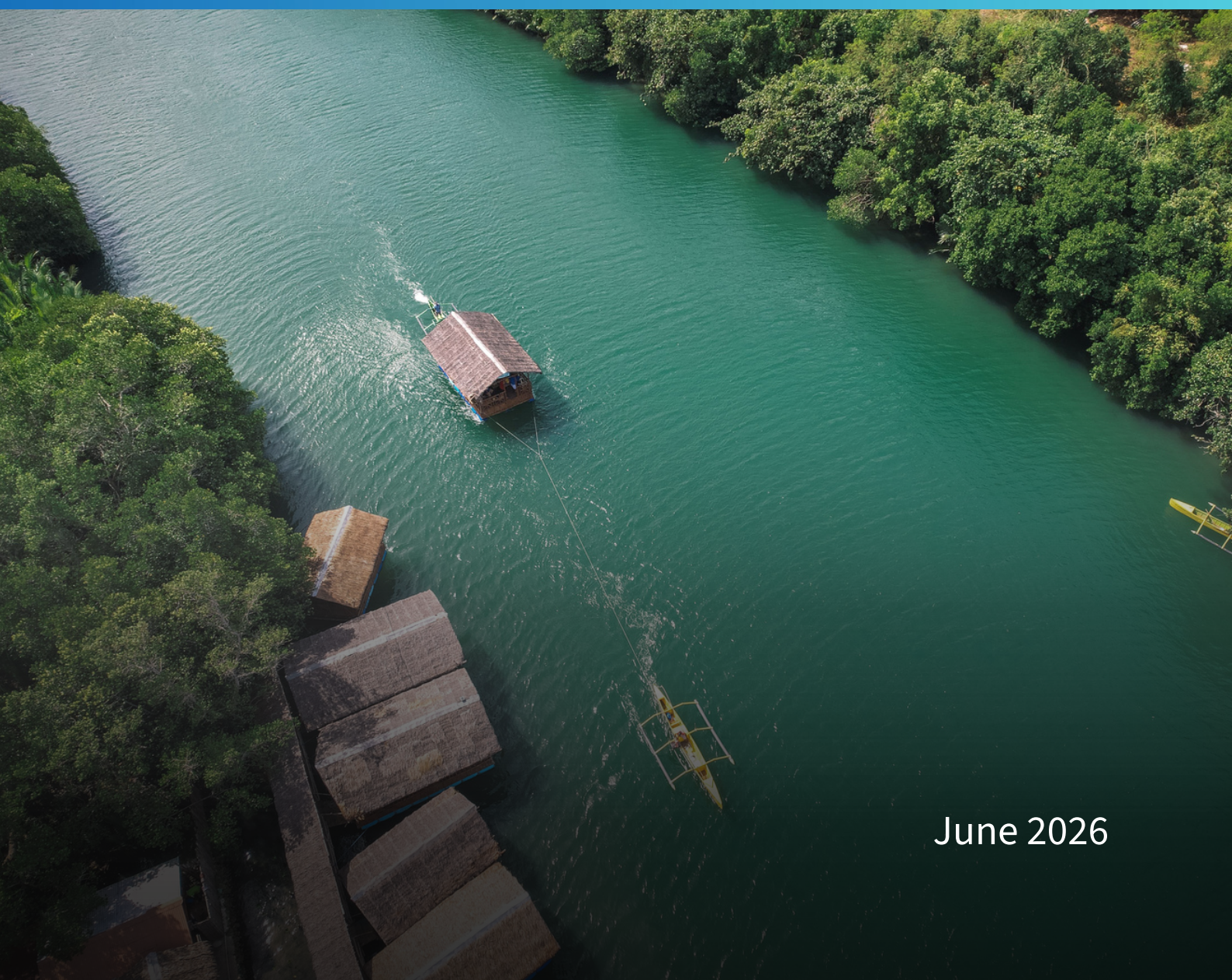


Preliminary National Water Tenure Assessment Report of the Philippines



June 2026

FOREWORD

Water is fundamental to human well-being, food security, economic development, and ecosystem sustainability. As Southeast Asia faces increasing pressures from climate change, rapid urbanization, competing water demands, and growing water-related risks, strengthening the governance of water resources has become more important than ever. Ensuring that water is allocated, accessed, and managed fairly and sustainably requires not only sound policies and institutions but also a clear understanding of the rights, responsibilities, and relationships that shape how water is used. This is the essence of water tenure.

The Global Water Partnership Southeast Asia (GWP-SEA) is pleased to support the preparation of these Preliminary National Water Tenure Assessment Reports for Lao PDR, Malaysia, and the Philippines under the project Scaling up Capacities for Responsible Governance of Water Tenure (ScaleWat), implemented in partnership with the Food and Agriculture Organization of the United Nations (FAO). These assessments represent an important step in advancing regional understanding of water tenure governance, while supporting the implementation of Integrated Water Resources Management (IWRM) principles.

The reports provide valuable insights into the legal, policy, and institutional frameworks that shape water governance in each country. They highlight existing strengths, identify emerging challenges, and offer a foundation for future dialogue on improving equitable, sustainable, and resilient water management.

It is important to recognize that these assessments are preliminary and based primarily on desk reviews of legislation, policies, and institutional arrangements. While they offer a useful national-level overview of formal water tenure arrangements, they do not fully capture local realities, customary practices, or basin-specific experiences.

FOREWORD

GWP-SEA therefore recommends that these assessments be followed by pilot surveys and stakeholder consultations at selected river basin or watershed levels to validate findings, strengthen evidence, and deepen understanding of water tenure in practice.

We believe these reports mark an important first step in advancing the water tenure agenda in Southeast Asia. We hope they will serve as valuable references for policymakers, practitioners, researchers, and development partners, while fostering continued collaboration among stakeholders to strengthen water security, climate resilience, and sustainable development across the region.

On behalf of GWP Southeast Asia, I extend my sincere appreciation to FAO, the national experts, government agencies, and all partners who contributed to the preparation of these reports. Their commitment and expertise have laid the groundwork for future learning and action toward more inclusive and effective water governance.



Rozman Bin Mohamad

Chairman

Global Water Partnership Southeast Asia (GWP-SEA)

Kuala Lumpur, Malaysia

June 2026

ACKNOWLEDGMENT

Contributor and Report Writer: Jihan Al-Shdifat; Philippine Water Partnership under the leadership of Amy Lecciones; The Society for the Conservation of Philippine Wetlands (SCPW); The local government units and fisherfolk communities of Cardona and Binangonan in Rizal and Panguil in Laguna; Representatives from the Laguna Lake Development Authority (LLDA) and Metropolitan Waterworks and Sewerage System (MWSS); Kharren Mae Rosario; Aldrin Magpantay and Angelica Euara Manrique (Maynilad Water Services / Philippine Young Water Professionals).

Coordinator and Editor: Raymond Valiant

Project Management: Louise Desrainy Maryonoputri

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About FAO

The Food and Agriculture Organization (FAO) is a specialized agency of the United Nations that leads international efforts to defeat hunger. FAO further supports countries in strengthening water governance to address growing challenges such as climate change, water scarcity, and food insecurity. A key part of this work is advancing the concept of water tenure, understanding who has rights to use water, under what conditions, and how those rights are governed.

About GWP-SEA

GWP is a global action network of 3,000+ organizations in 183 countries. As its oldest regional branch, GWPSEA coordinates 8 Country Water Partnerships (CWPs). Representing a diverse multi-stakeholder network, from government and development banks to NGOs, the Jakarta-based secretariat serves as the regional hub for advancing integrated water management.

About this publication

Developed under the FAO ScaleWat Project (GCP/GLO/1169/GER) in collaboration with GWP SEA, this product supports FAO's Global Dialogue on Water Tenure to promote inclusive governance, food security, and water access rights across Asia-Pacific.

ABBREVIATIONS

BFAR	Bureau of Fisheries and Aquatic Resources
BSWM	Bureau of Soils and Water Management
BWSA / RWSA	Barangay Waterworks and Sanitation Association / Rural Waterworks and Sanitation Association
DA	Department of Agriculture
DENR	Department of Environment and Natural Resources
DILG	Department of the Interior and Local Government
DOE	Department of Energy
DOH	Department of Health
DPWH	Department of Public Works and Highways
DRRM	Disaster Risk Reduction and Management
DWR	Department of Water Resources (Proposed apex body under the National Water Resources Management Act)
ECC	Environmental Compliance Certificate
EMB	Environmental Management Bureau (under DENR)
FARMC	Fisheries and Aquatic Resources Management Council
FPIC	Free, Prior, and Informed Consent
IPRA	Indigenous Peoples' Rights Act (Republic Act No. 8371)
LGU	Local Government Unit
LLDA	Laguna Lake Development Authority
LWUA	Local Water Utilities Administration
MGB	Mines and Geosciences Bureau
MLD	Million Liters per Day (Unit of volume measurement for water supply)
MWSS	Metropolitan Waterworks and Sewerage System

ABBREVIATIONS

MWSS-RO	Metropolitan Waterworks and Sewerage System Regulatory Office
NAMRIA	National Mapping and Resource Information Authority
NCIP	National Commission on Indigenous Peoples
NDRRMC	National Disaster Risk Reduction and Management Council
NIA	National Irrigation Administration
NPC	National Power Corporation
NWRB	National Water Resources Board
PAB	Pollution Adjudication Board
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PNSDW	Philippine National Standards for Drinking Water
PPP	Public-Private Partnership
SALINTUBIG	Sagana at Ligas na Tubig sa Lahat (Government water provision program)
TIEZA	Tourism Infrastructure and Enterprise Zone Authority
WRMO	Water Resources Management Office (under DENR)

GLOSSARY

- **Agency Control:** A water tenure type where the state, through specific charters and legislations (such as the MWSS Charter or the Provincial Water Utilities Act), retains centralized administrative dominion over state-managed water supply, watershed protection, and basin governance.
- **Artisanal Fishers / Small-scale Fisherfolk:** Traditional, low-volume fishers whose access to and dependence on water bodies for livelihood operate largely through informal or communal structures, making them weakly visible or vulnerable within formal permit-allocation frameworks.
- **Assumed Water Rights:** An informal water tenure type where local communities, small-scale fisherfolk, or households assume continued access to water resources based on historical use, proximity, or practice, leaving them vulnerable to legal displacement when formal permits or infrastructure intervene.
- **Beneficial Use:** The legal measure and limit of water appropriation under the Philippine Water Code, which mandates that water must be utilized efficiently and for the purpose for which it was granted; however, its strict enforcement can inadvertently create a "use-it-or-lose-it" disincentive for water conservation.
- **Customary Water Tenure:** Traditional systems of water access and sharing practiced by indigenous communities within ancestral domains, which are partially recognized through land laws (like IPRA) but poorly integrated into the core national water allocation framework.
- **De Minimis Rights (Small-Scale):** A narrow legal exemption under the Philippine Water Code allowing minor water abstractions, such as purely domestic use by a single household (capped at 250 liters per capita per day), without full permitting requirements, provided the source is registered.
- **Environmental / Minimum Flow Requirement:** The regulatory benchmark managed by the NWRB, typically set at maintaining at least 10% of the 80% dependable flow of a river system, designed to preserve downstream ecological systems and satisfy community needs.
- **Fit-Stretch-Friction Framework:** An interpretive diagnostic matrix matching national water governance functions against FAO water tenure principles, categorized by strong alignment (Fit), partial alignment with implementation gaps (Stretch), or weak alignment with clear vulnerabilities for informal users (Friction).

GLOSSARY

- **Impossible Water Rights:** An analytical category defining the systemic barrier faced by marginalized or last-mile users who have no realistic, practical pathway to obtain or comply with formal, highly-documented water rights under the existing regulatory regime.
- **Intermediated / Mediated Access:** Alternative water distribution arrangements where underserved or last-mile communities rely on third-party intermediaries (e.g., water vendors, communal taps, or NGOs securing bulk water) rather than direct utility lines, often resulting in lower tenure security and significantly higher costs.
- **New Water:** A pioneering urban water reuse framework in the Philippines (piloted in Parañaque City in 2022) that reclaims treated municipal wastewater effluent and purifies it into drinkable water supply via advanced modular treatment, serving as a resilient alternative to raw surface water.
- **Prior Appropriation (Priority in Time):** The legal doctrine governing competing formal water claims in the Philippines, where the first user to legally register and obtain a permit holds a superior right over later applicants ("first in time, first in right"), subject to emergency domestic preferences.
- **Unrecognized Tenure:** Forms of actual water access and dependence that exist entirely outside the permit registry—such as informal small-scale fishing or communal spring use—rendering real users legally invisible and unprotected in water allocation decisions.
- **Water Rights Administration System:** A restrictive governance model focused primarily on formal state authorizations, permitting channels, and compliance mechanisms for documented abstractors, distinct from a comprehensive water-tenure system that legally recognizes the full diversity of actual water users and relationships.
- **Waterless Communities:** Municipalities or localities officially classified (such as by the NAPC or the SALINTUBIG program) as highly vulnerable due to severe water insecurity, specifically where less than 50% of the population has access to safe, potable water.

