines training into pre-service curricula		X			Consultant, travel, documentation
	Develop behaviour change resources on WASH and IPC behaviours and practices for use at HCFs		X		X	Research, creative design, production
Improve capacity of HCFs for WASH Operation and maintenance, cleaning and IPC	Develop human resource plans and budgets for maintenance workers, cleaning staff, IPC officers to ensure adequate resourcing for O&M of WASH and IPC	X	X			Trainer PHA, DHM, HCF OIC
Priority 4: Financing						
Increase capital investment in WASH facilities that are inclusive and equitable and sufficient for needs and consider climate change	Improve cost estimation and streamline processes for accessing funding sources for WASH improvements	X	X			Documentation, workshops, travel NDOH, PHAs, DHM
Increase budgets for repairs and maintenance and supplies	Develop guidelines for HCF OIC and Board of Management to budget for WASH operations and maintenance	X	X			Documentation, workshops NDOH, PHAs, DHM, HCF OIC

Priority 5: Information, Research and Innovation

Strengthen WASH in HCF information and research	Contextualise WASH-FIT for facility assessments and scale up use	X	X	X	Consultant, workshops, training	NDOH, WHO, PMU, PHAs, EHO, TWG, NGOs, HCF staff, DHM
	Build capacity of HCF staff, District and Provincial health teams in WASH data collection and analysis	X	X		Training, workshops, travel	
	Strengthen reporting on WASH in HCF including aligning reporting systems		X	X	Documentation, mentoring	
	Improve learning on WASH in HCFs	X	X	X	Research, workshops, production	
	Integrate WASH into nutrition and maternal, child and newborn health programs delivered through HCFs		X	X	Consultant, documentation, mentoring	
Develop advocacy strategy for WASH in HCFs	X	X		Consultant, documentation		

ANNEX 2. INDICATIVE WASH COSTS PER FACILITY

	Capital costs (US\$ 2020)	Recurrent costs (US\$ 2020)
Water		
Non hospital, rural, piped	5,757 (2,125-23,750)	2,000 (500-5,289)
Non-hospital, rural, on premises	15,601 (6,875-28,726)	1,700 (500-4,500)
Non-hospital, urban, piped	5,000 (2,000-9,000)	1,500 (500-3,030)
Non-hospital, urban, on premises	17,500 (5,000-28,330)	1,425 (500-3,450)
Hospital, piped	4,500 (2,000-20,000)	2,000 (1,200-5,000)
Sanitation		
Non-hospital, septic	12,000 (6,000-17,376)	855 (350-2,000)
Non-hospital, sewerage	8,700 (5,000-13,500)	300 (150-600)
Hospital, septic	18,000 (10,000-30,000)	2,050 (808-3,500)
Hospital, sewerage	10,000 (7,000-24,000)	1,000 (600-2,006)
Hygiene		
Non-hospital	1,200 (463-3,500)	330 (200-950)
Hospital	2,500 (1,107-6,690)	1,500 (403-3,000)
Waste management		
Non-hospital	10,159 (3,000-15,000)	1,750 (500-3,918)
Hospital	21,000 (15,000-50,000)	4,250 (1,500-10,500)

Notes:

1. Environmental cleaning was excluded from the cost analysis due to insufficient data on existing levels of coverage.
2. Costs are expressed in US\$ at 2020 prices, as median (and low to high range) for between 25 and 40 least-developed countries.
3. Costs for PNG can be up to 4 times that of other developing countries.

Source: Michael Chaitkin, Samantha McCormick, Jorge Alvarez-Sala Torreano, Irene Amongin, Silvia Gaya, Odd N Hanssen, Richard Johnston, Tom Slaymaker, Claire Chase, Guy Hutton, Maggie Montgomery. 'Estimating the cost of achieving basic water, sanitation, hygiene, and waste management services in public healthcare facilities in the 46 UN designated least-developed countries: a modelling study'. WHO. Lancet Glob Health 2022; 10: e840-49

Definitions of basic service levels in health-care facilities

WASH SERVICES



Water	Water is available from an improved source on the premises.
Sanitation	Improved sanitation facilities are usable, with at least one toilet dedicated for staff, at least one sex-separated toilet with menstrual hygiene facilities, and at least one toilet accessible for people with limited mobility.
Hygiene	Functional hand hygiene facilities (with water and soap or alcohol-based hand rub, or both) are available at points of care and within 5 meters of toilets.
Waste management	Waste is safely segregated into at least three bins, and sharps and infectious waste are treated and disposed of safely.
Environmental cleaning	Basic protocols for cleaning are available, and staff with cleaning responsibilities have all received training.

Anti-microbial Stewardship

An ongoing program within a health organisation for judicious antimicrobial use to improve patient outcomes, ensure cost-effective therapy and reduce adverse sequelae of antimicrobial use, including antimicrobial resistance.

Carer/Guardian

A carer is defined as someone who gives unpaid care and support to a relative or friend who is seeking treatment at a health care facility. In PNG carers are called guardians.

COVID-19

The disease caused by a new strain of coronavirus. ‘CO’ stands for corona, ‘VI’ for virus, and ‘D’ for disease.

Gender

Gender refers to the roles and responsibilities learned by women and men. Gendered expectations, attributes, opportunities, and relationships are socially constructed and are learned through socialization processes. They are context/time-specific and changeable. The term gender increasingly recognizes intersectional identities, understanding that, for example, women of colour, women with disability, women of colour and with disability, rural women, etc. face different barriers than women of privilege.

Gender Equality

Gender equality refers to the equal rights, responsibilities, and opportunities of women and men and girls and boys. Gender equality implies that the interests, needs, and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men, as well as people with other gender identities (LGBTQI+). Gender equality is not just a women’s issue but should concern and fully engage men, as well as other genders.

Gender Equality and Social Inclusion

GESI combines two dimensions defined here, i.e., gender equality and social inclusion. The two areas of inclusion may be treated separately or together.

Hand hygiene

A general term applying to processes aiming to reduce the number of microorganisms on hands. This includes application of a waterless antimicrobial agent to the surface of dry unsoiled hands; or use of soap / solution (plain or antimicrobial) and running water (if hands are visibly soiled), followed by patting dry with single-use towels.

HCAI

Health Care Associated Infection is an infection acquired by staff, patients, or carers either as a direct result of healthcare interventions such as medical or surgical treatment, or from being in contact with a healthcare setting.

Inclusive Infrastructure

Inclusive infrastructure enhances positive outcomes in social inclusivity, and ensures that no individual, community, or social group (including women and girls) is left behind or prevented from benefiting from improved infrastructure. 3 In this document, infrastructure projects (e.g., building of roads) and built infrastructure (e.g., access to and use of roads) are both of interest. In HCFs this can include disability accessible toilets or child friendly facilities.

Personal protective equipment (PPE)

Refers to a variety of protective barriers used alone, or in combination, to protect mucous membranes, skin, and clothing from contact with recognised and unrecognised sources of infectious agents in healthcare settings.

Point of care

The time and location where an interaction between a patient and clinician occurs for delivering care.

WASH

In the context of health care facilities: water supply, sanitation, hygiene, health care waste management, and environmental cleaning



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