Ensure access to water and sanitation for all

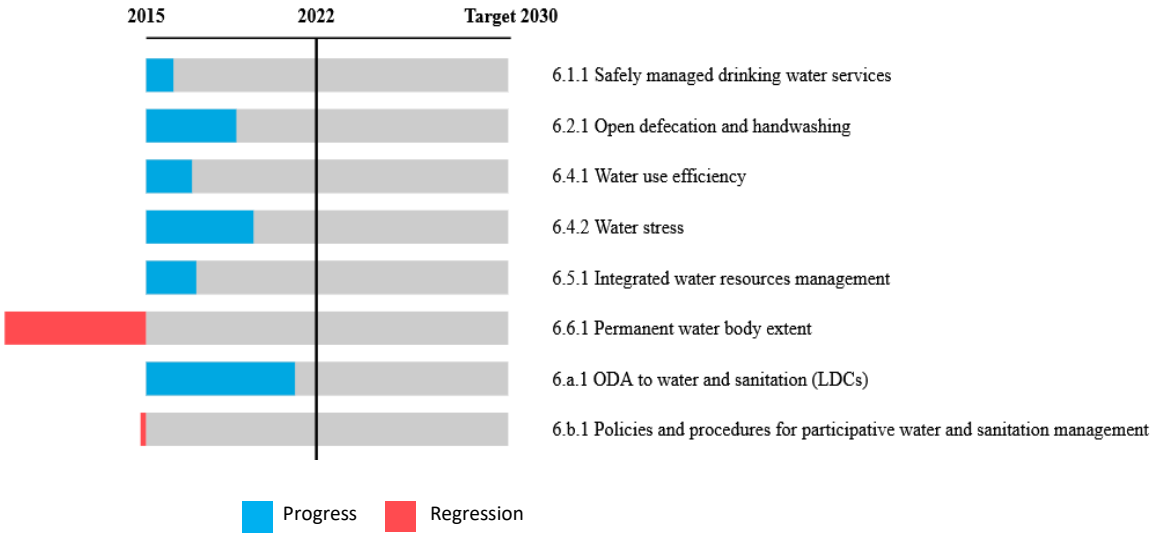
I. SUMMARY

The Asia-Pacific region has made considerable progress on improving economic and social welfare over the last decade. Water resources have contributed greatly to this transformation through water and sanitation hygiene (WASH), provision of basic services, agricultural expansion, food security and nutrition, and ecosystem services. This was most notable during COVID-19 pandemic, where WASH and innovations in WASH service delivery were at the forefront of disease prevention. As a result, since the adoption of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs), progress has been made to elevate water issues at the national and regional levels across the Asia-Pacific region. However, the region is far from being on track to meet SDG 6 targets as outlined in the 2030 Agenda for Sustainable Development (Figure 1). Access to sustainable water resources is increasingly threatened due to overuse and pollution, growing populations, increasing water demands, water scarcity, a changing climate, rapid urbanisation, inadequate

I. SUMMARY

sanitation services and lack of transboundary cooperation. Continuous water availability—both in sufficient quantity and adequate quality—is fundamental to the expansion of safe drinking water services under SDG 6. Despite the urgent need for solutions, it is often challenging to know where to begin. The most notable threat to SDG 6 progress is water stress. In the effort to ensure food security for growing populations, the status of available freshwater resources has largely been neglected in some of the most consequential parts of the Asia-Pacific region.[1]

Figure 1: *SDG 6 progress*



Source: Asia and Pacific Progress Report 2023, ESCAP.2

The Asia-Pacific region is currently not on track to achieve any of the SDG 6 targets by 2030, as progress falls short of where the region should be by 2022. The region must take action to reverse negative trends for target 6.6, protect and restore water-related ecosystems, and target 6.b, community participation in water and sanitation management. While there has been a substantial effort to increase aid to the least developed countries for water supply and sanitation, 1.9 billion people throughout the region still lack access to safely managed drinking water and sanitation services, and 1.3 billion people do not have basic handwashing facilities. Despite progress in some components of SDG 6, such as the reduction of open defecation, overall development is not on track to achieve the specific target goals by 2030.

II. CURRENT STATUS

A. AREAS WHERE PROGRESS IS BEING MADE

WASH

Expanding access to water and sanitation has been a priority for the Asia-Pacific region over the past two decades (targets 6.1 and 6.2). While 93 per cent of the region's population in 2020 enjoyed access to basic drinking water services, only an estimated 64 per cent had access to a safely managed drinking water service that is accessible and available on premises and free of contamination (target 6.1). Given the scarcity of data, especially about water safety, regional progress for safely managed drinking water services cannot properly be assessed.