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EXECUTIVE SUMMARY

The Philippine framework is best understood as a strong water-rights administration system that has not yet matured into a comprehensive water-tenure system. The concept closest to water tenure in national law is still “water rights,” defined and processed through State-issued permits. This gives the State clear legal control over allocation, but it also narrows recognition to uses that can be formally documented and processed through administrative channels.

Under the Water Code, no person, including government entities and government-owned or controlled corporations, may appropriate water without a water right evidenced by a water permit, and the National Water Resources Board (NWRB) likewise frames a water right as a privilege granted by the government to appropriate and use water.

Viewed through the FAO water tenure lens, the core issue is not the absence of law but the selectivity of legal recognition. Formal rights are clearly defined for permitted uses, yet informal, communal, livelihood-based, and customary uses remain weakly recognized in the core allocation framework. This architecture reveals a narrow model of recognition where the broader relationships, through which people access, share, negotiate, and depend on water remain only partially visible. Those most affected by this gap are likely to be low-income households dependent on mediated access, rural and upland communities using springs or communal systems, Indigenous Peoples and ancestral-domain communities, and small-scale users competing with better-resourced permit holders. The result is a legal order that is coherent as water-rights administration, but socially thinner as water-tenure governance.

This assessment reveals attempts by the Philippines to move beyond this narrow, highly-formal model of recognizing water rights. Some signals observed from this review include recasting access to water as a basic human right and adopting an integrated water resources management framework using a more coherent institutional architecture through the establishment of a Department of Water Resources, and a reconstituted National Water Resources Allocation Board.

Consistent with states in Asia and the Pacific, the present system undervalues water as a resource. The current one-time filing fee of ₱7,200 (US\$116) for most permits and the annual charges imposed on permittees are still anchored to administrative cost recovery rather than to scarcity, environmental effects, or the social value of the resource,

EXECUTIVE SUMMARY

even though the amended implementing rules already allow the National Water Resources Board (NWRB) to revise charges by considering intended use, quantity of withdrawal, environmental effects, impacts on the source, and development costs. The most critical governance gaps identified in this assessment are five-fold. First, the legal system equates legitimacy too closely with permits. Second, beneficial use and forfeiture rules can discourage conservation of water as a resource. Third, prior appropriation stabilizes formal allocation but locks in historical patterns. Fourth, institutional mandates remain fragmented across allocation, basin planning, watershed protection, irrigation, and local service delivery. And finally, the charging system still largely reflects administrative cost recovery, not the scarcity value of the resource.

The priority response is therefore to widen recognition, simplify lower-level access pathways, reform incentives around beneficial use, improve institutional coherence, and gradually modernize allocation data and pricing.

In preparing this report, a desktop study of relevant documents related to water access were reviewed. Findings were supplemented by stakeholder interviews from water governance-related agencies, as well as grassroots organizations.

INTRODUCTION AND METHODOLOGY

This assessment lays out the regulatory landscape of water tenure in the Philippines and asks a threshold analytical question: how relevant is the concept of water tenure in a context where the dominant legal language is not tenure but water rights? The inquiry is important because the distinction is not semantic. A water-rights framework emphasizes state authorization, permits, and compliance. A water-tenure framework asks who has access, who is recognized, who controls decisions, whose claims are secure, and how competing uses are mediated in practice. The Philippines presents a particularly useful case because the formal system is both detailed and restrictive, while the wider governance context includes human-rights claims, local service provision, indigenous and community interests, conflict resolution, and emerging calls for integrated reform.

The assessment is motivated by three connected policy concerns. The first is institutional fragmentation. The proposed National Water Resources Act argues that the current landscape is split among multiple agencies, including the NWRB, Local Water Utilities Administration (LWUA), Metropolitan Waterworks and Sewerage System (MWSS), and National Irrigation Administration (NIA), with overlapping mandates, duplication, weak coordination, and at times conflicting policies and programs.

The second concern is equity and human rights. The United Nations Development Programme-Department of Interior and Local Government (UNDP-DILG) reported on human-rights-based local governance, called WatSan, identifying lack of access to sufficient, acceptable, accessible, and affordable water and sanitation as deeply rooted in poverty, weak governance, power imbalance, and discrimination. It also identifies claimholders living in 455 waterless municipalities among the most vulnerable groups.

The third concern is the growing mismatch between the legal architecture of allocation and the economic and ecological realities of scarcity. Current fees are more reflective of the administrative costs recovery, anchored on a strong prioritization of permitting-based access, rather than the full economic, social, and environmental value of water, and that permit fees and water charges have not been updated in line with scarcity conditions. As water stress increases due to climate change, urbanization, population growth, and rising economic activity, this disconnect becomes more consequential for both efficiency and justice. From the review of the regulatory landscape, no provision for climate risk financing associated with water assets are mandated.

Methodologically, this report combines desktop legal and policy review with a taxonomy of water rights opposite a qualitative water-tenure lens that may later be strengthened through stakeholder interviews. A simple “Fit-Stretch-Friction” analytical framework was also developed to better illustrate the degree of alignment of current water governance in the Philippines with FAO’s water tenure principles. The framework was used as a high-level interpretive tool to assess whether existing legal, institutional, and governance arrangements adequately reflect water tenure principles in practice.

The categories were defined as follows:

- Fit – Strong alignment between Philippine water governance functions and FAO water tenure principles. Existing laws, institutions, or mechanisms substantially support the intended tenure element in both design and implementation.
- Stretch – Partial or uneven alignment. Governance arrangements recognize or address the tenure element to some degree, but implementation gaps, inconsistencies, or limitations remain.
- Friction – Weak alignment or clear gaps. Existing governance systems insufficiently recognize, support, or operationalize the tenure element, particularly for informal, livelihood-based, or vulnerable water users.

The overall method is interpretive and diagnostic rather than doctrinal as it identifies how the law defines legitimate water use, how procedures translate those rules into administrative filters, how agencies divide responsibility, and how governance gaps appear when the system is tested against FAO’s water tenure concerns such as legal recognition, clarity of rights, equity among users, inclusiveness of decision-making, tenure security, and sustainability. A simple focus group discussion with the fisheries sector in the Laguna de Bay watershed was designed to test how these formal arrangements operate in practice, where permits are difficult to secure, where informal arrangements persist, and how water users perceive fairness, recognition, and security. All tabulated and graphical analyses are compiled in the annexes.

COUNTRY PROFILE AND WATER CONTEXT

The Philippines is an archipelagic country with strong hydrological diversity, seasonal variability, and high exposure to droughts, floods, and climate-related extremes (e.g., different regions are classified between Type I to Type IV rainfall regimes). Official documents identify 18 major river basins and multiple water-resources regions, underscoring that national water-tenure issues are shaped less by one uniform scarcity condition than by uneven geography, variable rainfall, and recurring allocation stress. In practice, this means tenure security depends not only on legal rights but also on where users are located within river-basin, watershed, and service-delivery systems.

The formal legal system identifies a descending list of uses including domestic, municipal, irrigation, power generation, fisheries, livestock raising, industrial, recreational, and other purposes. That ordering already signals that water governance is inseparable from economic structure and political prioritization, and not merely shaped by hydrology.

The national context is also defined by a continuing access challenge with more than 3 million people continuing to rely on unsafe and unsustainable water sources and around 7 million lacking access to improved sanitation. Out of 1,493 municipalities, there are also 455 municipalities identified as “waterless” by the National Anti-Poverty Commission (NAPC)—a staggering 35%. Waterless communities are defined to be those with less than 50% of their population having access to safe, potable water. The *Sagana at Ligtas na Tubig sa Lahat* (SALINTUBIG) program of the Department of Interior and Local Government has been established to define waterless communities as those. These figures matter for water tenure because they show that legal allocation cannot be assessed separately from access, deprivation, and vulnerability.

Available permit-allocation data also reveal the formal structure of water use. As of December 2022, around 52% of the country’s water resources, surface water and groundwater combined, were already allocated through permits. Of the allocated volume, power accounted for 58.85%, irrigation for 27.44%, industrial use for 9.49%, and domestic or municipal use for only 3.21%. These figures do not capture all actual water use, but they do show that the formal allocation system is heavily weighted toward large-volume sectoral uses.

This country context already signals rising competition among sectors and between different kinds of users. It also suggests that households can experience water insecurity even where water is formally allocated elsewhere in the system.

A common pattern in urban areas outside of Metro Manila is having communal taps or water vendors who serve households living in poverty. These households are reported to pay three to ten times more for water than customers using the water district-served system or private wells. That disparity is not just a service issue but also evidence that formal rights, service access, and effective tenure security do not automatically coincide.

LEGAL FRAMEWORKS GOVERNING WATER ACCESS AT THE NATIONAL LEVEL

The national legal framework is anchored in Presidential Decree No. 1067, the Water Code of the Philippines, and in the amended implementing rules governing appropriation and utilization of waters. The framework is clear on ownership: water belongs to the State, and access is mediated through administrative authorization. Article 13, as summarized in NWRB permitting processes, provides that no person may appropriate water without a water right evidenced by a water permit. This makes formal authorization the principal route through which water tenure is recognized in law.

The scope of the framework is broad, covering ownership, appropriation, utilization, development, conservation, and protection. Formal arrangements recognized under the reviewed legal documents include permits for domestic, municipal, irrigation, power, fisheries, livestock, industrial, recreational, and other purposes; temporary permits; permits to drill groundwater; transfer and lease arrangements for existing rights; and registration of single-household domestic sources. Purely domestic use by a single household, defined in the implementing rules as not more than 250 liters per capita per day, is exempt from the permit requirement but is still expected to be registered with the Board.

In typological terms, the formal arrangement combines public ownership with administratively granted use rights. It clearly recognizes individual, corporate, municipal, and public-sector permit holders. Rights are also linked to land in a practical sense because applicants are generally required to show ownership, legal title, or a right to use the property where the source is situated. The law further permits transfer and lease of rights, meaning the Philippine framework has hybrid features: water remains public, use rights are permit-based and transferable, yet access is still strongly conditioned by property, documentation, and administrative legibility.

The strong emphasis on formal permitting and legal documentation in the Philippine system can inadvertently exclude segments of the population that are unable to comply with these requirements, even in highly urbanized areas such as Metro Manila.

In response, non-government actors have emerged to bridge this gap. Organizations such as Better With Water work with private concessionaires and local water boards to secure bulk water, which is then distributed to last-mile users through alternative arrangements. In effect, these organizations perform functions similar to those of a water utility, particularly in extending supply to underserved communities, but without the full legal mandate or regulatory recognition of a utility provider. This challenges conventional definitions of what constitutes a “water utility” within the formal system. From a water tenure perspective, however, such arrangements are not peripheral. They are essential, as they represent one of the few viable pathways through which last-mile users are able to access water.

The legal architecture is strongly shaped by beneficial use and priority in appropriation. Beneficial use is the measure and limit of appropriation, while priority in time gives the better right among competing appropriators, subject to emergency preference for domestic and municipal use. This gives the framework internal coherence, but it is coherence around appropriation rather than around tenure pluralism. The available legal and policy materials also point to a significant gap: they do not clearly demonstrate strong recognition of customary or traditional tenure arrangements within the core water-rights system itself, nor do they define the legal status of many unregistered livelihood or communal uses beyond indirect recognition through rights-based or social legislation.

Other legal instruments widen the frame unevenly. The rights-based governance reference notes that the Constitution does not explicitly recognize the right to water, though it protects dignity, participation, accountability, and stewardship. It also notes that the Magna Carta of Women expressly recognizes the right of marginalized sectors to enjoy, use, and manage water resources within their communities or ancestral domains, while environmental and sanitation laws recognize related public-health and ecological interests. The proposed National Water Resources Act goes further by expressly declaring access to water a basic human right and by proposing a more integrated governance architecture. This means the wider legal environment is moving beyond narrow permit logic, but the core allocation framework still has not fully absorbed that broader vision.

