MAPPING OF GOOD PRACTICES IN WASH IN BRAZIL













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ACRONYMS

ABC Agência Brasileira de Cooperação (Brazilian Cooperation Agency)

AIS Agente Indígena de Saúde (Indigenous Health Agents)

AISAN Agente Indígena de Saneamento (Indigenous Sanitation Agent)

ANA Agência Nacional das Águas e do Saneamento (National Agency for Water and Basic Sanitation)

Cadúnico Cadastro Único (Single Registry)

CDC Convenção sobre os Direitos da Criança (Convention on the Rights of the Child)

CF 88 Constituição da República Federativa do Brasil de 1988 (Brazilian Federal Constitution of 1988)

CONAMA Conselho Nacional de Meio Ambiente (National Environment Council)

ConCidades Council of Cities

Codevasf Companhia de Desenvolvimento dos Vales do São Francisco e do Parnaíba

CNRH Conselho Nacional de Recursos Hídricos (National Association of Municipal Environment Agencies)

CWIS Citywide Inclusive Sanitation

DEAMB Departamento de Determinantes Ambientais da Saúde Indígena (Department of Environmental

Determinants of Indigenous Health)

DGR Departamento de Gestão de Resíduos (Waste Management Department)

DMQAI Diretrizes para Monitoramento da Qualidade da Água para o Consumo Humano em Aldeias Indígenas

(Guidelines for Monitoring Drinking Water Quality in Indigenous communities)

DMUR Departamento de Meio Ambiente Urbano (Department of Urban Environment)

DPPO Domicílios Particulares Permanentes Ocupados (Occupied Permanent Private Households)

DQA Departamento de Qualidade Ambiental (Environmental Quality Department)

DRSAI Doenças Relacionadas ao Saneamento Ambiental Inadequado (Diseases Related to Inadequate

Environmental Sanitation)

DSEI Distrito Sanitário Especial Indígena (Special Indigenous Health Districts)

ECA Estatuto da Criança e do Adolescente (Child and Adolescent Statute)

EMSI Equipes Multidisciplinares de Saúde Indígena (Multidisciplinary Indigenous Health Teams)

ESF Estratégia Saúde da Família (Family Health Strategy)

ETA Estação de Tratamento de Água (Water Treatment Unit)

FUNASA Fundação Nacional de Saúde (National Health Foundation)

GT Grupo de Trabalho (Working Group)

IBAMA Instituto Brasileiro de Meio Ambiente e dos Recursos Naturais Renováveis (Institute of Environment and

Renewable Natural Resources)

IPEA Instituto de Pesquisa Econômica Aplicada (Institute for Applied Economic Research)

LNSB Lei Nacional de Saneamento Básico (National Law on Basic Sanitation)

MCid Ministério das Cidades (Ministry of Cities)

MDS Ministério do Desenvolvimento e Assistência Social, Família e Combate à Fome (Ministry of Social

Development and Assistance, Family and Fight against Hunger)

MIDR Ministério da Integração e do Desenvolvimento Regional (Ministry of Integration and Regional Development)

MMA Ministério do Meio Ambiente e Mudança do Clima (Ministry of Environment and Climate Change)

MoH Ministry of Health

MSD Melhorias Sanitárias Domiciliares (Home Sanitation Improvements)
MRE Ministério das Relações Exteriores (Ministry of Foreign Affairs)

ODM Objetivos de Desenvolvimento do Milênio (Millennium Development Goals)
ODS Objetivos de Desenvolvimento Sustentável (Sustainable Development Goals)

OMS Organização Mundial da Saúde (World Health Organization)

ONU Organização das Nações Unidas (United Nations)

P1MC Programa Um Milhão de Cisternas (One Million Cisterns Program)
P1+2 Programa Uma Terra e Duas Águas (One Land and Two Water Program)
PAC Programa de Aceleração do Crescimento (Growth Acceleration Program)
PDDE Programa Dinheiro Direto na Escola (Direct Money at School Program)
PLANARES Plano Nacional de Resíduos Sólidos (National Plan for Solid Waste)

PlanHab Plano Nacional de Habitação (National Housing Plan)

PLANSAB Plano Nacional de Saneamento Básico (National Basic Sanitation Plan)

PMSB Plano Municipal de Saneamento Básico (Municipal Basic Sanitation Plan)

PNASPI Política Nacional de Atenção à Saúde dos Povos Indígenas (National Policy on Health Care for Indigenous

Peoples)

PNMA Política Nacional do Meio Ambiente (National Environmental Policy)

PNPS Política Nacional de Promoção à Saúde (National Health Promotion Policy)

PNS Plano Nacional de Saúde (National Health Plan)

PNRS Política Nacional de Resíduos Sólidos (National Solid Waste Policy)

PNSR Programa Nacional de Saneamento Rural (National Program on Rural Sanitation PNVS Política Nacional de Vigilância em Saúde (National Health Surveillance Policy)

PPA Plano Plurianual (Multi-annual Plan)

PPI-VS Programação Pactuada e Integrada de Vigilância em Saúde (Integrated Agreed Programming on Health

Surveillance)

ProteGEEr Proteção do Clima na Gestão dos Resíduos Sólidos Urbanos (Climate Protection in Urban Solid Waste

Management)

SAA Sistemas de Abastecimento de Água (Water Supply Systems)
SAC Soluções Alternativas Coletivas (Collective Alternative Solutions)
SAI Soluções Alternativas Individuais (Individual Alternative Solutions)
SESAI Secretaria de Saúde Indígena (Indigenous Health Secretariat)

SINGREH Sistema Nacional de Gerenciamento de Recursos Hídricos (National Water Resources Management System)
SINIR Sistema Nacional de Informações sobre a Gestão dos Resíduos Sólidos (National Solid Waste Management

Information System)

SISAGUA Sistema de Informação de Vigilância da Qualidade da Água para Consumo Humano (Information System for

Drinking Water Quality Monitoring)

SISAR Sistema Integrado de Saneamento Rural (Integrated Rural Sanitation System)

Sislab Sistema Nacional de Laboratórios de Saúde Pública (Brazilian System of Public Health Laboratories)

SISNAMA Sistema Nacional do Meio Ambiente (National Environment System)
SNH Secretaria Nacional de Habitação (National Housing Secretariat)

SNHIS Sistema Nacional de Habitação de Interesse Social (National Social Interest Housing System)

SNIRH Sistema Nacional de Informações sobre Recursos Hídricos (National Water Resources Information System)

SNIS Sistema Nacional de Informações sobre Saneamento (National Sanitation Information System)

SINISA Sistema Nacional de Informações em Saneamento Básico (National Basic Sanitation Information System)

SNP Secretaria Nacional de Periferias (National Peripheries Secretariat)

SNSA Secretaria Nacional de Saneamento Ambiental (National Secretariat of Environmental Sanitation)

SNSH Secretaria Nacional de Segurança Hídrica (National Water Security Secretariat)

SSC South-South Cooperation

SUS Sistema Único da Saúde (National Unified Health System)

SVSA Secretaria de Vigilância em Saúde e Ambiente (Secretariat for Health and Environmental Surveillance)

SWA Sanitation and Water for All

TMI Taxa de Mortalidade Infantil (Infant Mortality Rate)

TSSC Trilateral South-South Cooperation

UCCQA Unidade de Coleta para o Controle da Qualidade da Água para consumo humano (Collection Unit for the

Control of Drinking Water)

UMCQA Unidade Móvel para o Controle da Qualidade da Água para consumo humano (Mobile Unit for the Quality

Control of Drinking Water)

UMTA Unidade Móvel de Tratamento de Água (Mobile Water Treatment Unit)

UNICEF United Nations Children's Fund

URSS União das Repúblicas Socialistas Soviéticas (Union of Soviet Socialist Republics)

VIGIAGUA Programa Nacional da Vigilância da Qualidade da Água para Consumo Humano (National Program for

Drinking Water Quality Monitoring)

WASH Water, Sanitation and Hygiene

SUMMARY

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Introduction

Since January 2014, the Brazilian Cooperation Agency of the Ministry of Foreign Affairs (ABC/MRE, acronyms in Portuguese) and the United Nations Children's Fund (UNICEF) have implemented the Cooperation Agreement between the Brazilian government and UNICEF to promote Horizontal South-South Cooperation, to share successful Brazilian experiences with developing countries. This Cooperation Agreement underlies the Brazil-UNICEF Partnership Program for Trilateral South-South Cooperation (TSSC).