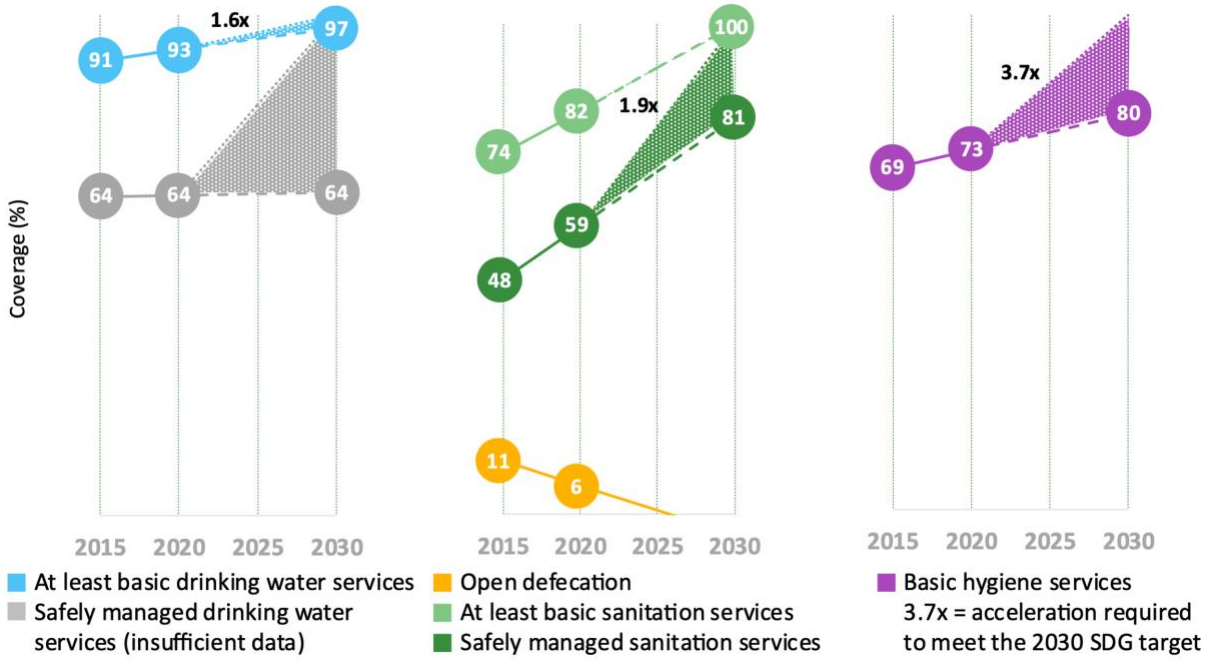
In 2020, there were still 323 million people without access to a basic drinking water service, and 36 million relied on surface water. Open defecation prevalence has further decreased from 11 per cent in 2015 to 6 per cent in 2020, which still leaves 224 million without access to any type of toilet. Since 2015, 549 million people gained access to at least basic sanitation services, increasing coverage from 74 per cent in 2015 to 82 per cent in 2020. Coverage of safely managed sanitation services increased from 48 per cent in 2015 to 59 per cent in 2020. Progress must be accelerated by 1.9 times to meet the 2030 target for safely managed sanitation (target 6.2a). Additionally, access to basic hygiene services increased from 69 per cent in 2015 to 73 per cent in 2020, leaving 1.3 billion people without a handwashing station with water and soap (target 6.2b). Progress must be accelerated by 3.7 times to ensure universal access to basic hygiene by 2030 (Figure 2).[3]

In 2020, about half of the rural population had access to safely managed drinking water services (52 per cent) and safely managed sanitation services (48 per cent)*. From 2015–2020, the disparity in access to safely managed services between urban

* Safely managed drinking water services refers to improved water source that is accessible on premises, available when needed and free from faecal and priority chemical contamination while safely managed sanitation service that are not shared with other households and where excreta are safely disposed in situ or removed and treated offsite.

and rural areas has declined from 37 to 35 percentage points for drinking water services and from 21 to 18 percentage points for sanitation services. Rural open defecation prevalence declined from 20 per cent in 2015 to 12 per cent in 2020.[4]

Figure 2: *Progress towards targets 6.1 and 6.2, trends and acceleration in ESCAP region from 2015–2020 and projections to 2030*



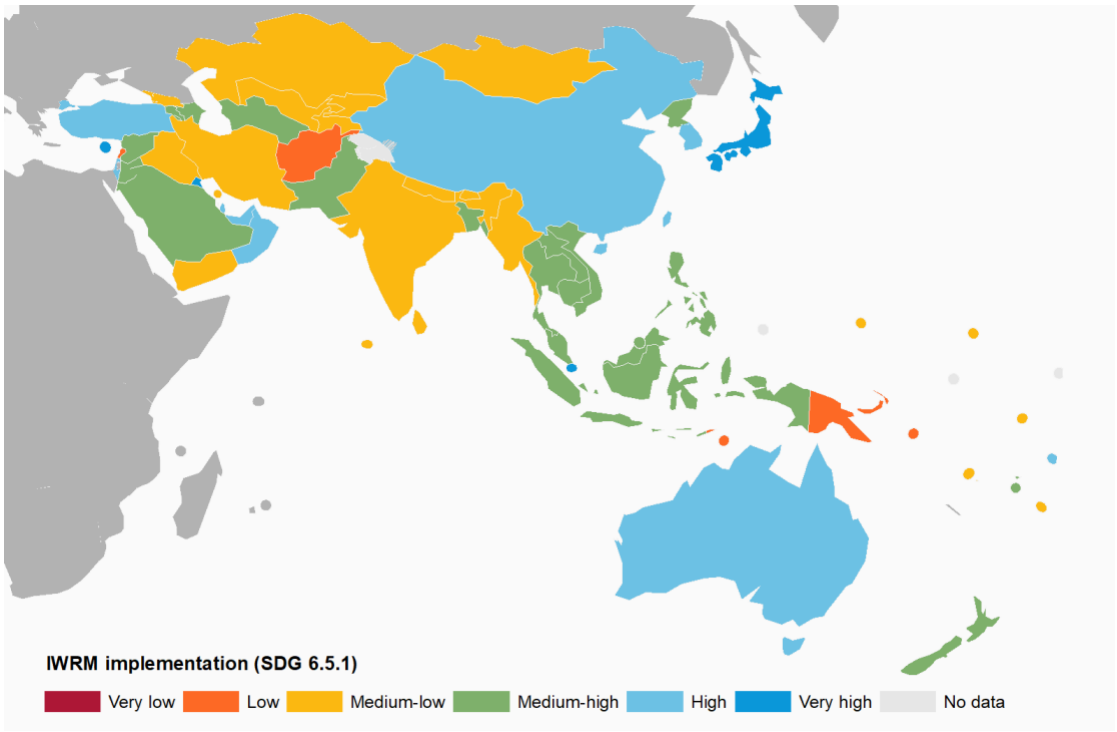
Source: 2000-2020: Five Years into the SDGs, World Health Organisation and UNICEF.[5]