The proposed establishment of a Department of Water Resources (DWR) under the National Water Resources Management Act (SB 2771 / HB 6789) represents a major institutional reform aimed at addressing the long-standing fragmentation of water governance in the Philippines. The measure seeks to consolidate key functions currently distributed across multiple agencies, including the NWRB, LWUA, MWSS, NIA, and LLDA, into a single department responsible for national water policy,

allocation, regulation, and planning. It also envisions a unified framework for water resources management, alongside strengthened regulatory oversight of tariffs, service standards, and resource use. This institutional consolidation responds directly to widely recognized coordination gaps in the sector, where overlapping mandates and siloed decision-making have limited the system's ability to manage water resources holistically.

From an integrated water resource management (IWRM) perspective, the DWR has the potential to move the system toward greater coherence by aligning allocation, watershed management, service delivery, and climate considerations within a single institutional framework. IWRM emphasizes coordinated development and management of water, land, and related resources to maximize social and economic welfare without compromising ecosystems. In principle, this aligns closely with water tenure objectives, particularly in strengthening coordination, improving sustainability, and linking basin conditions more directly to allocation decisions. However, from a water tenure lens, institutional consolidation alone will not resolve core gaps. The effectiveness of the DWR will depend on whether it goes beyond administrative integration to also expand recognition of diverse water users especially those outside the formal tenure arrangements, incorporate participation mechanisms, and address inequities in access and tenure security. Without these elements, there is a risk that a more centralized system could reinforce existing patterns of selective recognition, rather than transform them. Fully committing to a strengthened water tenure assessment therefore has benefits in the Philippines' IWRM journey. Beyond improving allocation and regulatory clarity, a water tenure approach makes visible the users, livelihoods, and informal arrangements that are often overlooked in formal systems. In a governance landscape characterized by overlapping mandates and fragmented implementation, water tenure offers an alternative lens to strengthen coordination, improve legitimacy in decision-making, and balance infrastructure development with equity, environmental sustainability, and long-term water security.

This approach also provides an opportunity to move beyond managing water as a sectoral resource toward governing it as a shared social, economic, and ecological system.

This functional mapping reframes water governance in the Philippines from a legal-institutional inventory into a system of roles. It highlights how different functions (e.g., allocation, quality, service delivery, ecosystem management, and user representation), are distributed across institutions, often with overlapping mandates and varying degrees of recognition for different water users.

Table 1: Functional mapping of water governance in the Philippines and its overlap with water tenure principles

Function	Description	Lead Institutions	Supporting / Overlapping Institutions	Key Legal Basis/ Instruments	Key Observations from a Tenure Lens
Water Allocation and Rights	Governs who are legally allowed to use water through permits, allocation priorities, and regulation of abstraction. Anchored in state ownership of water under the Constitution and operationalized through the Water Code.	National Water Resources Board (NWRB)	DENR, WRMO, NIA, DOE, LLDA (basin-specific), LGUs (limited roles)	PD 1067 (Water Code) ; EO 123; EO 22	Highly formalized and permit based. Strong clarity for large, documented users. Weak visibility for informal and livelihood users (e.g., small fisherfolk).
Water Quality Protection	Regulates pollution, wastewater discharge, ambient water quality, and environmental compliance. Ensures water remains safe for ecosystems and human use.	DENR – Environmental Management Bureau (EMB)	Pollution Adjudication Board (PAB), LGUs, MWSS, LWUA, DOH, industries	RA 9275 (Clean Water Act) ; PD 984 (legacy); RA 9003 (indirect)	Strong regulatory framework (Clean Water Act). Enforcement and compliance vary. Impacts of pollution often felt downstream by users not directly involved in decisions.

Function	Description	Lead Institutions	Supporting / Overlapping Institutions	Key Legal Basis/ Instruments	Key Observations from a Tenure Lens
Water Supply and Service Delivery	Provides drinking water, sewerage, and sanitation services to households and communities. Includes both centralized and decentralized systems.	MWSS (Metro Manila), LWUA (water districts)	LGUs, private concessionaires, rural water associations (BWSAs/RWSAs), DOH	RA 6234 (MWSS) ; PD 198 (Water Districts); RA 8041	Service delivery is fragmented. Access is often mediated (vendors, shared systems). Formal service ≠ equitable access.
Watershed and Ecosystem Governance	Protects and manages watersheds, forests, lakes, rivers, and protected areas that sustain water supply and ecological balance.	DENR (Forest Management Bureau, Biodiversity Management Bureau)	LLDA (Laguna Lake), Protected Area Management Boards (PAMB), LGUs, NCIP	PD 705 (Forestry Code) ; RA 7586 / RA 11038 (NIPAS/ENIPAS)	Strong legal basis but competing land uses (e.g., mining, agriculture, settlements). Ecosystem health directly affects downstream users.
Agricultural Water Management (Irrigation)	Develops, operates, and manages irrigation systems for agricultural productivity.	National Irrigation Administration (NIA)	Department of Agriculture (DA), irrigators' associations, LGUs, NWRB	RA 3601 / PD 552 / PD 1702 (NIA)	Major water user. Allocation heavily favors irrigation. Farmer groups recognized, but small-scale or informal users outside systems less visible.
Fisheries and Aquatic Resource Use	Governs fishing activities, aquaculture, and use of municipal waters. Protects municipal fisherfolk while regulating commercial operations.	Bureau of Fisheries and Aquatic Resources (BFAR), LGUs	LLDA (for Laguna Lake), FARMCs, DENR	RA 8550 (Fisheries Code)	Dual system: municipal fisherfolk vs commercial aquaculture. Overlaps with water rights system not clearly defined—creates tenure ambiguity.

Function	Description	Lead Institutions	Supporting / Overlapping Institutions	Key Legal Basis/ Instruments	Key Observations from a Tenure Lens
Water in Energy and Industry	Regulates water use for hydropower, industrial processes, and other large-scale economic uses.	Department of Energy (DOE), NWRB	DENR, EMB, private firms, economic zone authorities	PD 1067; Energy laws; investment laws	Large-volume users with strong regulatory visibility. Often prioritized in allocation. Impacts on other users (e.g., downstream) not always fully accounted for.
Water and Public Health / Sanitation	Ensures drinking water safety, sanitation standards, and public health protection related to water.	Department of Health (DOH)	LGUs, MWSS, water districts, utilities	PD 856 (Sanitation Code); DOH standards	Focuses on quality at point of use. Highlights gap between infrastructure and actual safe access.
Water and Local Governance	Local planning, enforcement, service provision, and community-level management of water resources.	Local Government Units (LGUs)	DILG, barangays, local water utilities, community organizations	RA 7160 (Local Government Code)	Highly influential in practice. Local politics and capacity shape outcomes. Key interface between formal policy and lived experience.
Water in Mining, Tourism, and Land Use	Governs water impacts from extractive industries, tourism development, and land-use change.	DENR-MGB (mining), DOT/TIEZA (tourism)	LGUs, EMB, NCIP, private sector	RA 7942 (Mining Act); RA 9593 (Tourism Act)	Water is affected indirectly through land use. These sectors often introduce new pressures on water systems and local users.

Function	Description	Lead Institutions	Supporting / Overlapping Institutions	Key Legal Basis/ Instruments	Key Observations from a Tenure Lens
Climate, Disaster, and Hydrological Systems	Manages water-related risks such as floods, droughts, and climate variability. Provides data and forecasting.	Climate Change Commission, PAGASA, NDRRMC	DENR, DPWH, LGUs, DOST	RA 9729 (Climate Act); RA 10121 (DRRM Act)	Increasingly important. Climate stress reshapes availability and security of water, but not fully integrated into allocation decisions.
User Representation and Participation	Represents interests of water users in decision-making processes and governance structures.	LGUs, FARMCs, irrigators' associations	NCIP, community organizations, civil society	RA 8550 (FARMCs); RA 8371 (IPRA)	Participation exists but is uneven. Some groups (e.g., farmers) are structured; others (e.g., fisherfolk) are less consistently represented in water allocation decisions.

The Philippine system separates water allocation from water delivery. While NWRB governs access at the source, LWUA and water districts govern access at the household level. This creates a situation where legal water rights do not automatically translate into equitable or secure access. PD 198 and the water district system determine how that water is delivered to communities where private concessionaires do not exist. In practice, tenure security is therefore shaped as much by service delivery institutions as by formal water rights, leading to cases such as in Metropolitan Cebu where water tenure difference is determined by whether one's location is serviced by the water district.

Through its mandate over water rights allocation, the NWRB exerts a structuring influence on how bulk water is apportioned across sectors, including between Metro Manila's private concessionaires and agricultural users. Allocation decisions function not only as regulatory instruments but as drivers of behavior, creating binding constraints within which utilities must operate. This, in turn, compels concessionaires to pursue alternative supply sources, enhance resource recovery, and reduce non-revenue water losses to maintain reliability of service.

In Parañaque City, Metro Manila, the private concessionaire Maynilad Water Services has established the country's first NEW WATER facility, a pioneering initiative that reclaims treated used water for potable application. Launched in 2022, the ₱450-million modular treatment plant receives treated effluent from the Parañaque Water Reclamation Facility and converts it into drinkable water supply through advanced treatment processes. The facility currently produces up to 10 million liters per day (MLD) of reclaimed water, which is blended with conventional potable water from the La Mesa Treatment Plants before distribution to selected barangays in Parañaque City, beginning with San Isidro and San Dionisio. The initiative marks the first implementation of potable water reuse in the Philippines, positioning wastewater reclamation as an alternative source to augment supply amid increasing water stress.

To support public confidence and ensure water safety, the initiative was accompanied by community consultations, communication campaigns, and a series of rigorous technical assessments by health and water quality regulators. NEW WATER underwent extensive testing against the Philippine National Standards for Drinking Water (PNSDW) and was assessed for consistency with international potable reuse standards, eventually receiving both a Certificate of Potability from the Parañaque City Health Office and a Permanent Operational Permit from the Department of Health following sustained compliance monitoring. Building on this pilot, Maynilad has signaled plans to expand similar facilities as part of a broader strategy to diversify raw water sources and strengthen long-term supply resilience.

From a water tenure perspective, the initiative also raises important future questions around public acceptance, trust, and how reclaimed water may reshape understanding of potable water access and allocation in increasingly water-scarce urban environments.

On the bulk water supply side, two recent and major bulk water supply projects, the Kaliwa Dam under the New Centennial Water Source program and the Upper Wawa Dam under the Wawa Bulk Water Supply Project, illustrate how large-scale infrastructure development intersects with water tenure in the Philippines. Both projects are flagship initiatives aimed at augmenting Metro Manila's water supply and reducing dependence on the ageing Angat Dam system, which currently provides most of the the region's raw water. The Kaliwa Dam, led by the Metropolitan Waterworks and Sewerage System (MWSS), is designed to deliver approximately 600 million liters per day (MLD), while the Wawa project, implemented through a public-private partnership led by WawaJVCo., is expected to deliver over 500 MLD upon completion.

From a formal governance perspective, both projects align with established legal and institutional mechanisms for water allocation. They operate within the framework of state-sanctioned water rights, environmental compliance requirements, and national development priorities, reflecting the system's capacity to mobilize large-scale investments to meet growing urban demand. However, a closer examination reveals important differences in governance approach, financing structure, and stakeholder engagement. The Kaliwa Dam is financed through Official Development Assistance (ODA) from China, while the Wawa project follows a Public-Private Partnership (PPP) model, with private financing supported by long-term offtake agreements. These differences have implications for transparency, accountability, and the distribution of risks and benefits across actors.

Viewed through a water tenure lens, the projects bring into focus tensions around recognition, participation, and equity. Both are in areas that intersect with ancestral domains of Indigenous Peoples, requiring processes such as Free, Prior, and Informed Consent (FPIC) under the Indigenous Peoples' Rights Act. While formal compliance mechanisms are in place, the depth and quality of engagement, and the extent to which affected communities meaningfully influence decisions, remain key points of concern. The Kaliwa Dam, in particular, has faced sustained scrutiny due to its location within ecologically sensitive and protected areas in the Sierra Madre and its potential impacts on biodiversity and indigenous communities. In contrast, the Wawa project has been assessed as relatively stronger in transparency and accountability, particularly in project disclosure and stakeholder engagement, and was able to deliver initial phases more efficiently.