Within the scope of this Program, UNICEF and the ABC have been developing an evidence generation agenda that seeks to generate knowledge about good practices in Brazil, considering public policies, legal frameworks and programs at the federal and subnational levels. In this context, this report was developed with the objective of mapping out good practices in Brazil within the area of basic sanitation.

Basic sanitation is in Brazil addressed in an integrated manner and organized around four strategic axes: water; sewage; urban cleaning and solid waste management; rainwater drainage. The definition of basic sanitation in Brazil is closely aligned with the definition of WASH (Water, Sanitation and Hygiene), a concept used by the United Nations System and by many other actors working in these thematic areas at the international level, and which also aligns with the definition of Sustainable Development Goal number 6 (SDG 6) that seeks to ensure the availability and sustainable management of drinking water and sanitation for all.

Although many challenges remain within the country, Brazil has in recent decades advanced on many fronts to improve the quality of basic sanitation services for its population, while increasing its coverage. Brazilian Federal Law 11.445, of January 05, 2007, which set out the national guidelines for basic sanitation, and the subsequent Law 14.026, of July 15, 2020 (National Basic Sanitation Law (LNSB, acronym in Portuguese)), which updated legal provisions of the sector in the country, serve as fundamental milestones for these advances, which in turn inform the National Basic Sanitation Plan (PLANSAB, acronym in Portuguese), among other instruments that serve to implement the federal policy.

Among the experiences and available knowhow of Brazil in the sanitation sector, one could highlight the implementation of tools for efficiency and effectiveness in service provision; legal stability to attract private capital to the sector; the definition of methodologies that consider technical criteria and efficiency; as well as the improvement in the quality-of-service provision while promoting social inclusion.

Based on these advances in Brazil, this document presents a systematized map-out of good practices in Brazil that can serve to inform demands for TSSC and knowledge exchange with Brazil.

The first part of the document introduces the reader to the global and national context regarding WASH. Chapter 1 addresses global efforts to promote access to water and sanitation as a fundamental human right that affects the lives of billions of people around the world. The lack of access to safe water, adequate sanitation facilities and basic hygiene practices has significant implications for the health, education, and well-being of the most vulnerable communities. Global initiatives, such as the United Nations Sustainable Development Goals (SDGs), in particular Goal 6 - "Clean water and sanitation", and the "Sanitation and Water for All" Movement¹, stand out as driving forces in promoting the WASH agenda around the world. Chapter 2 provides an overview of the legal frameworks in Brazil, before and after the current national constitution, as well as the main institutions responsible for the sector.

The second part of this document presents initiatives in Brazil that have contributed to improve life quality of the population and that have the potential to be adapted to other realities. The good practices highlighted in this document not only reflect Brazil's dedication to the WASH agenda. They also offer valuable lessons for other communities that face similar challenges.

The material presented here was developed in response to concrete demands for cooperation received by the ABC and UNICEF and the growing interest from international partners for more information on the way in which Brazil organizes and implements its basic sanitation services, programs and policies. In addition, the project also seeks to support national and international partners of TSSC in diversifying the set of Brazilian initiatives that may be of interest.

¹ Sanitation and Water for All - SWA (https://www.sanitationandwaterforall.org/).

Part 1

1. Access to water and sanitation: a universal right

ne of the main causes of infant mortality, at the global level, is due to illness caused by unhealthy conditions resulting from the absence of basic sanitation in homes and territories (urban and rural), causing about 10% of all child deaths in early childhood² (BRAZIL, 2020).

It is important to highlight that the supply of drinking water, the collection and treatment of effluents, urban cleaning and the management of solid waste and rainwater in urban and rural areas directly affect the way of life of individuals, and therefore, in contexts similar to Brazil, the provision of WASH services by the State is a determining factor for ensuring the healthy lives of children³, young people, and their families.

Lack of sanitation infrastructures and misinformation about and among populations in situations of poverty and extreme poverty favor the spread of diarrheal diseases caused by pathogens (by fecal and oral transmission) causing the onset of diseases and even death.

It is worth noting that in 2010 the UN General Assembly instituted access to "clean and safe water and sanitation as a human right" (UN, 2010). This is a fundamental right to ensure the well-being of children and their families, contributing to improved eating, hygiene and sanitation habits and reduced transmission of diseases related to inadequate environmental sanitation (DRSAI, acronym in Portuguese) which in turn help expanding the access and permanence of children and adolescents in educational institutions and reducing inequalities.

Alongside this, the UN 2030 Agenda, launched in 2015 as an expansion of the previous agenda of the Millennium Development Goals (MDG), expanded the commitments of UN member states with the 17 Sustainable Development Goals (SDGs), which are aligned with the objectives of the Convention on the Rights of the Child (CRC). In line with these overarching frameworks, the global UNICEF WASH strategy is organized around the following lines of action:

² According to article 2 of Law No. 13.257, of March 8, 2016, early childhood is considered to be the period that covers the first 6 (six) full years or 72 (seventy-two) months of the child's life. (BRAZIL, 2016).

³ Brazil's 1988 Federal Constitution and Child and Adolescent Statute use the term 'child' for persons up to the age of 12 years, and 'adolescent' for persons aged 13 to 17 years old. The English version of this document applies the terms 'child' and 'children' for human beings below the age of eighteen years old, in accordance with language used in the UN Convention on the Rights of the Child.

Figure 1: UNICEF Global Strategy in WASH (2016 -2030)

Keep learning and adapting

Water

Safety, sustainability and access.

Sanitation

Social norms, access and sustainability.

Hygiene

More focus, supporting others to promote behavior change.

Humanitarian

Service delivery, breaking down silos, national coordination.

Source: (Unicef, 2016).

Do better

Facilitating environment

Strengthen capacity and systems to enable all sectors to contribute effectively.

Accountability

Support transparency, monitoring and participation of people as pillars of good governance.

Working across sectors

WASH (water, sanitation and hygiene) as a contribution to education, health, nutrition and other outcomes, including addressing gender and disability.

Leverage resources for WASH

Public and private funding for the expansion and sustainability of programs.

Move in new directions

Climate resilient WASH
 Work plan based on risk
 analysis.

Urban

Reach the most vulnerable people, wherever they are.

Private sector

Goods and services, as well as a broader contribution.

Another important tool is Citywide Inclusive Sanitation (CWIS), a concept developed by the Gates Foundation, which aims to enhance existing public policies that promote sanitation (at the macro level), so as to strengthen and improve these to achieve expected results in line with the SDGs.