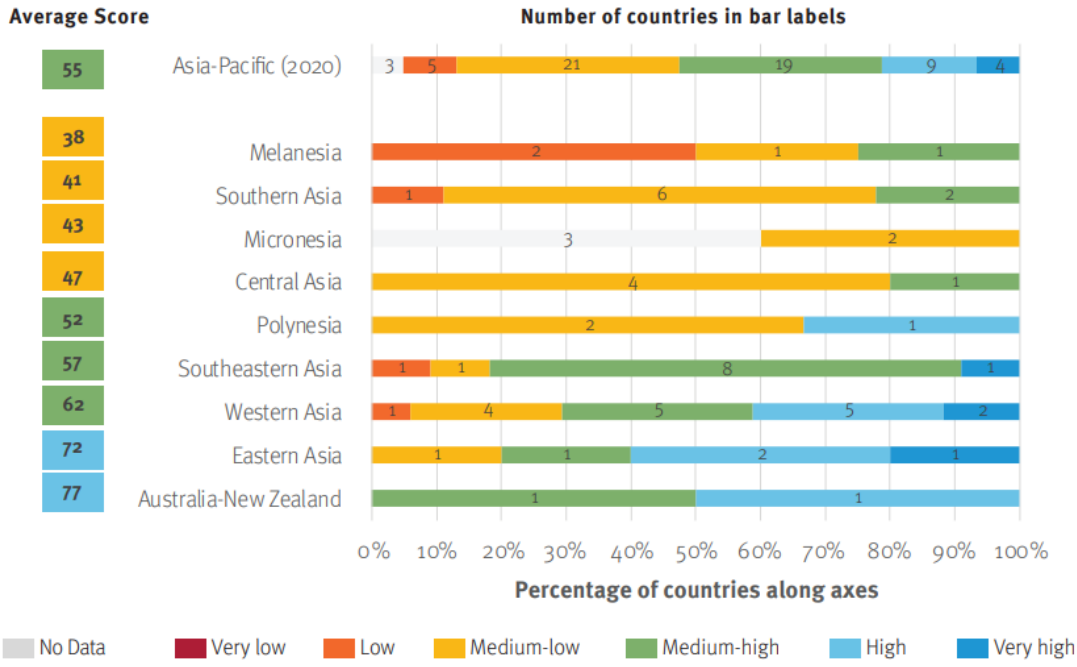
INTEGRATED WATER RESOURCE MANAGEMENT (IWRM)

There have been improvements in the implementation of IWRM (target 6.5) across the Asia-Pacific region (Figure 3). In 2021, the Global Water Partnership and UN Environmental Programme-DHI (UNEP-DHI) noted that 13 countries in the region had high or very high levels of implementation, 19 medium-high, 21 medium-low, and five low.[6] However, despite the implementation of IWRM strategies, water management challenges remain prevalent due to limited implementation of water policy instruments. For example, no country in Asia systemically and regularly monitors water withdrawal and use that is needed for rational water planning and allocation.[7] Siloed policymaking, weak monitoring, poor intersectoral coordination, inadequate data and lack of resources and capacity remain major hindrances in countries with limited implementation of policy instruments.

II. CURRENT STATUS

Figure 3: *Asia-Pacific progress towards indicator 6.5.1, degree of integrated water resources management*





Source: Progress on Integrated Water Resources Management in the Asia-Pacific Region 2021, Global Water Partnership and UNEP-DHI.[8]