In the Philippines, the environmental flow requirements are generally guided by the NWRB standard of maintaining at least 10% of the 80% dependable flow of a river system. In the case of the Kaliwa Dam project, this benchmark became a point of contention,

with critics questioning whether downstream ecological and community needs would be adequately protected. The Environmental Management Bureau (EMB), however, maintained that minimum environmental flow requirements would be preserved through project design and compliance measures stipulated in the Environmental Compliance Certificate (ECC).

These two cases highlight a central tension in Philippine water governance. While the system effectively defines who is formally authorized to extract and supply water, it is less equipped to fully account for those who are affected by these decisions, particularly communities whose relationship with water is based on livelihood, territory, and long-standing use rather than formal permits. The comparison between Kaliwa and Wawa suggests that governance approaches, especially in terms of transparency, participation, and institutional arrangements, play a critical role in shaping how water tenure is experienced in practice. As such, the “two dams” case underscores the need to move beyond a purely supply-oriented framing of water infrastructure toward a more inclusive understanding of water tenure that integrates questions of recognition, equity, and long-term stewardship. The arguments on resettlement of indigenous communities also raises an important water tenure question of whose right to access water bear heavier weight in the eyes of the system—Metro Manila, and its booming urban landscape, or the indigenous communities and natural environmental flows that have been in place for generations?

Finally, across the country, local water districts have increasingly entered into joint venture and concession arrangements with third-party entities, often private corporations, to support water service delivery, infrastructure investment, and operational management. In these arrangements, local water districts retain their legal mandate while service quality and performance are governed through contractual agreements with private operators. However, such partnerships have also faced scrutiny, particularly where concerns have emerged regarding service quality, tariff structures, supply reliability, and accountability mechanisms. In some cases, including arrangements involving PrimeWater Corporation, these concerns have prompted legal reviews, congressional inquiries, and calls for closer regulatory oversight to ensure that contractual arrangements adequately safeguard public service obligations and long-term water access.

The effectiveness of water rights systems ultimately depends on how well they are embedded within broader institutional arrangements that can manage competing uses, resolve conflicts, and adapt to changing conditions.

INSTITUTIONAL FRAMEWORK FOR WATER TENURE

The institutional framework for water tenure is centered on the NWRB, but it is not institutionally simple. The NWRB is the main authority for allocating formal water rights, processing applications, maintaining the core registry, and regulating appropriation and charges. The available materials reviewed for this assessment also describe it as the sole government body mandated to perform water-resource regulation, spanning policy coordination, resource regulation, and economic regulation.

The allocation process itself is relatively structured. Applications are screened for documentary completeness, posted publicly for thirty days, circulated to relevant national and local offices, and investigated against criteria that include existing appropriations, beneficial-use standards, possible adverse effects, environmental effects, land-use economics, and climate conditions and changes. Groundwater applications require an added drilling and technical evaluation process, and protests may be filed by adversely affected parties. This gives the formal system a clear administrative chain for allocation, recording, and modification of rights.

Beyond the NWRB, however, functions are dispersed. The amended implementing rules and the NWRB permitting guidelines show that water permitting already requires interaction with or notice to bodies such as National Irrigation Authority (NIA), the Department of Public Works and Highways (DPWH), Department of Environment and Natural Resources (DENR), Department of Energy (DOE), local government units (LGUs), and other specialized agencies depending on the proposed use. In a nutshell, DENR retains watershed and environmental roles; NIA, DPWH, DOE, Laguna Lake Development Authority (LLDA), LGUs, water districts, cooperatives, and community providers all retain mandates relevant to irrigation, infrastructure, hydropower, local service delivery, or watershed protection.

The Water Resources Management Office under the DENR is tasked with integrated water-resources management and master planning as imposed by Executive Order No. 22. The River Basin Control Office rationalizes basin programs and maintains databases and related information systems. These functions matter for water tenure because allocation security depends not only on permits but on watershed conditions, basin planning, data quality, and environmental enforcement.

The proposed National Water Resources Act is explicit that the present arrangement is fragmented, resulting in roles partly defined in law but not always coherently aligned in practice. The proposed National Water Resources Act defines that clearer institutional architecture is needed.

It would subsume or attach multiple agencies and functions under a Department of Water Resources, separate service regulation from resource allocation, and create a Resource Allocation Office to serve as technical secretariat to the reconstituted Board. Whether or not that proposal proceeds, the institutional diagnosis is already clear: the Philippines does not lack agencies; it lacks a sufficiently integrated governance design that aligns rights administration, basin planning, humanrights obligations, environmental stewardship, service regulation, and reliable data systems.

The case for such reform is reinforced by recent policy analysis identifying institutional fragmentation, weak planning and monitoring systems, and uneven service delivery as core constraints in the sector, despite the country's relatively abundant water resources.

Table 2: Agencies involved in water tenure and water-rights governance

Agency / actor	Role in relation to water tenure / water rights
National Water Resources Board (NWRB)	Central authority for formal water-rights allocation and permitting under the current framework; processes applications, issues permits, enforces compliance, regulates appropriation and charges, hears controversies, and coordinates with deputized agents and technical offices
DENR / Water Resources Management Office (WRMO)	Leads integrated water resources management planning and the development of an integrated water-resources master plan; important for linking allocation with basin-scale sustainability and data integration.
DENR / River Basin Control Office (RBCO)	Coordinates river-basin plans, initiatives, and database consolidation; retain watershed, environmental compliance, reforestation, and pollution-control roles that affect water allocation conditions; relevant because basin conditions influence tenure security and allocation sustainability.
Department of Public Works and Highways (DPWH)	Engaged in water projects, flood control, rainwater harvesting installations and technical review processes connected to water use and infrastructure; receives notices and participates in selected permitting and project reviews.
National Irrigation Administration (NIA)	Key actor for irrigation systems and irrigation-related review and coordination; relevant for agricultural appropriation and conflicts among competing uses.
Department of Energy (DOE)	Required in relation to hydropower and specific delegated matters; relevant where water rights intersect with power generation.

Agency / actor	Role in relation to water tenure / water rights
Laguna Lake Development Authority (LLDA)	Provides clearances in Laguna Lake (Laguna de Bay) watershed contexts and functions as a basin-specific regulatory and management actor.
Local Government Units (LGUs)	Set local policy directions, regulate and sometimes provide services, participate in notices and endorsements, and mediate access and local accountability, especially where formal and informal arrangements intersect.
Water service providers, private concessionaires, cooperatives, community associations, and private actors	Operate or mediate actual service delivery and access, especially in local systems; important for understanding the gap between formal resource rights and lived water tenure.

WATER TENURE GOVERNANCE GAPS AND KEY CHALLENGES

On paper, the Philippine water system is orderly. Rights are defined, permits are issued, and institutions are assigned clear mandates. In practice, however, the system reveals a more uneven landscape—one where recognition is selective, protection is uneven, and not all relationships with water are equally visible. It is within this gap between formal structure and lived reality that key water tenure challenges arise.

The challenge is not absolute water scarcity, but a mismatch between supply and demand driven by weak institutional coordination and management.

The first and most important governance gap concerns identification, recognition, and protection of legitimate tenure arrangements. The Philippine system is legally rigorous, but it is rigorous about permits rather than about tenure diversity. It recognizes users who can present documents, technical descriptions, legal identity, and measurable points of diversion more readily than users whose relationship to water is communal, customary, seasonal, service-based, or embedded in local livelihoods. In that sense, the problem is not simply informality but selective recognition. This fragmentation is well documented, with recent policy analysis highlighting weak coordination, fragmented mandates, and limited data systems as persistent constraints to effective water governance.

This selective recognition affects security. Formal users enjoy relatively strong tenure so long as they remain compliant, but informal or weakly documented users have little protection against exclusion or reallocation.

Even formal tenure is conditional. Rights may be modified, suspended, or revoked for non-use or other violations, but the system provides far less clarity on compensation or adjustment when reallocations affect livelihoods. The pricing analysis recounts one severe shortage episode in which water was reallocated from irrigation to domestic and municipal uses while affected farmers received no monetary compensation. This is precisely the kind of tenure-security issue that a water-tenure perspective brings into view.

In the Magat watershed, conflict arose between the Saint Joseph Rural Water Works and Sanitation Association and the Belance Farmers Irrigators Association over competing domestic and irrigation claims to Belance Creek. This case belongs in the governance-gaps section because it shows that formal permits do not eliminate conflict, but instead interact with local history, community needs, Indigenous and migrant presence, and competing sectoral claims.

Second, gaps arise due to the doctrine of beneficial use. While intended to prevent hoarding and underutilization, it also creates a “use-it-or-lose-it” logic that can discourage conservation. The legal presentation on beneficial use argues that appropriators are disincentivized from conserving allocated water, while the pricing analysis notes that water permits are effectively permanent and rarely revoked absent a complaint. The resulting system protects continued appropriation more strongly than adaptive restraint, even though climate variability and scarcity make flexibility increasingly necessary. The resulting system therefore tends to protect continued appropriation more strongly than adaptive restraint, even as increasing climate variability and water scarcity call for greater flexibility, conservation, and reallocation capacity.

Another gap is in evidence-based reform and policy coherence. The available materials show a sophisticated administrative framework, but a thinner evidence base on actual use outside the permit registry, cumulative basin impacts, and the social effects of allocation. The pricing paper argues that current charges reflect administrative costs rather than full economic value, while the rights-based governance material highlights inequality, gendered burdens, and the centrality of participation and accountability. Taken together, these materials suggest that the formal regime is technically structured but not yet fully integrated with social, economic, and environmental evidence needed for adaptive reform.

Fairness, accessibility, and enforceability of the current framework also need work. Permit procedures rely on documentary requirements, endorsements, and technical steps that are easier for large firms, utilities, or well-resourced institutions to satisfy than for small-scale users or community systems. The pricing paper specifically notes that documentary requirements are virtually the same between small-scale and larger permittees, despite major differences in capacity and risk. This means the system is procedurally formal but not necessarily substantively accessible or fair.

From an accountability, sustainability, and resilience frame, the current implementing rules do include notice, protest, environmental review, and consideration of climate conditions and changes, which are important foundations. However, the transparency of the process is not yet matched by visible cumulative allocation outcomes, and environmental or scarcity considerations are still not strongly embedded in pricing or in incentives around beneficial use. The result is a system that can regulate appropriation but is less well designed to govern transition under increasing scarcity, pollution risk, and climate stress.

The need for a more integrated approach to managing water resources becomes particularly evident in this context, as fragmented mandates can shape not only how water is governed but also how it is defined in practice. The current governance landscape reveals that different agencies engage with water through their respective institutional lenses, which in turn influences the types of interventions deployed to improve access. For instance, rainwater harvesting initiatives implemented by the Department of Public Works and Highways (DPWH) are framed as infrastructure development, positioning the agency as a key factor in expanding water access through this modality. While such interventions can provide immediate relief, questions arise regarding long-term water quality management and system sustainability, particularly where institutional coordination with agencies responsible for health standards and water services is limited. Similar dynamics are observed in the Department of Environment and Natural Resources' (DENR) water filtration and desalination program, which, through the Water Resources Management Office (WRMO), is deploying systems in water-scarce and remote island communities. Although these initiatives address urgent access gaps, they also blur traditional sectoral roles and raise questions about long-term ownership, maintenance, and accountability. Evidence from recent field accounts, including the 2024 documentary *Disyerto sa Dagat*, suggests that without sustained institutional alignment, communities may face challenges in maintaining such systems over time. Taken together, these examples illustrate how siloed approaches, while well-intentioned, can lead to uneven and potentially fragile water access outcomes usually observed as community fatigue. From a water tenure perspective, this underscores the importance of coordinated, system-wide governance to ensure that short-term solutions translate into secure and sustainable access in the long term.

Finally, gaps exist on rights-based approaches, gender, and access to justice. The available materials strongly support a rights-based reading of water governance and emphasize women's central role in water management. However, they do not yet show how women's participation, customary dispute resolution, or vulnerable users' remedies are concretely embedded in the allocation process itself. Embedded in this gap are economic opportunities and gains that are activated with better water provision for women and girls. This is one of the clearest areas where the first-draft desk review is informative but incomplete, and where interviews are essential to test the law-in-practice dimension of tenure governance.