Figure 2: CWIS strategy framework

CWIS SERVICE STRUCTURE					
MAIN CWIS RESULTS	EQUITY The services reflect fairness in the distribution and prioritization of service quality, prices, and the allocation of public funding/subsidies.	SAFETY The services protect clients, workers and communities from health and safety risks, ensuring that everyone has access to safe sanitation.	SUSTAINABILITY The services are delivered reliably and continuously, based on the effective management of human, financial, and natural resources.		
MAIN FUNCTIONS OF CWIS	RESPONSIBILITY Authorities execute a clear public mandate to ensure safe, equitable, and sustainable sanitation for all.	ACCOUNTABILITY The performance of authorities in relation to their mandate is monitored and managed with data, transparency and incentives.	RESOURCE PLANNING AND MANAGEMENT Human, financial and natural resources and assets are managed effectively to support the execution of the mandate over time and space.		

Source: www.cwiscities.com.

Faced with the challenge of achieving the SDGs of the 2030 Agenda, the approach proposed by the CWIS includes the need to combine the efforts of public managers in a responsible manner, with transparency, planning and management, to maximize the reach of WASH sector initiatives effectively, aiming at more equitable, safe, healthy, and sustainable results for the population.

Initiatives that cover the variables of basic sanitation have a comprehensive impact on the lives of children and their families. Basic sanitation provides a series of aspects favorable to the well-being and health of individuals, being linked to social and economic environmental variables. Children and young people suffer from diarrheal diseases and their impacts because of the lack of access to water, sanitation and hygiene. Furthermore, the lack of this access reflects negatively on education and aggravate situations of food insecurity.

With regards to the SDGs, according to the UNICEF WASH strategy and CWIS guidelines, the provision of basic sanitation is associated with the following objectives: SDG 1 – Eradication of poverty; SDG 3 – Health and well-being; SDG 4 – Quality education; SDG 6 – Clean water and sanitation; and SDG 11 – Sustainable cities and communities. However, the relationship with SDGs 5 on gender equality is also highly relevant, considering that by ensuring water and sanitation to guarantee hygiene for women and girls one can decrease exposure to risks, including the risk of sexual violence, avoiding the need to travel long distances to remote places to collect water, while also reducing school dropout by guaranteeing the necessary conditions for the provision of menstrual hygiene in school environments. In addition, the relationship with SDG 17 on partnerships for the Goals should be pointed out, since well implemented practices in WASH can be shared and replicated in national and international cooperation

contexts. SDG 13 on Climate action is also of great importance for the WASH sector, considering that extreme weather events, such as floods and droughts, affect infrastructure and the provision of water and sanitation services, especially for populations in situations of social vulnerability. In this context, the climate emergency should be considered as a determining factor for the strategic planning of the water and sanitation sector, with a view to universalizing services and reducing social inequalities.

Figure 3: Interrelations of the WASH sector with the SDGs





2. The Brazilian context

To contextualize the scenario of WASH-related public policies in Brazil, it is essential to understand how policies have developed in recent decades, as well as the internal and external factors that directly influence national governance strategies.

To understand the historical context, one needs to look closely at the achievements made in Brazil after the promulgation of the Federal Constitution of 1988 (CF/88), which marked the beginning of the democratic period in the country. However, it is helpful to also briefly point out certain milestones prior to CF/88 that directly influenced the development of the WASH sector in Brazil.

2.1 Policies and other factors that influenced the WASH sector in Brazil pre CF/88

With regards to water quality, the World Health Organization (WHO) launched the first water potability standards in the 1950s. The 1st edition of the 'International Standards for Drinking-Water', was presented in 1958. These standards guide countries worldwide. In Brazil, the Ministry of Health instituted the first national water potability ordinance in 1977. From then on, the procedures for controlling and monitoring the quality and potability standard of drinking water have been periodically reviewed, always with the aim to guide laboratories responsible for water supply and the health sector, in their respective management spheres, for the development of actions to guarantee quality drinking water (BAROQUE; FORTS; KLIGERMAN, 2019).

Also in the 1970s, a strong debate on public health policies began in Brazil with the Health Reform movement, also influenced by the International Alma-Ata Conference, held in 1978 in the USSR (Union of Soviet Socialist Republics), including the perspective on health as a human right and considering the need to observe social determinants for the construction of policies in a more democratic manner.

In 1986, the 8th Brazilian Health Conference discussed the need for the Brazilian State to make commitments to the scenario of public health policies in an integrated manner with the policies of other sectors – such as social, educational and basic sanitation – with the proposal of changing the Brazilian health system at the time, demarcating the importance of social participation and conferring rights such as: the adoption of health policies that effectively respond to the complexity of the socio-

sanitation profile of the Brazilian population; the promotion of hygienic and dignified housing; and the right of children to be accompanied at their appointments (BRAZIL, 1986).

Another relevant aspect to be discussed is the institution of the Brazilian Environmental Policy in 1981⁴, which, among other aspects, determined the establishment of the National Environment System (SISNAMA, acronym in Portuguese). It currently has a direct relationship with the WASH sector in Brazil, especially regarding solid waste management policies.

The Federal Constitution was drafted against this backdrop, considering many of the discussions that had already taken place in Brazilian society and in the international community, allowing for considerable progress in Brazilian public policies towards a more democratic and dignified state for its citizens.

2.2 Brazilian Federal Constitution as a driver for public policies in the WASH sector and attention to children and adolescents

The CF/88 is considered a driving force for the development of policies in the WASH sector. The CF/88 recognizes the human right to basic sanitation and the need to create a single health system integrated with the formulation and execution of sector-specific policies and actions, while determining that the federal government is responsible for establishing guidelines for urban development, including the promotion of housing and basic sanitation programs (BRAZIL, 1988).

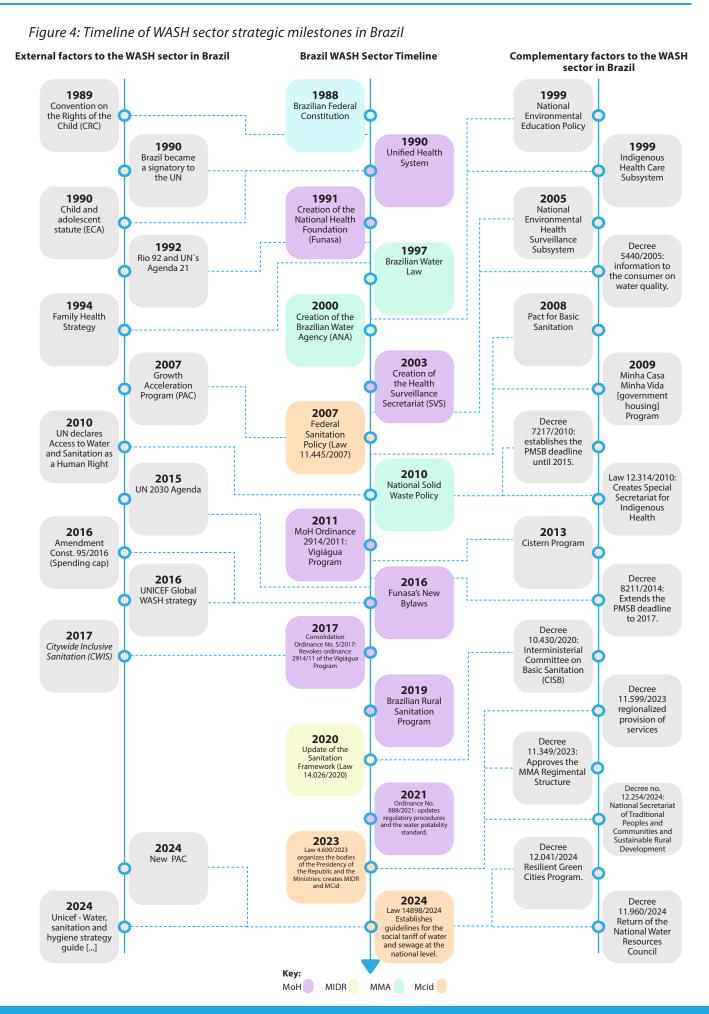
Similarly, the Constitution guarantees the protection of children and adolescents, especially the most vulnerable. It also establishes the State's responsibility to promote comprehensive health care programs for children, adolescents and youth and confers the need to provide care for maternal and child health.