II. CURRENT STATUS

B. AREAS REQUIRING ATTENTION AND ASSOCIATED KEY CHALLENGES

WATER DISTASTERS

The Asia-Pacific region is one of the most disaster-prone regions in the world, according to the World Meteorological Organization, and water-related hazards dominate disasters over the past 50 years,[9] making climate and disaster risk reduction a key priority for water resource management. As the global community continues to fall short of key emission targets under the Paris Agreement to slow global temperature rise, the Asia-Pacific region is expected to experience more frequent and intense droughts, floods and cyclones; melting glaciers; earlier and shorter monsoons; more deadly heat waves; and disruption to groundwater recharge including intrusion of seawater into aquifers as a result of rising sea levels.[10] [11] These impacts are likely to hamper progress in achieving SDG 6 (as well as other relevant SDGs) and roll back progress already made, especially if adaptation and mitigation strategies are not swiftly implemented. Increased displacement is likely to be amongst a wide array of consequences. The region already accounts for the majority of global displacements, with 225.3 million internal displacements reported from 2010–2021.[12] Of those, weather-related hazards, such as monsoon rains, floods, storms and cyclones, were responsible for 95 per cent. [13] Water is required for every component of human life and underpins the sustainability of communities and societies. With increasing scarcity, increasing climate variability and increasing tensions over the finite resources at both national and regional scales, the conservation of water resources has never been more important to social prosperity and economic stability in the region.

CLIMATE CHANGE, RESILIENCE AND ADAPTATION

The increasing incidence and severity of climate-induced extreme weather events throughout the region calls upon countries to safeguard drinking water and sanitation services against their impacts. For example, adaptations to new and existing services are required to withstand strong winds and minimise the impact of recurrent floods and droughts.

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Domestic wastewater alone accounts for 7 percent of the global methane emission[14] [15]. The bulk of this stems from landfill sites that do not capture methane emissions, but a significant portion originates from irrigation with raw sewage and uncontrolled anaerobic digestion in open sewers and septic tanks. Safely managed sanitation services call for the safe capture, transport, treatment and final disposal or reuse of human waste, all of which can greatly contribute to reducing uncontrolled methane emissions. A circular sanitation economy, whereby sewage and sludge are treated as a resource instead of waste, has great potential and holds promise throughout the region. Affordable technologies are available to use human waste for energy generation, as fertiliser and even for protein production for animal feed. Challenging the private sector to explore the commercial value of human waste reuse is an excellent investment of public funds, which could eventually provide alternatives to the significant investments required to build and operate large sewer systems and sewage treatment plants.

LEAVING NO ONE BEHIND

Reaching marginalised populations in hard-to-reach in rural areas, widely dispersed small communities, migratory populations or people living without basic WASH services in informal settlements around cities and towns continues to pose a major challenge. Governments have a responsibility to allocate public funds to provide basic services where they are lacking. These are political choices, as demonstrated by several countries in the region that have made tremendous progress over the past decade through allocating public funds to provide basic services to marginalised populations. While both per-capita costs and technological challenges increase in reaching the remaining 5 or 10 per cent of the population, returns on investments in basic WASH services are estimated to be up to 5.5 times.[16]

INCREASING WATER POLLUTION

While it is difficult to measure progress due to limited data on wastewater management (target 6.3), there is wide recognition that water quality is degrading due to increasing water scarcity, droughts and floods, urbanisation, over-fertilisation, industrialisation and economic activity. Since the 1990s, water pollution has increased in most rivers in the Asia-Pacific region. Land-based plastic pollution, severe pathogens and other hazardous chemicals affect river stretches in Asia, and up to 134 million rural and remote inhabitants' health is at risk due to contact with polluted

surface water. Among the most vulnerable are indigenous groups, women, and children. Water pollution also gravely impacts oceans, marine biodiversity and ecosystems, while degrading coastal areas.[17] It is projected that 70–80 per cent of untreated turban wastewater is discharged into freshwater reservoirs and oceans each year, leaving water systems open to organic pollutants and other hazardous chemicals.[18] In response, localised solutions towards wastewater management, such as decentralised treatment systems, are emerging at technical and policy levels in South and Southeast Asia, however, pervasive challenges still exist as investment in sanitation is much more costly than in provision of clean drinking water, making political support for sanitation interventions challenging in contexts where financial resources are scarce.[19] Currently, less than 10 per cent of wastewater flows in some countries in Central Asia, South Asia, Southeast Asia and the Pacific are safely treated, presenting obvious challenges for reaching the 2030 target.[20]

INCREASING WATER SCARCITY

The most critical issue facing water resources and freshwater ecosystems in the region today is increasing water scarcity (target 6.4). The Asia-Pacific region is home 60 per cent of the world's population, whilst having only 36% of global water resources, making its per capita water availability the lowest in the world.[21] It is should however be noted with caution that significant variation exists among and within the countries in terms of per capita water resources availability ranging from over 100,000 m^3 per inhabitant per year in Bhutan to about 253 m^3 per habitant per year in Pakistan.[22]

The region's growing water scarcity is exacerbated by increasing water demand for agricultural production (target 6.4). The agricultural sector in Asia and the Pacific, particularly in South, East and Southeast Asia, continues to grow, extracting record quantities of water resources. Irrigated agriculture currently accounts for approximately 85 per cent of extracted groundwater in most Asian countries.[23] Compared to the global average of less than 20 per cent, 45.2 per cent of cultivated land in Asia and Pacific is irrigated. Over the coming decade, water over-withdrawal will likely intensify as the population expands at a rate of 0.6 per cent per annum, with an additional 322 million people by 2030.[24]

A recent report from the Organisation for Economic Co-operation and Development placed Asia's irrigation-dependent food baskets in northwest India and north China as two of the world's top three hotspots in terms of water-related risks to food production.[25] However although water scarcity has long been pervasive in India, north

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China and Pakistan, it is starting to impact countries that have typically been considered water-abundant in South and Southeast Asia. Ten countries in the Asia-Pacific region fall under the category of 'high baseline water stress' or 'extremely high baseline water stress.' High water stress countries include Uzbekistan, Afghanistan, Republic of Türkiye, Armenia, Kyrgyzstan and Nepal. Extremely high-water stress countries include Iran, India, Pakistan and Turkmenistan. While there is widespread scientific recognition of increasing water scarcity, data on water withdrawals in the region is extremely limited, as most water abstraction is not well or consistently monitored.