RECOMMENDATIONS

A water tenure perspective points to a set of priority reforms that expand recognition, strengthen security, and better align institutional arrangements with the lived realities of water use.

The first priority, suitable for action in the next one to two years, is to widen recognition without abandoning regulatory discipline. NWRB, DENR, and relevant local actors should design a differentiated recognition framework that distinguishes high-volume commercial abstraction from low-volume, communal, livelihood-based, and domestic uses. The aim should be to reduce invisibility, not to force all users through one permit model.

The second priority is to reform the incentive structure around beneficial use. NWRB should issue guidance or pursue rule changes so that conservation, efficiency measures, and reduced withdrawals in times of stress do not automatically weaken tenure security. For large users, conservation and efficiency plans could be tied to new permits, permit amendments, or petitions for increased allocation.

The third priority is to simplify and differentiate permitting procedures. Smaller users and community systems should not face the same procedural burden as deep-well developers, bulk suppliers, or large industrial abstractors. A more proportional approach to documentary requirements, technical demands, and fee structures would improve fairness and make enforcement more realistic.

The fourth priority is institutional coherence. Whether achieved through legislation or coordinated administrative reform, allocation, basin planning, watershed protection, data management, and local service governance need to be better aligned so that basin conditions, climate risks, and cumulative withdrawals shape formal allocation decisions more directly.

The fifth priority is to modernize abstraction charging and raw-water valuation over the medium term. The next round of reform should move gradually away from pure administrative cost recovery and toward a scarcity-aware structure that considers quantity, environmental effects, impacts on the source, and development costs, all of which are already contemplated in the implementing rules. Improved volumetric monitoring where feasible should support that transition.

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ANNEX 1: WATER TENURE ARRANGEMENTS DERIVING FROM THE LEGAL FRAMEWORK

This table links the FAO typology of water tenure arrangements to the Philippine legal framework and identifies the primary institutions responsible for each arrangement.

No	Types of water tenure arrangements	Seen in the Philippines?	Legal basis (law or policy provision)	Mandated stakeholders / responsible institutions	Examples of uses (practice)	Doubts / comments	Fit / Stretch / Friction
1	Land-based	Yes	PD 1067 (Water Code); Civil Code (land ownership principles)	NWRB; LGUs; DENR (for land/watershed interface)	Landowners abstract water (e.g., shallow wells, small irrigation tied to land)	Not a pure land-based system; water remains State-owned	Stretch
2	Permitted-based volumetric formal water rights	Yes	PD 1067; NWRB permitting rules	NWRB (primary); sector agencies (NIA, MWSS, NPC)	Permits issued for irrigation, domestic supply, industry, hydropower	Strong for formal users; excludes informal and livelihood users	Fit
3	Regulatory licenses	Yes	RA 9275 (Clean Water Act); Fisheries Code; LLDA rules; ECC system	DENR (EMB); LLDA; BFAR; LGUs	Discharge permits, fish pen/cage permits, ECCs	Fragmented across agencies; overlapping requirements	Stretch

ANNEX 1: WATER TENURE ARRANGEMENTS NOT DERIVING FROM THE LEGAL FRAMEWORK

No	Types of water tenure arrangements	Seen in the Philippines?	Legal basis (law or policy provision)	Mandated stakeholders / responsible institutions	Examples of uses (practice)	Doubts / comments	Fit / Stretch / Friction
4	Agency control	Yes	MWSS Charter; PD 198 (LWUA); RA 7160 (LGU Code); LLDA Charter	MWSS; LWUA; Water Districts; LGUs; LLDA; DENR	State-managed water supply, watershed protection, basin governance	Overlapping mandates; unclear boundaries	Fit
5	Water supply contracts	Yes	MWSS concession agreements; PD 198; local service frameworks	MWSS; Private concessionaires; Water districts; LGUs	Households access water through utilities and service providers	Does not capture informal / NGO-mediated access fully	Stretch
6	Commonhold tenure	No / limited	No clear legal basis identified	—	—	No clear equivalent in PH system	Friction
7	Investment contracts	Yes (limited)	PPP frameworks; project agreements (e.g., Wawa, Kaliwa)	NEDA; MWSS; PPP Center; Project proponents; DENR (for approvals)	Bulk water supply projects; dams; infrastructure investments	Shapes control but not always framed as tenure	Stretch

ANNEX 1: WATER TENURE ARRANGEMENTS NOT DERIVING FROM THE LEGAL FRAMEWORK

No	Types of water tenure arrangements	Seen in the Philippines?	Legal basis (law or policy provision)	Mandated stakeholders / responsible institutions	Examples of uses (practice)	Doubts / comments	Fit / Stretch / Friction
8	De minimis rights – small scale	Yes (narrow)	PD 1067 (domestic exemption provisions)	NWRB; LGUs	Small domestic use without full permit requirements	Narrow scope; not extended to livelihood uses	Stretch
9	Declared/exempt commercial uses	No clear evidence	—	—	—	No clear category identified	Friction
10	Reserves/minimum flow requirements	Partial	Environmental laws; watershed/basin planning frameworks	DENR; NWRB; LLDA	Environmental regulation affecting flows and water quality	Not clearly operationalized as formal allocation rule	Stretch

ANNEX 2: WATER TENURE ARRANGEMENTS NOT DERIVING FROM THE LEGAL FRAMEWORK

This set of arrangements highlights forms of water access and use that operate outside, alongside, or in tension with the formal legal framework. In the Philippine context, these arrangements are widespread and often essential to livelihoods, particularly for fisherfolk, informal settlements, and last-mile communities, yet remain weakly recognized in formal allocation and governance systems.

No	Types of water tenure arrangements	Seen in the Philippines?	Legal basis (law or policy provision)	Mandated stakeholders / responsible institutions	Examples of uses (practice)	Doubts / comments	Fit / Stretch / Friction
1	Customary water tenure	Partial	Indirect (IPRA; ancestral domain recognition, but not fully embedded in water allocation law)	Indigenous communities; NCIP; LGUs (limited interface)	Traditional use of springs, rivers, and fishing areas based on long-standing community practices	Weak integration into formal water allocation; more recognized through land than water law	Friction
2	Religious water tenure	No clear evidence	None identified	Religious institutions (if any localized practice)	No clear documented case in current assessment	May exist locally but not evident in reviewed materials	Friction

ANNEX 2: WATER TENURE ARRANGEMENTS NOT DERIVING FROM THE LEGAL FRAMEWORK

No	Types of water tenure arrangements	Seen in the Philippines?	Legal basis (law or policy provision)	Mandated stakeholders / responsible institutions	Examples of uses (practice)	Doubts / comments	Fit / Stretch / Friction
3	Informal arrangements (deliberately illegal)	Yes	None	Individual users; informal settlers; small-scale operators; weak enforcement interface with LGUs/NWRB/DENR	Illegal deep wells, unregistered abstraction, unauthorized discharge, exclusionary local ordinances	Exists due to enforcement gaps and access constraints; often normalized in practice	Friction
4	Informal arrangements (evolved over time)	Yes	None	Communities; fisherfolk; NGOs; local associations; water vendors	Communal sharing, vendor systems, NGO-facilitated access, informal distribution networks, lake access practices	Socially embedded and functional, but legally insecure	Friction

ANNEX 2: WATER TENURE ARRANGEMENTS NOT DERIVING FROM THE LEGAL FRAMEWORK

No	Types of water tenure arrangements	Seen in the Philippines?	Legal basis (law or policy provision)	Mandated stakeholders / responsible institutions	Examples of uses (practice)	Doubts / comments	Fit / Stretch / Friction
5	Assumed water rights	Yes (implicit)	None	Local users; communities; small-scale fisherfolk; households	Long-term users assume continued access based on history, proximity, or practice (e.g., fishing grounds, communal sources)	Vulnerable when formal allocation, infrastructure, or permits intervene	Friction
6	Impossible water rights	Possible (analytical)	None	Marginalized groups; informal settlers; last-mile communities	Users who have no realistic pathway to secure formal water rights under existing frameworks	More conceptual but relevant in highly constrained or excluded settings	Stretch

ANNEX 2: WATER TENURE ARRANGEMENTS NOT DERIVING FROM THE LEGAL FRAMEWORK

No	Types of water tenure arrangements	Seen in the Philippines?	Legal basis (law or policy provision)	Mandated stakeholders / responsible institutions	Examples of uses (practice)	Doubts / comments	Fit / Stretch / Friction
7	Unrecognized tenure	Yes	None	Indigenous communities; fisherfolk; informal households; last-mile users; NGOs (as intermediaries)	Small-scale fishing without permits, informal access to lake areas, reliance on intermediated supply	One of the most critical gaps—users are real but not visible in allocation systems	Friction

ANNEX 3: 12 ELEMENTS OF WATER TENURE ASSESSMENT - PHILIPPINE FOCUS

All elements are present to some degree, but many are only partially realized in practice, particularly in relation to recognition, equity, and coordination.

FAO Water Tenure Element	Exists in the Philippine System?	How It Exists (Formal / Informal / Partial)	Observed Gaps and Issues	Fit / Stretch / Friction
1. Recognition of Water Users	✓ (Partial)	Strong recognition of formal permit holders and utilities; informal, livelihood-based, and last-mile users recognized only indirectly	Informal users (e.g., fisherfolk, urban poor, small-scale users) are not systematically identified in allocation systems	Friction
2. Recognition of Tenure Types	✓ (Partial)	Dominated by permit-based rights; some recognition of customary rights (IPRA) and service-based access	Limited integration of communal, customary, and service-mediated access into formal governance	Friction
3. Clarity of Water Rights	✓	Clearly defined through Water Code (PD 1067) and permitting system	Focus on extraction rights; does not capture broader relationships such as dependency or access	Fit
4. Allocation Mechanisms	✓	Centralized allocation through NWRB; prioritization across sectors	Allocation does not fully account for equity, cumulative use, or informal users	Stretch
5. Documentation and Registration	✓	Formal permitting and registration systems for water abstraction	Documentation systems exclude non-permitted users; weak integration with local-level realities	Fit

ANNEX 3: 12 ELEMENTS OF WATER TENURE ASSESSMENT - PHILIPPINE FOCUS

All elements are present to some degree, but many are only partially realized in practice, particularly in relation to recognition, equity, and coordination.

FAO Water Tenure Element	Exists in the Philippine System?	How It Exists (Formal / Informal / Partial)	Observed Gaps and Issues	Fit / Stretch / Friction
6. Security of Tenure	✓ (Partial)	Strong for formal permit holders under compliance conditions	Informal users lack protection; even formal rights are conditional and can be reallocated without clear safeguards	Stretch
7. Protection Against Arbitrary Loss	✓ (Partial)	Legal provisions exist for regulation, suspension, and revocation of permits	Limited clarity on compensation, transition, or livelihood protection during reallocation	Stretch
8. Equity in Access	✓ (Partial)	Addressed through service delivery programs and utilities	Poor and last-mile users often rely on informal systems and pay higher costs	Friction
9. Inclusion of Vulnerable Groups	✓ (Partial)	Some recognition through IPRA, Fisheries Code, and local mechanisms	Inclusion is uneven and not systematically integrated into allocation or planning decisions	Friction
10. Participation and Representation	✓ (Partial)	Mechanisms exist (LGUs, FARMCs, consultations)	Participation often procedural rather than influential	Stretch

ANNEX 3: 12 ELEMENTS OF WATER TENURE ASSESSMENT - PHILIPPINE FOCUS

FAO Water Tenure Element	Exists in the Philippine System?	How It Exists (Formal / Informal / Partial)	Observed Gaps and Issues	Fit / Stretch / Friction
11. Accountability and Enforcement	✓ (Partial)	Legal and regulatory frameworks exist	Enforcement capacity and monitoring remain uneven	Stretch
12. Coordination and Sustainability	✓ (Partial)	Multiple agencies with defined roles; push toward integration	Persistent fragmentation; weak alignment across sectors	Stretch

ANNEX 4: FIT-STRETCH-FRICTION FRAMEWORK OF FAO'S WATER TENURE PRINCIPLES AGAINST THE PHILIPPINE WATER GOVERNANCE FUNCTIONS

The Philippine water governance system aligns strongly with FAO principles on formal rights and regulatory control, but shows weaker alignment in areas of recognition, equity, and tenure security, particularly for livelihood-dependent and informal water users.