The 1988 Constitution has been followed by a series of infra-legal policies, laws and regulations that allow for the regulation of the WASH sector and order the ways to ensure federal resources for the provision of basic sanitation, through programs, plans, and other governance strategies and/or regulatory instruments.

The following figure presents a timeline containing the main legal frameworks in the scenario of public policies on health, sanitation and child rights, influenced by factors external but complementary to the WASH sector, especially with regards to the State's duty to provide healthy and hygienic environments for children.⁵

⁴ Law No. 6.938, of August 31, 1981 – Provides for the Brazilian Environmental Policy, its purposes and mechanisms of formulation and application, and other measures.

⁵ Additional and more detailed information on each of the milestones listed in Figure 4 can be found in the second product of this mapping; the systematization of good practices.



2.3 Structure and competences of the federative entities responsible for the WASH sector in Brazil

The WASH sector has advanced significantly in Brazil since the first decade of the 21st century when there were financial incentives from the federal government to boost the country's development through the Growth Acceleration Program (PAC, acronym in Portuguese)⁶. At the same time, there was the institution of legislative frameworks that allowed the regulation of the basic sanitation sector, which guided the creation of normative instruments that organized the distribution of federal funds for states and municipalities to invest in basic sanitation infrastructure.

The government responsibilities for the WASH sector are distributed across several ministries (and secretariats), namely the Ministry of Cities (MCid, acronym in Portuguese), the Ministry of Integration and Regional Development (MIDR, acronym in Portuguese), the Ministry of Health (MoH) and the Ministry of Environment and Climate Change (MMA, acronym in Portuguese)⁷. These entities thus share legal, fiscal and economic responsibilities related to drinking water supply, sanitation, urban cleaning and solid waste management and drainage and urban rainwater management.

As shown in Figure 5, responsibilities are further distributed to specific entities linked to the above-mentioned ministries, such as: the National Agency for Water and Basic Sanitation (ANA, acronym in Portuguese) and the Companhia de Desenvolvimento dos Vales do São Francisco e do Parnaíba - Codevasf, both of which are linked to MIDR; the Brazilian Health Foundation (FUNASA, acronym in Portuguese) linked to the MoH; and the Brazilian Institute of Environment and Renewable Natural Resources (IBAMA, acronym in Portuguese), linked to the MMA. There are also Councils, which are deliberative bodies that allow the participation of representatives of the government and civil society, namely: the National Environment Council (CONAMA, acronym in Portuguese), linked to the MMA; the Council of Cities (ConCidades, acronym in Portuguese) and the National Council for Water Resources (CNRH, acronym in Portuguese), linked, respectively, to the MCid and MIDR.

Each of these institutions is composed of secretariats and departments that deal specifically with WASH-related issues, including legislation, management, planning and financing as well as technical matters such as qualification, training, implementation, and monitoring.

⁶ The federal government program called Growth Acceleration Program (PAC) was created by Decree No. 6.025/2007, intended to boost the development of cities, through partnerships between the government, state-owned companies and the private sector, making it possible to invest in actions to promote the modernization and expansion of infrastructure in the country (such as roads, railroads, ports and electricity) and improve the quality of life of citizens (sanitation, health and education). (BRAZIL, 2007)

In 2024, the federal government launched the New PAC program that allocates the total investment R\$ 1.7 trillion to 5 axes: Water for all; Sustainable and resilient cities; Education, Science and Technology; Social and Inclusive Infrastructure; and Health. (BRAZIL, 2024).

⁷ The nomenclature and structure of the Ministries presented corresponds to the management of the Presidency from 2023 until the moment of conclusion of this document (Oct/2024). There are other ministries that interface with the basic sanitation sector, such as the Ministry of Social Developent and Assistance, Family and Fight against Hunger (MDS, acronym in Portuguese), which is responsible for implementing the Cistern Program (Decree No. 8.038/2013 revoked by Decree No. 9606/2018) and the Social Tariff for Water and Sewage (Law No. 14888/2024).

Ministry of Cities Ministry of Integration and Regional Development

National Agency for Water and Basic Sanitation (ANA)

Companhia de Desemvolvimento dos Vales do São Francisco e do Parnaiba (Conclidade)

Routional Secretariat of Peripheries

National Secretariat of Housing

National Secretariat of Environmental Surveillance

National Secretariat of Indigenous Health

National Secretariat of Indigenous Health

National Secretariat of Traditional Secretariat of Indigenous Health

National Secretariat of Indigenous Health

Figure 5: Federal governmental structure of the WASH sector in Brazil

It is important to point out that due to the complexity of the organizational structure of the Brazilian federal government, added to the changes that may occur due to given party-political context, the agendas related to the WASH sector were distributed across several sectors of the federal public administration.

At the subnational level, state and municipal departments play a fundamental role in the implementation and management of public sanitation policies involving actions aimed at ensuring access to drinking water, sanitation services, solid waste management and rainwater drainage management. These departments are responsible for planning, coordinating, and executing actions aimed at ensuring universal access and quality of basic sanitation services, promoting public health and environmental protection.

At the municipal level, the departments often develop specific programs for the collection and treatment of sewage, as well as initiatives to improve urban drainage infrastructure, with the objective of preventing and reducing flooding and ensuring stability of inhabited territories. The state secretariats, on the other hand, act in the regulation and supervision of sanitation services, in addition to coordinating efforts between municipalities to strengthen the integrated management of water resources and the environmentally adequate disposal of solid waste.

Integration between these spheres of government is crucial, as it allows for exchange of information, mobilization of resources and implementation of solutions that meet the health needs of citizens residing in the territories.

The following Figures (6 to 9) are presented to synthesize the WASH sector in accordance with basic sanitation (in the Brazilian context) and the federal entities involved in each subsector. One can notice the decentralization of the sector and understand some of its complexity. The understanding of this scenario and the way in which responsibilities are distributed helps creating a logical path for the mapping exercise, which in turn serves to guide the data collection process in a clear and cohesive manner.