The Water Scarcity and Water Stress Concepts

The term water scarcity is used broadly to indicate a lack of adequate volume of water resources for human and ecosystem uses. The term water scarcity itself does not have any standardization and could differ with different interpretation and purpose. Water Stress, on the other hand, helps measure the degree of water scarcity and therefore provides the standardization. A widely used method called 'Falkenmark indicator' does so in terms of total water resources available to the population of a country or a region. Any country with less than 1,700 m^3 per inhabitant per year is said to experience water stress.

The key challenge for the region moving forward is managing and prioritising quality water resources for both human and ecosystem use against the backdrop of increasing water scarcity and direct competition between different sectors. This challenge requires prioritisation of uses by economic, social and environmental value. However, greater efforts are required to establish conclusive data or formal water accounts detailing water withdrawal and its uses. Currently, this data is lacking and has become a growing concern, as policymakers are unable to effectively develop water resource policies without comprehensive data. Increased efforts are required to establish water accounts, as rational and equitable water allocation is hard to implement without a comprehensive understanding of water balance.

TRANSBOUNDARY RIVER COOPERATION

There are currently 780 million people in South and Southeast Asia that are dependent on transboundary rivers.[26] However, challenges to implementing IWRM are magnified

in transboundary (river basins and aquifers) contexts (target 6.5) due to the politically and geopolitically complex nature of transboundary water resources. These challenges are compounded by increasing water scarcity, and climate impacts, such as floods and droughts further exacerbated by the reluctance to share data among neighbours and lack of agreement on the balance of water resources use between countries. Asia is home to 57 transboundary river basins, which account for 39 per cent of the continent's land surface. Of these river basins, only 10 are covered by basin-wide agreements, 15 are partially covered and 32 are not covered.[27] For Central, East, South and Southeast Asia combined, only in 6 out of 15 countries occupy 90 per cent or more of river basin areas covered by operational arrangements.[28]

TRANSBOUNDARY AQUIFER COOPERATION

There are significant gaps in water policy and agreements for transboundary aquifers (target 6.5). A global inventory of transboundary aquifers identified 129 in Asia, covering approximately 9 million km^2, or about 20 per cent of the entire region.[29] Uzbekistan shares the most with 31 transboundary aquifer basins, followed by China and Russia with 21; Tajikistan with 15; Kyrgyzstan, Kazakhstan and Mongolia with 14; Azerbaijan with 13; and Iran with 10 (see Figure 5).[29] In Asia, transboundary aquifers experience high Aquifer Stress Index (ASI), defined as groundwater exploitation rate divided by aquifer recharge. Notably, over 50 per cent of Asia's aquifers report high ASI. For example, transboundary aquifers in Western Asia (AS125–131, 140, 143, etc.) are over-exploited due to increasing human activity, and as a result the ASI has increased more than 250 per cent over the last 50 years.[29] In Southeast Asia, the increasing over-exploitation of groundwater abstraction in the Mekong Delta (AS89) region has resulted in continuous depletion of groundwater resources and related environmental issues, such as land subsidence, salinization, and ripening of acid sulphate soil.[29] However, despite this growing threat, most countries in the Asia-Pacific region do not have effective legal and institutional instruments to regulate the use of groundwater resources, and only a limited number of bilateral agreements exist for transboundary aquifers.[29] Similarly, most countries in Asia have not developed water policies for dealing with internationally shared groundwater resources.[29]

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CASE STUDY 1 - The 20-year national water resources master plans in Thailand
In response to Thailand's water-related disasters, the country formulated a 20-year national water resources master plan (2018-2037), aiming to address drought, flood and wastewater problems. The master plan, which is a revision of Thailand's 12-year water resource management strategy (2015-2026), now covers more strategic measures and includes indicators to assess output, outcomes and impact. It identifies and prioritises target areas towards SDG implementation, climate change adaptation and disaster risk reduction. Additionally, the master plan examines nature-based solutions, green and grey infrastructure, and flood risk reduction measures, including shifting the cropping calendar and using large scale paddy fields.[30]