As part of this desktop review, a simple Fit-Stretch-Friction framework was developed to test FAO's Elements of Water Tenure against existing water governance mandates. This framework aims to, at a high-level, demonstrate alignment between the two principles.

Function	Strong Alignment (FIT)	Partial Alignment (STRETCH)	Weak Alignment / Gap (FRICTION)
Water Allocation (NWRB / Water Code)	Rights clarity, formal allocation, enforcement mechanisms	Limited transparency for smaller users	Weak recognition of informal and livelihood users; equity gaps
Water Quality (DENR / EMB)	Accountability, environmental protection	Coordination with allocation systems	Does not address access, recognition, or tenure security
Service Delivery (MWSS / LWUA / LGUs)	Directly affects tenure security (actual access)	Equity varies by location and provider	Access not guaranteed despite formal rights; mediated systems create inequality
Watershed / Ecosystems (DENR, LLDA)	Sustainability and stewardship	Some coordination with planning frameworks	Weak integration with allocation decisions; impacts not equally distributed

ANNEX 4: FIT-STRETCH-FRICTION FRAMEWORK OF FAO'S WATER TENURE PRINCIPLES AGAINST THE PHILIPPINE WATER GOVERNANCE FUNCTIONS

Function	Strong Alignment (FIT)	Partial Alignment (STRETCH)	Weak Alignment / Gap (FRICTION)
Agriculture / Irrigation (NIA)	Strong recognition of organized users	Institutional participation (irrigators' associations)	Favors structured users over informal ones
Fisheries (BFAR / LGUs)	Recognition of municipal fisherfolk in fisheries law	Participation via FARMCs	Weak integration with water rights system; tenure ambiguity
Energy / Industry	Strong rights clarity and allocation	High institutional visibility	Dominance in allocation may affect equity across users
Public Health (DOH)	Focus on safe access (quality dimension)	Linked to service delivery systems	Does not influence allocation or recognition directly
Local Governance (LGUs)	Participation, local representation	Context-specific responsiveness	Capacity and political variability affect equity
Mining / Tourism / Land Use	Environmental regulation exists	Some accountability mechanisms	External pressures on water systems not well integrated into tenure decisions

ANNEX 4: FIT-STRETCH-FRICTION FRAMEWORK OF FAO'S WATER TENURE PRINCIPLES AGAINST THE PHILIPPINE WATER GOVERNANCE FUNCTIONS

Function	Strong Alignment (FIT)	Partial Alignment (STRETCH)	Weak Alignment / Gap (FRICTION)
Climate / Disaster Systems	Sustainability and risk awareness	Growing integration with planning	Not yet embedded in allocation and tenure security
User Representation (FARMCs, NCIP, CSOs)	Participation and inclusion	Formal structures exist in some sectors	Uneven representation across user groups

ANNEX 5: ASSESSMENT OF PHILIPPINE WATER GOVERNANCE AGAINST FAO WATER TENURE ELEMENTS

This table integrates the data in Annex 1 and 2 to provide a more coherent picture of the alignment between FAO's Water Tenure Elements and the water governance landscape in the Philippines, together with an added analytical insight from the desktop review conducted by the national expert.

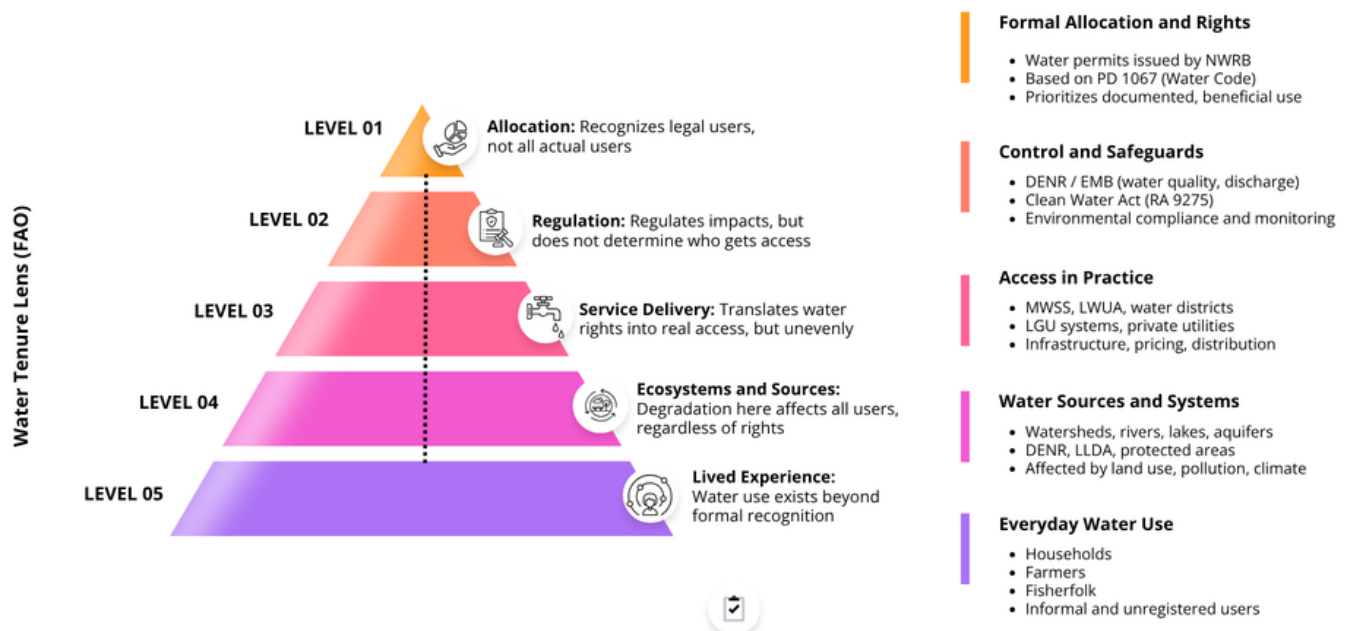
FAO Water Tenure Element	Philippine Context	Assessment (Fit / Stretch / Friction)	Analytical Insight
1. Recognition of Water Users	Formal users (permit holders, utilities, large sectors) are clearly recognized; informal and livelihood-based users are less visible in the system.	Friction	The system recognizes legally documented users but does not fully capture actual water users, particularly small-scale and informal groups.
2. Recognition of Tenure Types	Formal, permit-based tenure dominates; limited recognition of customary, communal, or livelihood-based use.	Friction	Water tenure is narrowly defined through legal instruments, limiting the visibility of diverse water-use arrangements.
3. Clarity of Water Rights	Strong legal framework under the Water Code; clear definition of water rights as state-granted permits.	Fit	The Philippines demonstrates strong clarity and structure in formal water rights.
4. Allocation Mechanisms	Permit-based allocation system managed by NWRB; prioritization of large-scale uses (e.g., power, irrigation).	Fit	Allocation mechanisms are established and operational, though sectorally skewed.
5. Documentation and Registration	Water rights are formally documented and recorded through permits.	Fit	Strong administrative systems exist for documenting formal water rights.
6. Security of Tenure	Security is high for formal permit holders; less certain for informal users and those relying on mediated access.	Stretch	Tenure security varies significantly depending on level of formal recognition.
7. Protection Against Arbitrary Loss	Legal protections exist for permit holders; weaker protections for non-formal users.	Stretch	Protection mechanisms are tied to formal recognition, leaving others exposed.
8. Equity in Access	Significant disparities in access across regions and socio-economic groups; service delivery is uneven.	Friction	Formal allocation does not translate into equitable access across users.
9. Inclusion of Vulnerable Groups	Some sector-specific recognition (e.g., municipal fisherfolk), but inconsistent across water governance.	Friction	Vulnerable groups are unevenly recognized and often excluded from formal systems.

ANNEX 5: ASSESSMENT OF PHILIPPINE WATER GOVERNANCE AGAINST FAO WATER TENURE ELEMENTS

FAO Water Tenure Element	Philippine Context	Assessment (Fit / Stretch / Friction)	Analytical Insight
10. Participation and Representation	Participation mechanisms exist (e.g., FARMCs, LGUs), but effectiveness varies.	Stretch	Participation is institutionalized but not consistently meaningful across sectors.
11. Accountability and Enforcement	Strong legal framework for enforcement (e.g., Clean Water Act), but implementation varies.	Stretch	Enforcement exists but is uneven across regions and sectors.
12. Coordination and Sustainability	Multiple agencies involved; coordination challenges persist; sustainability frameworks exist but are not fully integrated.	Stretch	Institutional fragmentation limits coherence and longterm sustainability outcomes.

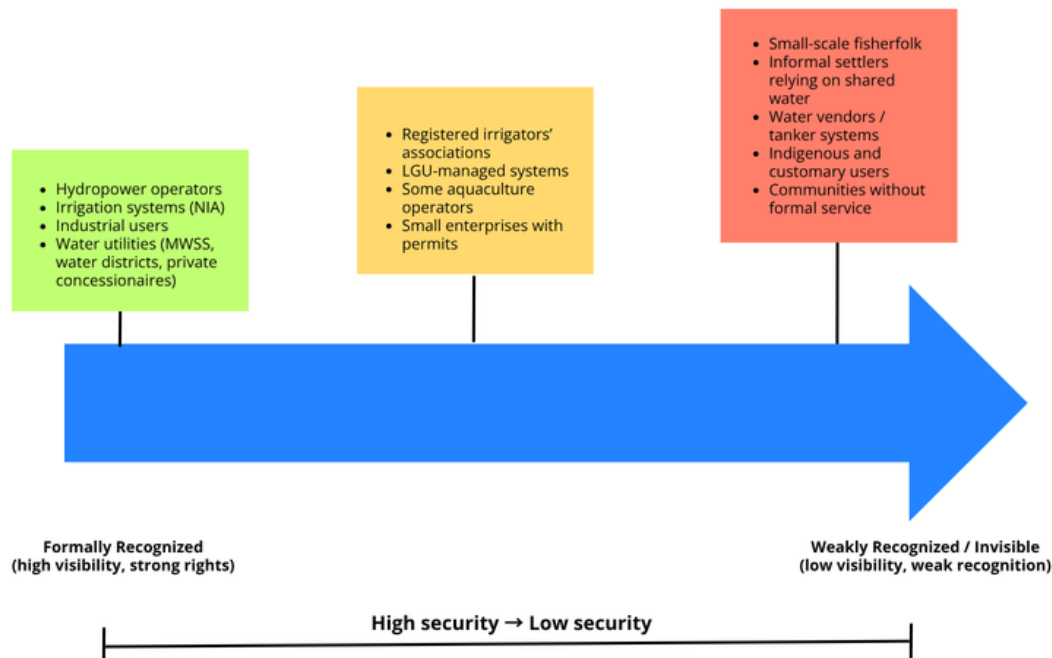
ANNEX 6: FROM ALLOCATION TO EXPERIENCE: UNDERSTANDING WATER TENURE IN THE PHILIPPINES

(Graphical abstract of water tenure in the Philippines)