Figure 6: Federal agencies responsible for the Water agenda

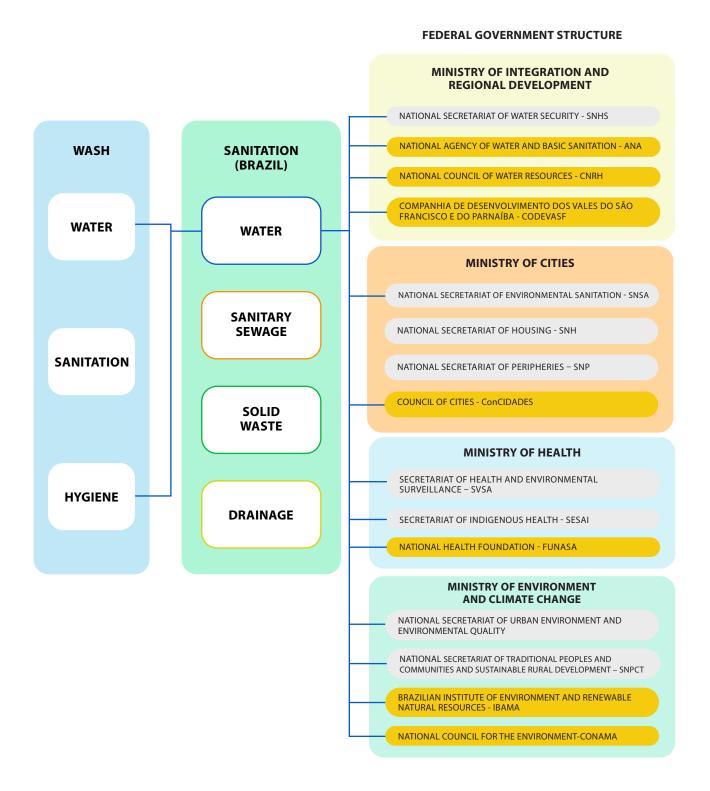


Figure 7: Federal agencies responsible for the Sanitation agenda

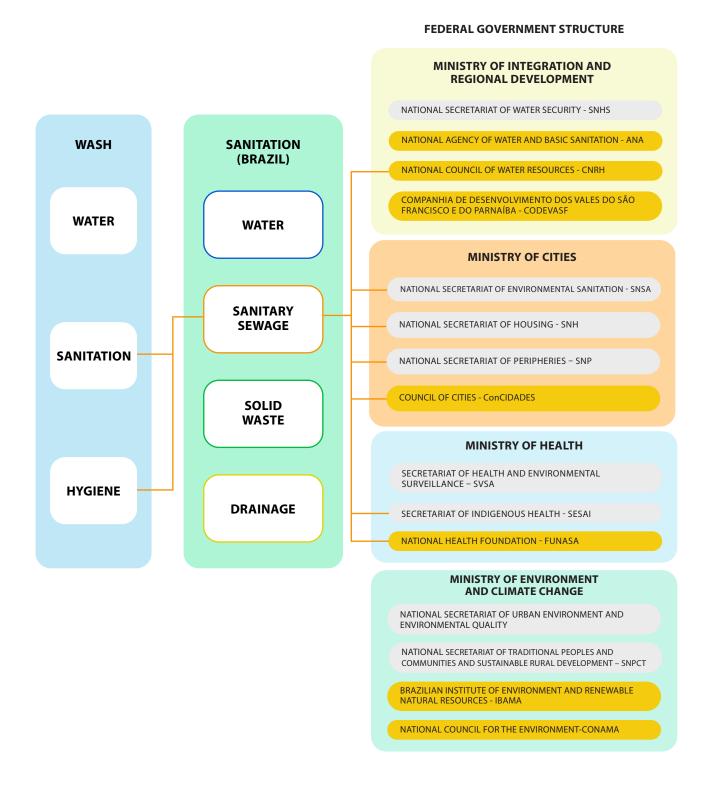


Figure 8: Federal agencies responsible for the Solid Waste agenda

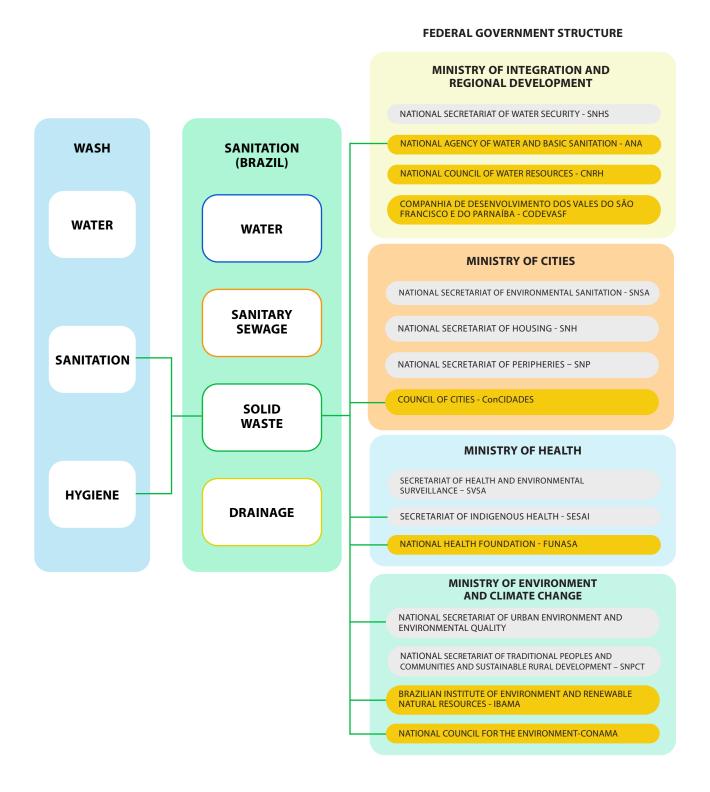
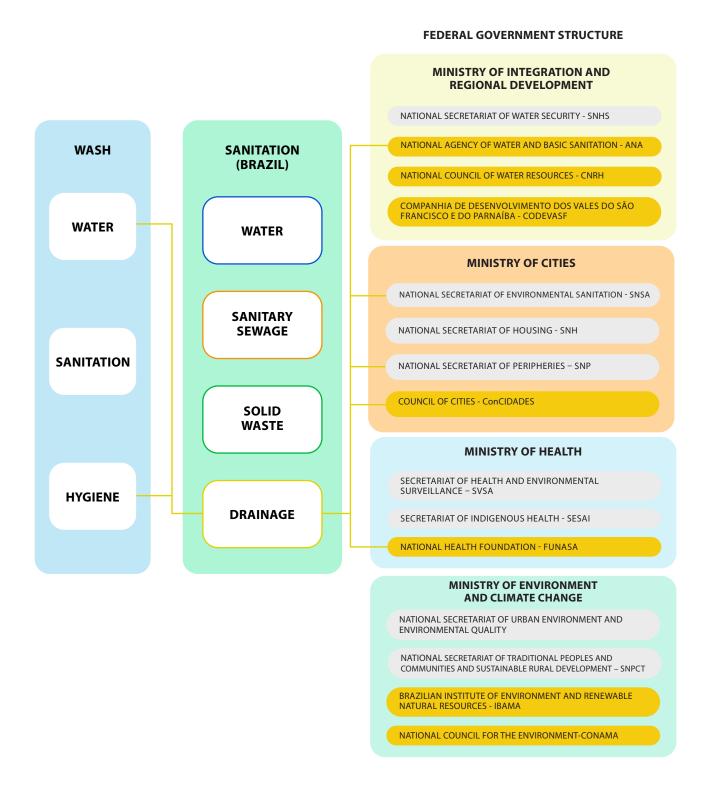


Figure 9: Federal agencies responsible for the Drainage agenda



As the figures above illustrate, responsibilities and competencies are shared between the four main ministries and their respective secretariats and entities. The following is a brief description of these responsibilities and competencies.

Ministry of Health

Unified Health System

Founded by article 5 of CF/88, the Unified Health System (SUS, acronym in Portuguese) of Brazil has its operation established by Law No. 8080/1990. Among other competencies, the SUS is responsible for participating in the construction of basic sanitation policies and for implementing part of the corresponding actions. This System has a tripartite governance model, giving entities from the three spheres of government (federal, state and municipal) responsibilities for its implementation. The SUS is also responsible for: promoting the integration at the executive level of health, environment, and basic sanitation actions; ensuring the right to health and well-being of children; as well as maternal health, as indicated by the Child and Adolescent Statute (ECA, acronym in Portuguese)⁸.