C. AVAILABILITY OF DATA

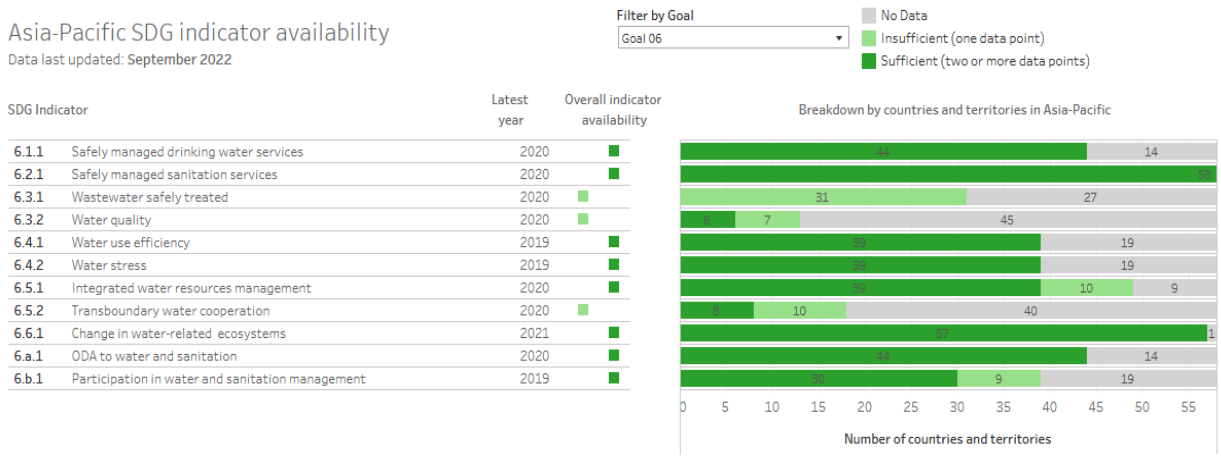
Data availability has improved considerably over the past few years, with only three indicators deemed insufficient by UNESCAP. However, at close observation at least two concerns stand out. First, there is still considerable variation in the availability of data between countries. Data availability in the Pacific sub-region particularly remains low. For example, data for indicators 6.4.1 (change in water use efficiency over time) and 6.4.2 (level of water stress) are available in only four countries and that data is still categorized as insufficient for both despite being a crucial indicators of overall water resources availability and uses.[31] Secondly, large data gaps exist in the region for two indicators 6.3.2 (water quality) and 6.5.2 (transboundary water cooperation) that are critical for informing the overall water resources management and making decisions that proliferate into the progress of other SDG 6 indicators. Collective action and collaboration between national statistical organisations and international organisations is needed to identify causes of poor data availability and work on measures to improve data availability in such countries across the region.

This discrepancy in monitoring capacities is demonstrated by data disaggregated by income level per the ESCAP economic groupings.[32] Low-income and lower-middle-income countries exhibit a lower percentage of no data indicator compared to high- and upper-middle-income countries that exhibit more than 60 per cent of no data indicators.

In addition to lack of data, target 6.4 monitoring is subject to errors inherent to statistical estimates of water withdrawals and related economic data. The

aggregation of sectoral statistics may obscure important partitions of water use, for instance, on withdrawals estimated for agriculture aggregates, irrigated agriculture, livestock watering and aquaculture. However, the frequency and reliability of such water withdrawal estimates are variable and may only be compiled at the national level once every five or ten years.

Figure 4: *Availability of SDG 6 data in the Asia-Pacific region*



Source: Asia-Pacific SDG indicator availability, ESCAP Statistics Division.[33]

III. HUMAN RIGHTS AND GENDER EQUALITY CONSIDERATIONS

Women continue to be predominantly responsible for water collection, spending on average somewhere between 5–20 minutes per trip.[34] This has implications for time allocated to paid work or leisure and their health and well-being as a result of transporting heavy loads for long distances and increasing exposure to violence during travel.[35] Women and girls typically experience specific challenges in the absence of access to safe, hygienic and private sanitation facilities, including shame, physical discomfort and insecurity. Yet, women have been found to be consistently absent in decision-making structures and policymaking in the WASH sector[36], meaning their knowledge, capacities and priorities are overlooked, especially in addressing sustainable water resource management, water-related disaster management and design of sanitation policies.

III. HUMAN RIGHTS AND GENDER EQUALITY CONSIDERATIONS

CASE STUDY 2 - The intersectionality of WASH access

The Water, Women and Disability study led by International Center for Evidence in Disability, London School of Hygiene and Tropical Medicine, World Vision Vanuatu and the Vanuatu National Statistics Office provides a demographic study of WASH access in Torba and Sanma Provinces in Vanuatu. The report highlights disparities in WASH management amongst persons with and without disabilities through a gender lens. The report highlights that fear of abuse and discomfort in travelling long distances to collect water amongst women and men with disabilities is much more frequently expressed than amongst the general population. Inaccessible latrines pose significant challenges for people who experience disabilities affecting their ability to leave home. Harmful taboos that confer untouchability during menstruation further affect women's ability to safely access water and thus affect menstrual hygiene. The disparity and challenges in WASH management amongst women and people with disabilities reduce individual dignity, and limits their ability to participate in daily activities.[37]