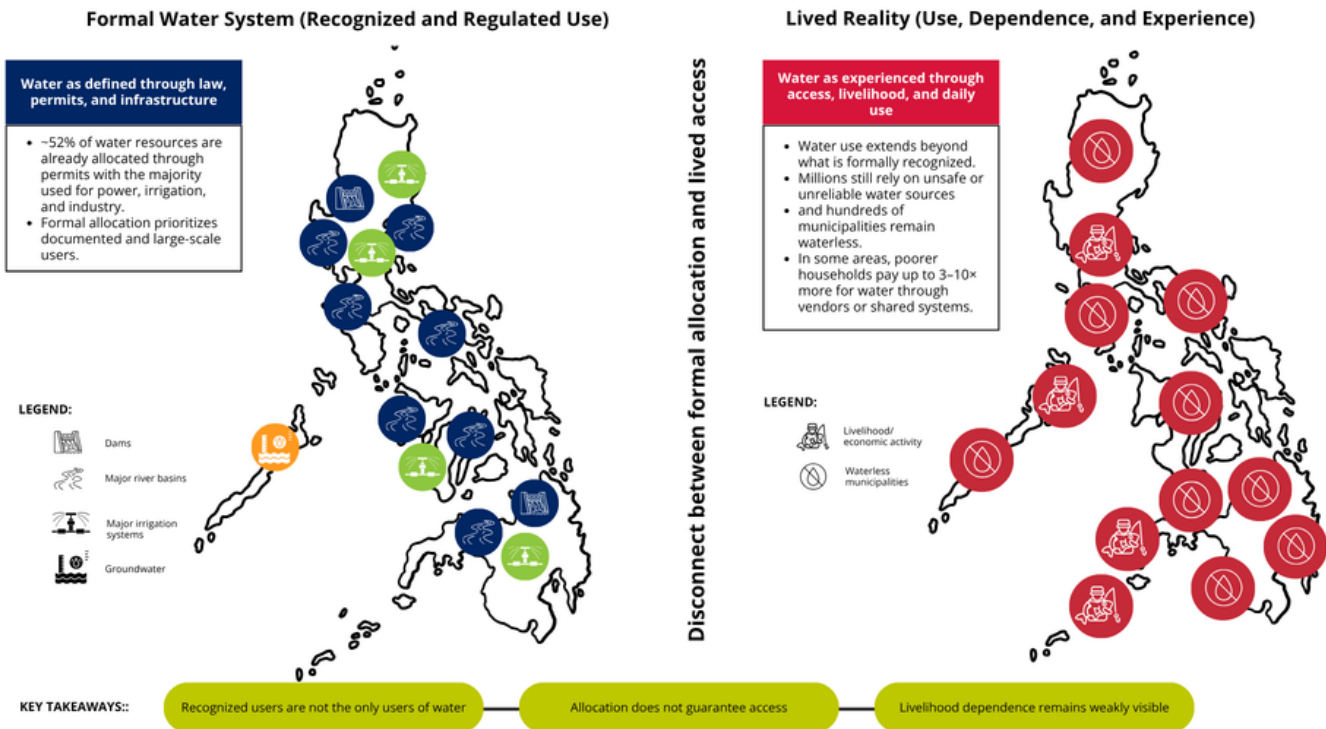
Water governance in the Philippines is structured through formal allocation, regulation, and service delivery systems. However, water tenure reveals that actual water use and security are shaped at the level of lived experience, where many users remain weakly recognized despite high dependence on water. The dotted line in the middle represents the disconnect between the formal system and lived reality.

ANNEX 7: WHO IS SEEN / WHO IS NOT SEEN: VISIBILITY IN THE PHILIPPINE WATER SYSTEM



Users most visible in the formal system tend to have more secure access, while livelihoodbased and informal users remain weakly recognized despite high dependence on water.

ANNEX 8: BEYOND PERMITS: THE DUAL WATER REALITY OF THE PHILIPPINES (WATER TENURE MAP)



The Philippine water system clearly defines who is formally allowed to use water through permits, infrastructure, and sectoral allocation. However, this formal system does not fully capture how water is accessed and experienced in practice. Many users, including small-scale and livelihood-dependent groups, remain weakly recognized despite high dependence on water. A water tenure lens reveals the gap between formal allocation and lived reality, highlighting the need to understand not only who is permitted to use water, but who is affected by its governance.

ANNEX 9: LAGUNA DE BAY WATER TENURE MAP: USERS, CLAIMS, AND INTERACTIONS

(Outputs from the Focus Group Discussion/ Workshop with Global Water Partnership Philippines and the Society for the Conservation of Philippine Wetlands - 31 March 2026)



ANNEX 9: LAGUNA DE BAY WATER TENURE MAP: USERS, CLAIMS, AND INTERACTIONS



The focus group discussion was designed to ground the national- level assessment of water tenure in the lived realities of water users around Laguna de Bay. Building on the presentation of key findings, including the strength of the legal and permitting system, the concentration of allocation in large-scale sectors, and the gap between access and security, the session created space to move beyond formal structures and listen to how water is actually experienced.

As highlighted in the findings in this report, while water rights in the Philippines are clearly defined, water tenure remains unevenly captured, particularly for livelihood- based users such as fisherfolk. Within this context, the fisheries sector was identified as a critical gap in the assessment, even in earlier Water Tenure Monday sessions.

In the Philippine Water Code, the fisheries sector is visible beginning at the fish cage/ fish pen operator level, and commercial fishing. There is limited understanding of how fisherfolk (artisanal fishers) access water, how their use overlaps with other users, and how decisions affecting the lake shape their livelihoods. This relative invisibility within formal systems provided the central motivation for the session: to better understand the realities of access, use, and governance from the perspective of those most directly dependent on the lake.

ANNEX 9: LAGUNA DE BAY WATER TENURE MAP: USERS, CLAIMS, AND INTERACTIONS

The discussion therefore aimed not only to validate existing findings, but to surface insights that are often absent from formal data systems and permitting frameworks.

To guide the discussion, a set of questions was structured in three phases, moving from individual experience to shared pressures and finally to governance and decision-making. The first phase focused on access and daily use, asking participants to reflect on how they obtain access to the lake and how it is used in their day-to-day livelihoods or institutional roles. The second phase explored changes and pressures over time, including the impacts of fish pens, infrastructure projects, and other competing uses on access and livelihoods. The third phase examined governance and voice, focusing on how decisions are made, who participates in these processes, and whether fisherfolk and local communities feel they have sufficient opportunity to influence outcomes.

Fisherfolk from three municipalities—Cardona and Binangonan in Rizal, and Panguil in Laguna—participated in the discussion, alongside local government representatives from these areas, as well as representatives from LLDA and MWSS.

The discussion questions were as follows:

Part 1: Access and Daily Use

- From your experience, bilang mangingisda, LGU, ahensya, o miyembro ng komunidad, paano kayo nakakakuha ng access sa tubig ng lawa? (*From your experience, as a fisherfolk, LGU representative, agency staff, or community member, how do you obtain access to the water of the lake?*)
- May mga pahintulot o proseso ba na kailangan sundin? (*Are there permits or processes that you need to follow?*)

ANNEX 9: LAGUNA DE BAY WATER TENURE MAP: USERS, CLAIMS, AND INTERACTIONS

- *Fisherfolk are required to register with both BFAR and LLDA; however, each agency defines “fisherfolk” differently and uses registration for different purposes, resulting in fragmented recognition.*
- *LLDA clarified that small-scale fishing does not require a permit, as long as the fishing method is legally recognized under Philippine law.*
- *Permitting becomes necessary when operations scale (e.g., fish cages), with LLDA requiring prior registration as a fisherfolk before issuing permits—creating a threshold between informal and formal access.*
- *Fisherfolk reported restrictions imposed by some municipalities, particularly on the Metro Manila side, limiting access to those from other areas. While considered inconsistent with LLDA’s mandate, these restrictions persist in practice.*
- *Participants emphasized the need for a unified Laguna de Bay governance framework to enable freer movement across the lake and reduce conflicts arising from overlapping local regulations.*

- *Sa araw-araw, paano ninyo ginagamit ang lawa para sa inyong kabuhayan o tungkulin? (On a day-to-day basis, how do you use the lake for your livelihood or responsibilities?)*
- *Fishing remains the primary livelihood, but has become increasingly difficult due to multiple pressures, including reported activities by private concessionaires such as pipe washing in the lake and the discharge of chlorinated effluent for compliance with water quality standards, contributing to changes in salinity (“pagsuba ng alat”) and affecting fish habitats.*

Part 2: Changes and Pressures (Shared Reality)

- *Sa nakaraang mga taon, ano ang pinakamalaking pagbabago na napansin ninyo sa lawa? (In recent years, what are the biggest changes you have observed in the lake?)*
- *Paano naapektuhan ng mga pagbabagong ito, tulad ng fish pens, proyekto, o iba pang paggamit, ang inyong kabuhayan o trabaho? (How have these changes—such as fish pens, infrastructure projects, or other uses—affected your livelihood or work?)*
- *May mga lugar ba sa lawa na dati ninyong nagagamit pero ngayon ay hindi na? Ano ang nangyari? (Are there areas of the lake that you used to access but can no longer use? What happened?)*

ANNEX 9: LAGUNA DE BAY WATER TENURE MAP: USERS, CLAIMS, AND INTERACTIONS

- *The impacts of climate variability are increasingly evident. Delays in the Southwest monsoon (habagat) have altered lake dynamics, limiting the inflow of saltwater and resulting in more turbid conditions that are less suitable for fish growth.*
- *Fish kill events have become more frequent, which participants associate with rising water temperatures across the water column.*
- *Concerns were raised regarding planned developments, including wind energy projects in Talim Island, the Ahunan Dam, and three proposed floating solar farms.*
- *Participants highlighted that the locations of these developments overlap with existing fish breeding grounds and traditional boat pathways, affecting both ecological functions and fishing operations.*
- *According to LLDA, the floating solar projects are still undergoing environmental clearance processes with DENR, and consultations with fisherfolk are expected. However, participants expressed limited confidence in the consultation process.*
- *Fisherfolk also reported observable ecological changes linked to wastewater effluents, including shifts in tidal patterns and the conversion of approximately one hectare of lake area into wetland due to vegetation growth from nutrient overloading.*
- *Other features that have restricted fisherfolk access to the lake includes reclamation activities to expand hydropower facilities, and planned subdivisions and commercial centers.*

Part 3: Governance and Voice

- *Kapag may pagbabago o issue sa paggamit ng lawa, paano ito napag-uusapan? Sinosino ang kadalasang involved? (When there are changes or issues related to the use of the lake, how are these discussed? Who is usually involved?)*
- *Sa tingin ninyo, sapat ba ang pagkakataon ng mga mangangisda at komunidad na makapagbigay ng input sa mga desisyon? (In your view, do fisherfolk and local communities have sufficient opportunity to provide input into decisions?)*

ANNEX 9: LAGUNA DE BAY WATER TENURE MAP: USERS, CLAIMS, AND INTERACTIONS

- *While consultations for planned developments are documented on paper, fisherfolk questioned the legitimacy of these processes, noting that neither they nor their associations were directly engaged in the projects discussed during the focus group.*
- *Concerns were heightened by the scale of proposed developments, particularly floating solar projects currently being piloted, with plans to expand up to 20,000 hectares within the Laguna de Bay system.*
- *Fisherfolk also challenged prevailing narratives that Laguna de Bay is a “dead” lake, emphasizing that it remains ecologically productive with active fishing grounds. They noted that such narratives may unintentionally justify large-scale infrastructure development without sufficient consideration of existing livelihoods and biodiversity.*

ANNEX 10: INSTITUTIONAL MAP OF WATER GOVERNANCE IN THE PHILIPPINES

Outlined is a comprehensive map of the principal constitutional, statutory, regulatory, and sectoral institutions in the Philippines that shape water allocation, water quality, water services, watershed protection, fisheries, mining, tourism, health, climate, and local governance.

From an integrated water management perspective, the Philippines does not have one single “water agency” that covers all aspects of water access. Instead, it has a layered system. The Water Code and NWRB sit at the core of water rights and allocation; while supporting agencies enable other aspects of water allocation (e.g., DENR and EMB shape water quality, watersheds, and environmental compliance; DOH shapes drinking water and sanitation standards; LWUA, MWSS, water districts, LGUs, and private concessionaires shape service delivery; NIA and DA shape irrigation and agricultural water; BFAR and LGUs shape fisheries and municipal waters; LLDA plays a basin-specific role in Laguna de Bay; and several other agencies enter where water intersects with mining, tourism, protected areas, indigenous rights, climate adaptation, and disaster risk).