Therefore, the Ministry of Health is the representative of the federal sphere of the SUS and the body responsible for the formulation and implementation of public health policies. Guided by the aforementioned law, it seeks to exercise its functions with the principles of universality, integrality and equity. The departments and entities of the Ministry of Health that work specifically on WASH-related issues are: the Secretariat for Health and Environmental Surveillance (SVSA, acronym in Portuguese), the Secretariat for Indigenous Health (SESAI, acronym in Portuguese) and the National Health Foundation (FUNASA, acronym in Portuguese).

In addition, it is important to mention the MoH Normative Instruction No. 01/2005 that informed the regulation of the organizational structure of the Environmental Health Surveillance system, defining the competences of the Federal Government entities as well as those of state and municipal government in relation to control and prevention actions related to environmental health. This includes the competences of the Secretariat of Health and Environmental Surveillance of the Ministry of Health.

Secretariat of Health and Environmental Surveillance (SVSA)

The Secretariat for Health and Environmental Surveillance (SVSA, acronym in Portuguese) is responsible for formalizing the guidelines for monitoring the quality of drinking water defined at the national level and determining the water quality standards to be followed throughout the national territory, aiming to ensure access to safe water for the populations (BRAZIL, 2023). Currently, the procedures for controlling and monitoring the quality of drinking water, among others, are governed by Ordinance No. 888/2021, which also presents the respective competences of the three spheres of management of the SUS, service providers and laboratories with regards to control and monitoring.

Established in 2003, the SVSA is currently governed by Decree No. 11.798/2023, which determines its competencies, of which the following are directly related to the WASH sector: i) coordinate the National

⁸ Law No. 8.069, of July 13, 1990 – Provides for the Child and Adolescents Statute and other provisions.

Policy on Health Surveillance; ii) coordinate the National Environmental Health Surveillance Subsystem, including the work environment; iii) coordinate the National System of Public Health Laboratories⁹; and iv) manage the Environmental Health Surveillance Information System.

In conjunction with the state and municipal Health Secretariats, the SVSA's work is essential to ensure that distribution systems for drinking water comply with the national quality standards. This includes safe access to quality water in schools and health units as well as in households and other buildings. The SVSA is responsible for the monitoring of all forms of water supply, whether collective or individual, public or private, including Water Supply Systems (SAA, acronym in Portuguese), Collective Alternative Solutions (SAC, acronym in Portuguese) and Individual Alternative Solutions (SAI, acronym in Portuguese). In addition, the SVSA has the responsibility to carry out continuous monitoring to ensure safe drinking water for children and their families.

As explained above, water quality and sanitation are the factors that are most closely related to infant mortality. Therefore, the SVSA has a fundamental role in combating the rates of mortality in early childhood.

The important advances in reducing the Infant Mortality Rate (IMR) in Brazil¹⁰ occurred due to the great efforts made in Health Surveillance, which in turn depended on dedicated budget allocations by the Federal Government. These efforts were further complemented by the implementation of programs such as the Family Health Strategy (ESF, acronym in Portuguese), cash transfer programs – which helped expand registrations in Health Systems through conditionalities related to issues that required family health monitoring (e.g. vaccinations and prenatal care). The primary care was also expanded through international cooperation programs, generating increased access to health networks in remote and hard-to-access locations, which is the reality of many municipalities in the North and Northeast of the country.

The SVSA coordinates the National Program for Drinking Water Quality Monitoring (VIGIAGUA, acronym in Portuguese) and continuously monitors water supplies. Information and data are provided and accessed at municipal level through the Information System for Drinking Water Quality Monitoring (SISAGUA, acronym in Portuguese). VIGIAGUA and SISAUGA are implemented in many municipalities and allow a deeper monitoring at local level, providing important data on health aspects, which in turn informs decision-making processes within the health sector, in coordination with those responsible for water supply in each territory. These and other good practices of the SVSA are further described in the fact sheets that complement this document.

⁹ National System of Public Health Laboratories (Sislab): The Brazilian Network of Epidemiological Surveillance Laboratories and the Brazilian Network of Environmental Health Surveillance Laboratories make up Sislab and are part of the Unified Health System. (BRAZIL, 2017).

¹⁰ Between 2007 and 2022, infant mortality in Brazil decreased from 18.6 to 12.95 deaths per thousand live births (MS/SVS/CGIAE – SIM/ Sinasc and Active Search).

Secretariat of Indigenous Health (SESAI)

Since the creation of the Indigenous Health Care Subsystem¹¹ in 1999, there has been an acknowledgement of the special need to consider the local reality and cultural specificities when developing public health policies for the indigenous population. This includes aspects of health care, basic sanitation, nutrition, housing, environment, land demarcation, health education and institutional integration (BRAZIL, 1999). Decree no. 3.156/1999, which provides for the conditions for the provision of health care to indigenous peoples, emphasizes – as part of its guidelines - "the reduction of mortality, especially maternal and child mortality" (BRAZIL, 1999).

In this context, the Special Indigenous Health Districts (DSEIs, acronym in Portuguese) were created, which are the decentralized entities of this subsystem that act directly in the territories, being composed of Multidisciplinary Teams of Indigenous Health (EMSI, acronym in Portuguese), including doctors, dentists, nurses, nursing assistants and technicians, indigenous health agents and indigenous sanitation agents." (Diehl and Langdon, 2015).

Currently, there are 34 DSEIs distributed according to territorial criteria and characteristics, most of which are in the North and Northeast regions of the country.

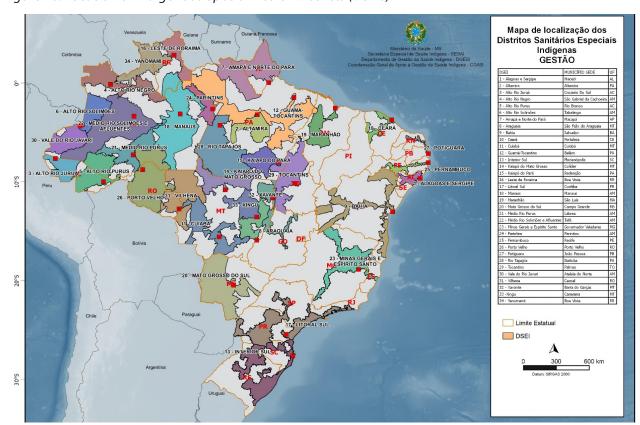


Figure 10: Location of Indigenous Special Health Districts (DSEIs)

Source: BRAZIL, 2024.

¹¹ Law No. 9.836, of September 23, 1999 – Adds provisions to Law No. 8.080, of September 19, 1990, which "provides for the conditions for the promotion, protection and recovery of health, the organization and operation of the corresponding services and other measures", establishing the Indigenous Health Care Subsystem.

In 2002, the National Policy for Health Care of Indigenous Peoples (PNASPI, acronym in Portuguese) was established. This policy is integrated with the SUS and the National Health Policy, and provides appropriate specificities for the public health system with regards to indigenous communities, recognizing and respecting the territorial and socio-cultural characteristics of this population.

The DSEIs are coordinated by the Secretariat of Indigenous Health of the Ministry of Health (SESAI, acronym in Portuguese), created in 2010. SESAI is responsible for all WASH-related matters related to the indigenous population, which includes specific aspects regarding indigenous children and youth as well as maternal health.