While noting challenges in the WASH sector, challenges in the Water Resource Management sector are even more pervasive. Water Resource Management decision making is carried out at a high level of government increasing barriers to inclusive participation. It is important to acknowledge that water resources management is ultimately a social and political domain, despite evolving from technical disciplines of engineering, science, water data management, modelling, hydro-economics and the like. All decisions informed by these technical disciplines are subject to trade-offs, power dynamics, negotiations and assumptions. These include assumptions about who uses and needs water, the value of certain uses over others and how water should be shared, especially in times of scarcity. Given the social and political nature of water management, it is therefore necessary to dig deeper to identify whose interests are being served by the processes and decisions related to allocating, managing and distributing water. This is where gender equality, inclusion and community engagement become central in effectively managing water resources. The sustainable management of water resources and universal access to safely managed water resources will only be achieved if the rights of women and marginalized groups are fulfilled. Inequality, discrimination and social exclusion, often experienced by indigenous peoples, women, cultural minorities, youth, people with disabilities, the elderly and sex and gender minorities, can be found within water governance, water

sector development including investment programs, agriculture and food security programmes due to inadequate consideration. All SDGs call for the inclusion of all, equal rights for women and the elimination of discrimination of people based on their age, gender, disability, race, ethnicity, origin, religion, economic or other status. The SDGs also require attention to multiple dimensions of discrimination, or intersectionality, e.g., women from a particular ethnic group may experience exclusion due to both their gender and ethnicity.

IV. PROMISING INNOVATIONS AND PRACTICES

WASTEWATER REUSE

There are major economic stakes involved in effective management of wastewater. Untreated water resources often get mixed into the larger water system including rivers and aquifers degrading their water quality as well. The UN World Water Development Report estimates that for every one U.S. dollar spent on sanitation, society benefits by an estimated 5.5 dollars.[38] Further, improved wastewater management has the capacity to relieve water scarcity and secure supplies for human use. Although treated and semi-treated wastewater may not serve as a big fraction of total diverted water resources volumetrically, they can however, serve as an alternate and augmented resource for agriculture use, especially during the times of extreme scarcity. Countries leading the way in improving wastewater treatment in Asia include: Singapore, South Korea, Japan and Malaysia, where 100 per cent, 99.4 per cent, 97.8 per cent, and 87.8 per cent of domestic wastewater flows are safely treated, respectively.[39]

CASE STUDY 3 – NEWater: Wastewater as a resource in Singapore

In 2003, the National Water Agency of Singapore closed the water loop by turning used water into a resource. The agency further processes treated water from reclamation plants with advanced membrane technologies and ultraviolet disinfection to produce ultra-clean, high-grade and reclaimed water called NEWater. NEWater is highly valued in industry and is primarily supplied to non-domestic sectors, such as wafer fabrication parks, industrial estates and commercial

buildings for industrial cooling and air conditioning purposes. During dry periods, NEWater is also added to local reservoirs to supplement the drinking water supply.[40]

RESTORING FRESHWATER ECOSYSTEMS

The relationship between water and ecosystems is both complex and critical. The health of water resources determines the health of ecosystems, and conversely the health of the ecosystem determines water supply and quality, making SDG 6 and SDG 15 deeply interlinked (target 15.1). Moreover, ecosystems guard against water-related hazards and disasters. For example, wetlands play a critical role in surface, subsurface and groundwater storage and in reducing the risk of flooding. They also help capture, process and dilute pollutants. Similarly, vegetation, such as grasslands and forests, support the healthy functioning of watersheds. Ensuring conservation, restoration, and sustainable use of terrestrial and inland freshwater ecosystems, in particular forests, wetlands, mountains, drylands and their services, will ensure long-term health and availability of sustainable water resources.[41]

CASE STUDY 4- Groundwater management and ecosystem restoration in Timor-Leste

In recent years, Permatil, a Timorese non-governmental organisation with expertise in community-led catchment management, pioneered the restoration of community springs in Timor-Leste. According to traditional practice, upland communities established and maintained reservoirs and water retention structures using local vegetation and materials. Infiltration would feed springs downstream, with maintenance effort assured through community knowledge of the association between reservoirs and springs. Through the efforts of Permatil and partners in government, academia and participating communities, this practice is now being re-introduced and linked to traditional knowledge of water, biodiversity and land management. With climate change bringing more severe dry seasons, ensuring year-round water supply has become a matter of urgency. Reservoirs have now been (re-)established in more than 70 locations through peer-to-peer learning. Further, the practice is under consideration as a potential UNESCO ecohydrology demonstration site.[42]

IV. PROMISING INNOVATIONS AND PRACTICES

ADVANCED TOOLS TO SUPPORT WATER ACCOUNTING AND WATER ALLOCATION

In the face of growing water scarcity in the region, a lot of management tools and technologies have been adopted to reduce consumptions through water saving. A lot of irrigation technologies, such as drip irrigation systems and lining of canals, have been long promoted as efficient mechanisms offering water conservation and enhancing water productivity using lesser water, however, the results have paradoxically shown to increase water consumption. Often in absence of water-saving policies and robust accounting and budgeting of water withdrawal and return flows from the systems, over time, farmers logically seek to increase their yields and income further—for example, by intensifying increasing cropped area or intensity. This response will increase water consumption even further and reduce the return flows, making lesser water available for downstream users. The idea that increasing water use efficiency will always lead to water savings and improved water productivity is a myth.[43] In order to address these issues, a new training and tool called Real Water Savings in Agricultural Systems (REWAS) helps calculate real water savings and assess the impact of on-farm interventions at basin scale.