Institution / legal anchor	Description of water-related role	Lead / involved government agencies
1987 Constitution	The constitutional foundation of Philippine water governance. Article XII, Section 2 places waters among natural resources owned by the State. Other relevant provisions include the right to health, the right to a balanced and healthful ecology, participation in decision-making, and local autonomy, which together shape water governance beyond pure allocation.	Congress, President, all executive agencies, LGUs, courts

ANNEX 10: INSTITUTIONAL MAP OF WATER GOVERNANCE IN THE PHILIPPINES

Institution / legal anchor	Description of water-related role	Lead / involved government agencies
Presidential Decree No. 1067 – Water Code of the Philippines	Core law for ownership, appropriation, utilization, exploitation, development, conservation, and protection of water resources . It establishes that no person may appropriate water without a water right evidenced by a water permit, except where otherwise provided; it also anchors beneficial use, priority in appropriation, permit suspension/revocation, easements, and administrative control over water resources.	NWRB as lead allocator/regulator; coordinated roles for DENR, DPWH, NIA, DOE, LGUs, and others depending on use
NWRB / National Water Resources Board	The principal national body for water resources regulation and water-rights permitting . NWRB handles permits, amendments, transfers/leases of water rights, and water charges; under EO 123 it is attached to DENR, and under EO 860 its primary function is to control and regulate the utilization, exploitation, development, conservation, and protection of water.	NWRB, DENR, deputized agencies and agents

ANNEX 10: INSTITUTIONAL MAP OF WATER GOVERNANCE IN THE PHILIPPINES

Institution / legal anchor	Description of water-related role	Lead / involved government agencies
Executive Order No. 123 (2002)	Reorganized DENR and ensured that the NWRB Secretariat is managed effectively under DENR, reinforcing the institutional link between water resource regulation and the environment department.	DENR, NWRB
Executive Order No. 22 (2023) – Water Resources Management Office (WRMO)	Created the Water Resources Management Office under DENR to implement Integrated Water Resources Management and prepare an integrated water resources master plan, coordinating across sectoral plans and supporting the longer-term move toward a more coherent apex water institution.	DENR-WRMO, NWRB, sector agencies, NEDA and other coordinating bodies
Republic Act No. 9275 – Philippine Clean Water Act of 2004	The principal law on water quality management . It provides for water quality management areas, wastewater discharge regulation, sewerage and septage management obligations, monitoring, enforcement, and penalties for prohibited discharges. It is the legal backbone for pollution control affecting rivers, lakes, groundwater, brackish waters, and marine waters.	DENR and EMB as lead environmental regulators; LGUs, MWSS, LWUA/water districts, DPWH, industries, and water service providers are all involved in implementation

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Institution / legal anchor	Description of water-related role	Lead / involved government agencies
Environmental Management Bureau (EMB) / DENR	EMB is the key implementing bureau for water quality regulation, discharge permits, ambient monitoring, and pollution control under the Clean Water Act, working through DENR's regional structures and enforcement mechanisms. The EMB Region XII page you shared is consistent with this role.	DENR-EMB, regional EMB offices, Pollution Adjudication Board, LGUs
Pollution Adjudication Board (PAB)	Handles pollution cases and enforcement under environmental laws, including matters touching water pollution. Supreme Court discussion confirms PAB's recommendatory role regarding fines under the Clean Water Act, with final punitive authority remaining with the DENR Secretary.	PAB, DENR Secretary, EMB
Presidential Decree No. 856 – Code on Sanitation of the Philippines	Main public health and sanitation law covering water supply sanitation, sanitary requirements, and public health dimensions of water and wastewater. It is part of the legal architecture behind drinking water safety and sanitation enforcement.	DOH as lead for health standards; LGUs for local sanitation functions; MWSS, water districts, service providers

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Institution / legal anchor	Description of water-related role	Lead / involved government agencies
Department of Health (DOH) / Philippine National Standards for Drinking Water	DOH sets and enforces drinking water quality standards , including the Philippine National Standards for Drinking Water. Current Metro Manila drinking water quality monitoring advisories show DOH's continuing oversight role, working with MWSS RO and concessionaires.	DOH, regional health offices, MWSS-RO, water concessionaires, LGUs
Republic Act No. 6234 – MWSS Charter	Creates the Metropolitan Waterworks and Sewerage System to supervise and control waterworks and sewerage systems in Metro Manila, Rizal, and some adjoining areas. MWSS remains central to bulk water, sewerage, and concession regulation in its service area.	MWSS, MWSS Regulatory Office, Manila Water, Maynilad, DOH, DENR, LGUs
Republic Act No. 8041 – National Water Crisis Act of 1995	Emergency-era reform law that authorized the President to adopt urgent measures to address the water crisis, including institutional reorganization and private-sector participation measures. It strongly influenced later restructuring of MWSS and LWUA and broader sector financing reforms.	Office of the President, MWSS, LWUA, relevant line agencies

ANNEX 10: INSTITUTIONAL MAP OF WATER GOVERNANCE IN THE PHILIPPINES

Institution / legal anchor	Description of water-related role	Lead / involved government agencies
Presidential Decree No. 198 – Provincial Water Utilities Act / LWUA	Establishes the Local Water Utilities Administration and water district framework, shaping local water service delivery outside MWSS service areas. LWUA sets standards, financing, and technical oversight for local water districts.	LWUA, water districts, LGUs, water service providers
EO 279 (2004) and water-sector financing reforms	EO 279 instituted reforms in the financing policies for the water supply and sewerage sector and rationalized support to water service providers, reinforcing financing and viability issues as part of water governance.	LWUA, MWSS, DBM, DOF, NEDA, service providers
Local Government Code of 1991 – RA 7160	Gives LGUs broad general welfare, environmental management, health, sanitation, local planning, and service delivery powers , which makes them central to local water supply, sanitation, watershed-related ordinances, local fisheries, and community-level enforcement.	Provinces, cities, municipalities, barangays; local health offices; local engineering; local environment and natural resources offices

ANNEX 10: INSTITUTIONAL MAP OF WATER GOVERNANCE IN THE PHILIPPINES

Institution / legal anchor	Description of water-related role	Lead / involved government agencies
Republic Act No. 3601 / NIA and related amendments (e.g., PD 552, PD 1702)	Creates and empowers the National Irrigation Administration to develop, operate, and maintain irrigation systems and collect irrigation fees. NIA is central wherever water allocation intersects with national irrigation systems, farmer associations, reservoirs, and irrigation infrastructure.	NIA, DA, irrigators' associations, LGUs, NWRB
Department of Agriculture (DA) / Bureau of Soils and Water Management (BSWM)	DA and BSWM handle agricultural water productivity, soil and water conservation, agricultural water management, and planning support for irrigation and water efficiency. Their role is more operational and planning-oriented than rights-allocation oriented, but they are important in agricultural water demand.	DA, BSWM, NIA, LGUs, farmers' groups
Republic Act No. 8550, as amended – Philippine Fisheries Code	Governs fisheries and municipal waters. It provides that fishery-related activities in municipal waters are for municipal fisherfolk and their organizations , while also regulating commercial fishing and aquaculture. This is highly relevant where fisheries, aquaculture, and lake/ river/ coastal water use intersect.	BFAR, DA, LGUs, FARMCs, municipal/city governments, fisherfolk organizations

ANNEX 10: INSTITUTIONAL MAP OF WATER GOVERNANCE IN THE PHILIPPINES

Institution / legal anchor	Description of water-related role	Lead / involved government agencies
Laguna Lake Development Authority – RA 4850 and subsequent amendments	A basin-specific authority for the Laguna de Bay region , with powers over planning, environmental management, clearances, and lake-region regulation. Supreme Court jurisprudence recognizes LLDA’s special role in the Laguna Lake region, including project clearance and lake-related environmental management.	LLDA, DENR, LGUs around Laguna de Bay, BFAR, utilities, industries, local communities
Presidential Decree No. 705 – Revised Forestry Code	Relevant because watersheds, forest lands, and watershed reservations directly affect water supply, recharge, sedimentation, and basin health. Forestry law and watershed proclamations remain central to source protection.	DENR-Forest Management Bureau, LGUs, protected area bodies, watershed managers
NIPAS / ENIPAS – RA 7586 and RA 11038	Protected areas law matters where rivers, lakes, wetlands, aquifers, mangroves, and watershed zones fall within protected areas. It adds conservation governance, protected area management boards, and limits on land/water uses within declared areas.	DENR-BMB, Protected Area Management Boards (PAMB), LGUs, indigenous communities, relevant resource agencies

ANNEX 10: INSTITUTIONAL MAP OF WATER GOVERNANCE IN THE PHILIPPINES

Institution / legal anchor	Description of water-related role	Lead / involved government agencies
Republic Act No. 9003 – Ecological Solid Waste Management Act	Though not a “water law” strictly speaking, it is directly relevant because improper solid waste management affects rivers, esteros, lakes, coastal waters, and groundwater . It creates institutional duties that indirectly but materially affect water quality.	LGUs as primary implementers, DENR/NSWMC, barangays, waste operators
Republic Act No. 7942 – Philippine Mining Act of 1995	Governs mining and is highly relevant to water use, tailings, mine drainage, watershed impacts, and conflicts over water quality and quantity . Mining also triggers environmental compliance, indigenous rights, and watershed concerns.	DENR-MGB, DENR-EMB, NCIP where ancestral domains are involved, LGUs, mining firms
Department of Energy / hydropower regulation	DOE enters water governance where water is used for power generation, including hydropower projects and permits linked to energy development. Under NWRB rules, hydropower-related water permit applications require DOE-related endorsements or initial permits.	DOE, NWRB, NPC, PSALM or dam operators where relevant, DENR

ANNEX 10: INSTITUTIONAL MAP OF WATER GOVERNANCE IN THE PHILIPPINES

Institution / legal anchor	Description of water-related role	Lead / involved government agencies
National Power Corporation and multi-purpose dams	Water infrastructure like Angat and other dams involve power generation, irrigation, flood control, and municipal water supply all at once. The Supreme Court discussion of Angat Dam highlights this multi-functional water governance reality.	NPC, NIA, MWSS, NWRB, DPWH, DOE
Department of Public Works and Highways (DPWH)	DPWH is relevant for flood control, drainage, sewerage, septage infrastructure, and public works affecting waterways . Jurisprudence and executive issuances confirm its role in flood control and drainage systems, especially in metropolitan areas and large infrastructure contexts. They are also now involved in rainwater harvesting infrastructure.	DPWH, MMDA in Metro Manila, LGUs, DENR
Tourism Act of 2009 – RA 9593 / DOT / TIEZA	Tourism becomes a water governance issue when resorts, tourism enterprise zones, transport facilities, water recreation, sanitation systems, and coastal or lakeside developments affect water demand and effluent management. The law itself is not a water law, but tourism facilities are water-intensive and sanitation-sensitive.	Department of Tourism, TIEZA, LGUs, DENR, DOH, utilities

ANNEX 10: INSTITUTIONAL MAP OF WATER GOVERNANCE IN THE PHILIPPINES

Institution / legal anchor	Description of water-related role	Lead / involved government agencies
IPRA – RA 8371 / National Commission on Indigenous Peoples (NCIP)	IPRA is relevant where water sources, rivers, watersheds, and natural resources fall within or affect ancestral domains. It protects indigenous rights and requires consent in certain natural resource decisions, including mining-related ones.	NCIP, DENR, NWRB, MGB, LGUs, indigenous governing bodies
Magna Carta of Women – RA 9710	Relevant because it expressly recognizes the rights of marginalized sectors, including rights relating to the use and management of water resources within communities or ancestral domains, and supports a gender-sensitive reading of water governance.	Philippine Commission on Women, all implementing agencies, LGUs, sector agencies
Climate Change Act – RA 9729 and DRRM Act – RA 10121	These laws matter because climate adaptation, flood risk, drought, and resilience planning increasingly shape water availability, infrastructure, allocation priorities, and local planning. They do not replace water law, but they are now embedded in water governance.	Climate Change Commission, NDRRMC, PAGASA, DOST, DENR, DPWH, LGUs

ANNEX 10: INSTITUTIONAL MAP OF WATER GOVERNANCE IN THE PHILIPPINES

Institution / legal anchor	Description of water-related role	Lead / involved government agencies
PAGASA / NAMRIA / scientific agencies	Although not always foregrounded in “water law,” these agencies shape water governance through hydrometeorological data, mapping, forecasting, flood and drought analysis, and scientific baselines that support allocation, disaster risk management, and basin planning. EO 22’s WRMO design also assumes such cross-agency coordination.	PAGASA, NAMRIA, DOST, DENR-WRMO, NWRB, DPWH
DILG and local utility governance	DILG matters where local service delivery, sanitation, local compliance, and coordination with LGUs are concerned. The rights based governance materials and water-sector reform proposals also position DILG as relevant to local WatSan governance and communityfacing delivery.	DILG, LGUs, barangays, water service providers
Private concessionaires, water districts, cooperatives, barangay/rural water associations	These entities are not “government agencies,” but they are essential institutional actors in Philippine water governance because they mediate actual access, billing, service standards, wastewater obligations, and local service experience. Their mandates derive from statutes, franchises, concession agreements, and local utility laws.	MWSS concessionaires (e.g, Maynilad Water Services, Manila Water, PrimeWater), water districts under LWUA, LGU-run utilities, BWSAs/RWSAs, cooperatives



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