It is worth noting that in this structure, the Department of Projects and Environmental Determinants of Indigenous Health (DEAMB, acronym in Portuguese) is the coordinating entity responsible for ensuring that structuring and structural policies reach indigenous territories and communities, including through collective water supply systems and solutions, and solid waste management.

Figure 11: Images of SESAI interventions to guarantee drinking water in indigenous territories





Source: BRAZIL, 2021.

National Health Foundation (FUNASA)

The National Health Foundation was created in the early 1990s and has since then undergone various configurations and changes to its bylaws. Since 2016 (according to its current Statute) it has been the entity "responsible for promoting basic sanitation solutions for disease prevention and control, as well as formulating and implementing interventions of health promotion and protection related to the overarching lines of actions established by the Brazilian Environmental Health Surveillance Subsystem" (BRAZIL, 2022).

With 26 state superintendencies, FUNASA is an institution with a wide national reach. Its institutional mandate is focused on municipalities of up to 50,000 inhabitants.

The institution is organized into 4 macro sectors, namely: i) Executive Board; ii) Administrative Department; iii) Department of Public Health Engineering; and iv) Department of Environmental

Health. Its mission is defined as follows: "Promote public health and social inclusion through sanitation and environmental health interventions" (BRAZIL, 2022).

Ministry of Integration and Regional Development

Established in 2023, through Decree 11.468, of April 5, the Ministry of Integration and Regional Development (MIDR, acronym in Portuguese) has the mandate to: ensure balanced development of Brazilian regions; provide for water resources management, infrastructure, and water security throughout the national territory; implement and manage irrigation projects in developing regions; and guarantee protection and civil defense through prevention and management of risks and disasters. When it comes to WASH, the MIDR is responsible for the Brazilian Water Resources Policy and the Brazilian Water Security Policy.

Brazilian Secretariat of Water Security (SNSH)

The Brazilian Secretariat of Water Security works to support the construction of infrastructures that promote access to water for urban and rural populations. This includes construction of dams, canals and other infrastructures, all of which serve to guarantee supply of drinking water, while contributing to the reduction of regional inequalities caused by water scarcity.

This department is thus responsible for the implementation of the National Water Resources Policy, established by Law No. 9.433/1997, which regulates water resources management at national level, which includes issues such as water use, abstraction, pricing and interface with land use, environmental quality, and urban growth. This same law also creates the National Water Resources Management System (SINGREH, acronym in Portuguese).

National Council of Water Resources (CNRH)

The CNRH's function is to exercise participatory water management at national level, with the function of deliberating on, coordinating and supervising the implementation of interventions to ensure that the use of water is sustainable and balanced across sectors. This council is an integral part of the Brazilian Water Resources Management System (SINGREH, acronym in Portuguese) and is composed of representatives of all levels of government (federal, state and municipal), end-users of water resources, and civil society organizations. The council thus promotes participatory and integrated water management.

National Agency for Water and Basic Sanitation (ANA)

Created in 2000 under the name of the National Water Agency, ANA currently stands for the National Agency for Water and Basic Sanitation. Up until 2020 ANA was responsible for regulating water resources through the Brazilian Water Law (Law No. 9.433/1997). However, in 2020 it was assigned the mandate to also regulate basic sanitation through Law No. 14.026/2020, which amended and complemented the Legal Framework for Basic Sanitation, Law No. 11.445, of January 05, 2007. This legal framework determines that the ANA, as a member of the National Water Resources Management System (SINGREH), has the mandate to "implement the National Water Resources Policy and institute reference standards"

for the regulation of public basic sanitation services" (BRAZIL, 2020).

Given that in Brazil the State is not solely responsible for the execution of basic services (such as those related to WASH), regulation plays a critical role. The regulatory agency thus has a fundamental role with regards to regulation of tariffs and prices charged by private companies operating in the sector, so as not to amplify inequalities in the provision of these services.

In addition to regulating water resources and sanitation concessionaires (public and private), the agency is also responsible for implementing the Brazilian Water Resources Plan.

Companhia de Desenvolvimento dos Vales do São Francisco e do Parnaíba (Codevasf)

Codevasf is a public company under private law, created in 1974, whose mission is to promote integrated and sustainable regional development in river basins, contributing to the reduction of inequalities. Codevasf's area of operation covers several hydrographic basins in the States of Alagoas, Amapá, Bahia, Ceará, Goiás, Maranhão, Mato Grosso, Minas Gerais, Pará, Pernambuco, Piauí, Sergipe, Tocantins and the Federal District, in view of initiatives related to water security, irrigated agriculture and sustainable economy.

In this sense, from the perspective of water security, Codevasf aims to ensure sustainable access to quality water in adequate quantities to maintain livelihoods, human well-being and socioeconomic development, in addition to ensuring the protection of water-related disasters (droughts and floods) and the preservation of ecosystems with the regularization of ecological flows and water quality control. As part of these efforts, Codevasf seeks to expand water storage capacity with the construction of reservoirs; Improve the spatial distribution of water, through the works of adductor and supply systems; Provide perennial sources of water, as a result of the execution of river basin integration systems; Promote and carry out the revitalization of river basins; and Foster and expand opportunities for the development of irrigation.

Ministry of Cities (MCid)

The Ministry of Cities was established in 2003, with the objective of meeting social demands for better housing and urban infrastructures. It was originally instituted to address the urban development policy as well as sectoral policies on housing, environmental sanitation, and urban mobility. The ministry plays a central role for the planning and management of these areas, all of which are key for the quality of life in cities.

Whereas in 2019 MCid was merged into the Ministry of Regional Development, in 2023 it resumed its status as an independent ministry, reaffirming its commitment to promoting more inclusive and sustainable cities. As part of the renewal of the Ministry, the National Secretariat of Environmental Sanitation and the National Secretariat of Housing were also reintroduced as part of the MCid structure. These Secretariats are fundamental for the development of sanitation in the country. In addition, the National Secretariat for Peripheries was also created, to ensure equity of services throughout urban territories with less access to housing and health infrastructure.

National Secretariat of Environmental Sanitation (SNSA)

Among other competencies, Decree No. 11.468, of April 5, 2023, assigned this secretariat with the responsibility of implementing and coordinating the National Sanitation Policy. This decree presents the regimental structure of the MCid and all its competences. It sets out the coordination of the National Sanitation Information System (SINISA, acronym in Portuguese), replacing the former System (SNIS, acronym in Portuguese). SINISA is a fundamental tool for the WASH sector in Brazil. It consists in a database that builds on information provided by municipal managers on water services, sewage, solid waste management, drainage and rainwater management, municipal management, regulation and rural sanitation. In addition, through Decree No. 11.468, of April 5, 2023, the Department of Rural Sanitation and Small Municipalities (DSR, acronym in Portuguese), which is linked to the SNSA, was created in the MCid structure. DSR has as its main purpose to provide structural and structuring interventions in rural territories and municipalities with a population of up to 50,000 inhabitants, aiming to improve the quality of life of the population, in the broadest aspect, including through support to municipalities in the preparation of Basic Sanitation Plans.

National Housing Secretariat (SNH)

The National Housing Secretariat emerged in 2003 in the context of the creation of the Ministry of Cities. In 2005, Law No. 11.124/2005 was established, which structured the National Social Housing System (SNHIS, acronym in Portuguese), which guided the creation of the National Housing Plan (PlanHab, acronym in Portuguese), an instrument that aims to "promote the conditions of access to decent housing – urbanized and integrated into the city – to all segments of the population, especially the low-income population" (BRAZIL, 2004). The SNH is responsible for the execution of PlanHab 2040, which is the guiding instrument for the planning of public housing policy in Brazil.