CASE STUDY 5 – REWAS: A simple and pragmatic tool that evaluates the impact of field-scale crop-water intervention at larger scale

REWAS was developed to overcome some of the aforementioned misconceptions with respect to water-saving technologies. REWAS uses the concept of "following the water," where the volume of water subject to drainage, percolation and runoff are tracked and shown to be recovered downstream. The tool dispels myths that high-tech irrigation methods save high volume of water, and demonstrates the opposite occurs due to increased consumption and reduced recoverable volume. The REWAS guidance document, an output of the training and tool, provides a full inventory of interventions, as well as their impact on basin hydrology. In addition to the guidance document, extensive training on REWAS is being provided by FutureWater, a water research and consulting organisation, through the FAO Water Scarcity Programme for the Asia-Pacific region. The training has been delivered in Iran, Malaysia, Vietnam, Thailand, Indonesia, North and South India, China and Bangladesh.

V. PRIORITY ACTIONS

Key drivers for accelerating implementation of SDG 6 targets are set out in UN-Water's SDG 6 Global Acceleration Framework (Figure 5). This framework outlines a set of guiding principles that promote focusing on the vulnerable, ensuring inclusivity, integrating conflict sensitivity, unleashing female and youth potential, planning for resilience, and designing and implementing transformations based on scientific evidence. The framework uses three action pillars:

1. Engage: engaging with UN agencies, governments and civil society;
2. Align: improving ways of working and coordinating with key stakeholders; and
3. Accelerate: bolstering key drivers that are understood to improve and support country progress.

Figure 5: *UN-Water's SDG 6 Global Acceleration Framework*

The five accelerators as defined by the framework are as follows:

1. Financing: Optimized financing is essential to get resources behind country plans.
2. Data and information: Data and information targets resources and measures progress.
3. Capacity development: A better-skilled workforce improves service levels and increases job creation and retention in the water sector.

V. PRIORITY ACTIONS

4. Innovation: New, smart practices and technologies will improve water and sanitation resources management and service delivery.
5. Governance: Collaboration across boundaries and sectors will make SDG 6 everyone's business.

To accelerate progress on delivery of SDG 6 and reverse the current regression on some targets, the following actions are recommended for priority consideration:

1. **Improve governance and cooperation through inclusive multi-stakeholder approaches** and developing a shared vision from local to transboundary levels for water and wastewater management within and across basins. This should be informed by rights-based approaches and gender-responsive principles and standards, including water accounting, water allocation processes and river basin planning and evaluation, accountable institutions and better management. Such efforts should include initiatives that encourage and foster women's leadership and effective participation in these processes.
2. **Improve policy coherence and develop policies that prepare for shifting demographics and livelihood practices in rural areas.** As most of the countries in the region witness unprecedented economic growth, a significant shift in livelihoods from agriculture to other industries is already underway. This trend has already occurred in China and the transition is already being observed in the southeast Asia. The trend would imply reallocation of significant portion of water resources traditionally owned by agriculture to other sectors. Reflection of this shift on water management principles, policies and regulation that guide action, investment and technology towards transparent allocation and reallocation, use, and protection of water resources and infrastructures is dire. Policies should also ensure genuine stakeholder engagement, enfranchisement of most vulnerable groups and transparency.
3. **Improve data collection and sharing** that underpins water accounting, informs sustainable management and use of water resources, increases access to safely managed drinking water and sanitation services, promotes transparent allocation of water, improves water quality and groundwater status, and helps model future scenarios. This task involves academic and research institutions, agencies and government at all levels and needs to be accompanied by active and open data sharing and cooperation between these institutions and countries. This entails improving the capacities and funding of national statistical offices to support the collection of location-, age-, and sex-disaggregated data that informs these efforts.

V. PRIORITY ACTIONS

4. **Strengthen national institutions** and institutional coordination across administrative scales, especially on water quality, wastewater and groundwater management, climate change and disasters, climate finance for national water accounting and allocation, and professionalisation for youth, as well as decentralisation (including enfranchisement of marginalised water users).
5. **Support gender equality, disability and social inclusion** through inclusive methodologies for consultation and outreach to different stakeholders in the design and implementation of relevant policies and strategies. This is crucial to promoting transparency of policy processes and regulatory arrangements. Engaging marginalised groups in evaluating impacts of policies and related interventions allows policymakers to assess their efforts in terms of their responsiveness to these groups' challenges and needs.
6. **Increase funding,** especially for water accounting, WASH, wastewater management and disaster risk reduction, and support for regional collaboration. This includes regulations to direct investment effective water management, clean production systems and to prevent pollution and disasters. Increase public financing for WASH services for marginalised populations who may not benefit equally from the economic prosperity and overall improvements in basic services.
7. **Use integrated approaches** that address protection and restoration of water-related ecosystems, promote nature-based solutions and foster citizen action for river restoration. This will enhance the linkages between water and disaster risk-reduction, climate adaptation and mitigation, energy and health, as well as prioritise improving water quality by regulating polluters, enforcing and incentivising compliance, and investing in water treatment and infrastructure.
8. **Enhance agricultural production with consideration of climate change adaptation and water supply limitations** and increase water storage where possible to secure water availability (while taking care of river and ecosystem health), through diversification of crops and improved understanding of water use efficiency measures that address misconceptions surrounding water savings. Maximise the potential for re-use of domestic wastewater and treated effluent in agriculture.

V. CREDITS AND REFERENCES

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