PlanHab 2040 determines strategies and guides the preparation of instruments agreed upon in the Multi-annual Plan (PPA, acronym in Portuguese) for the budgetary allocation aimed at social housing and sanitation services, focused on urban development. There is thus a direct link with public policies related to the WASH sector.

The right to housing is a commitment of the state guaranteed by the CF/88 and reaffirmed by the fundamental rights of the ECA, which determines, among other things, the right to decent living conditions. The right to housing and decent conditions involve access to drinking water, sanitation, and hygiene. However, since the PlanHab and the SNH deal with housing policies in their broader context, the initiatives of this specific (housing) sector will not be further explored in this mapping exercise.

National Secretariat of Peripheries (SNP)

The National Secretariat of Peripheries aims to promote significant improvements in the quality of life of populations living in marginalized areas, ensuring that everyone has access to adequate and dignified basic sanitation services. This is a measure to promote inclusion and citizenship in the peripheral areas of the country.

To support the promotion of basic sanitation, this department works on several fronts to ensure that

populations living in peripheries and favelas have access to services such as drinking water and sewage. This secretariat works together with the National Housing Secretariat and the National Environmental Sanitation Secretariat to implement the National Housing Policy.

Council of Cities (ConCidades)

The Council of Cities is a joint decision-making body of a consultative and deliberative nature, created to promote social participation in the development of public policies for urban development and housing in Brazil. ConCidades is a space for social inclusion to discuss, formulate and monitor guidelines on sustainable urban planning, access to the right to decent housing, in addition to supervising the implementation of the City Statute¹².

It is also up to the Council of Cities to organize the Brazilian Conference of Cities, which aims to promote mobilization and interaction between the government and civil society on topics related to the National Policy for Urban Development (PNDU, acronym in Portuguese).

Ministry of Environment and Climate Change

Unlike most of the laws that structure the WASH sector in Brazil, the National Environmental Policy (PNMA, acronym in Portuguese), was created in the 1980s by Law No. 6938/1981, due to the influences of international movements that focused on the construction of laws and standards to minimize and mitigate environmental impacts, recognizing the urgent need for policies for the conservation of natural resources.

The PNMA instituted the Brazilian Environment System (SISNAMA, acronym in Portuguese), which includes entities that currently have the responsibility to coordinate the solid waste management agenda. Whereas PNMA presents a series of guidelines related to the preservation of water resources and environmental quality, this document will focus on what directly relates to public policies on WASH, namely solid waste.

National Secretariat of Urban Environment and Environmental Quality

The Brazilian Secretariat for Urban Environment and Environmental Quality is part of the MMA structure, with responsibility for the implementation of the National Urban Environmental Quality Agenda, which is coordinated by the Department of Urban Environment (DMUR, acronym in Portuguese); Department of Waste Management (DGR, acronym in Portuguese); and the Department of Environmental Quality (DQA, acronym in Portuguese).

An important instrument coordinated by this secretariat is the National Solid Waste Management Information System (SINIR, acronym in Portuguese). This system compiles data related to solid waste management, with information at the municipal and state levels that also includes actions of consortia and reverse logistics. SINIR is an important driver for increased waste management at the local level,

¹² Law no. 10.257, of July 10, 2001, which establishes guidelines for sustainable urban development, guaranteeing the social function of the city and property. It aims to regulate the use of urban property for the collective good, security, and well-being of citizens, promoting the right to housing, urban mobility, and environmental preservation (BRAZIL, 2001).

facilitating access to information for waste management planning at regional level, including with regards to waste pickers and companies that operate in the sector.

Environmental quality at the subnational level is implemented through state and municipal departments that are directly related to the management, inspection and implementation of interventions that affect: solid waste management (urban and rural); water supply and quality; the creation of specific environmental legal regulations for the regional context in line with federal legislation; air quality monitoring; the creation of awareness and training activities on environmental education; association and partnership with non-governmental entities; creation of councils; among other related interventions.

National Secretariat of Traditional Peoples and Communities and Sustainable Rural Development

In January 2023, as per Decree No. 11.349, the Ministry of Environment and Climate Change announced the creation of a new secretariat, the National Secretariat of Traditional Peoples and Communities and Sustainable Rural Development.

This secretariat reinforces the commitment especially for communities that depend directly on natural resources and the sustainable management of the territory, aiming to promote environmental interventions that contribute to improving the quality of life of the populations.

With specific focus on traditional peoples and communities, the secretariat implements interventions related to basic sanitation, which are fundamental to ensure access to quality water and the conservation of water resources.

It is composed of the Department of Rural Environmental Management Policies, which develops guidelines for the integration between environmental preservation and sustainable rural practices; the Department of River Basin Revitalization, Water Access and Multiple Use of Water Resources, which focuses on recovery and conservation of water resources and to ensure equal access to water; and the Department of Combating Desertification, which acts to preserve soils and prevent the advance of desertification, also impacting water availability and sanitation infrastructure.

Brazilian Institute of Environment and Sustainable Natural Resources (IBAMA)

The Brazilian Institute of Environment and Sustainable Natural Resources (IBAMA, acronym in Portuguese) is an executing body of the MMA and responsible for the creation of the Brazilian Solid Waste Policy – Law 12305/2010, being a fundamental milestone for the waste management agenda at national level. The holistic nature of the institutional set-up enables IBAMA to address needs of social, market and environmental character, introducing the idea of shared responsibility for the multiple stakeholders of the waste chain. This, in turn, represents an important advancement for Brazil in the area of waste management.

IBAMA is thus the body that coordinates implementation of the PNMA, analyzing and registering solid waste (and hazardous waste) management plans as well as maintaining the creation of norms that contribute to the regulation of the sector.

The implementation of the PNMA has a direct influence on the lives of children and adolescents. Just a few decades ago it was very common for children in Brazil to work picking up recyclable materials in the streets and dumps.

The PNMA succeeded in raising the standards of solid waste management, which contributed to the formalization of waste pickers' cooperatives and associations, allowing the formal hiring of low-income and poorly educated people, who in turn were able to increase their income and provide better food and health conditions for their families, leading to increased life quality.

In addition, through training programs, waste pickers have been encouraged to register with the Single Registry (CadÚnico)¹³, so that they and their families can access government social assistance policies.

It is also worth noting that the goal of closing all dumps in Brazil, which is moving at a promising pace, requires the structuring of landfills¹⁴ following a series of structural standards to prevent children from accessing these spaces. Additionally, it requires greater control over the contamination of surrounding areas to avoid the proliferation of diseases for the families living there.

National Environment Council (CONAMA)

The National Environment Council is the advisory body of the National Environment System (SISNAMA, acronym in Portuguese), which deliberates on guidelines for public policies, norms and standards related to the environment and natural resources. This Council is composed of representatives of federal, state and municipal governments, economic sectors, civil society and the National Congress.

CONAMA deliberates on a series of resolutions which provide guidance on proper management of solid waste, including recyclable, hazardous, and hospital waste products, and determines on reverse logistics. With regards to the water component, these resolutions decide on the classification of water bodies, thus defining their type of use. They also define parameters for liquid effluents and physical, chemical and biological processes for the environmental quality of water.

¹³ The Single Registry is the main instrument for identifying and characterizing the socioeconomic situation of low-income families residing in Brazil. The Single Registry allows low-income families access to the Federal Government's Social Programs.

¹⁴ Currently, 60% of solid waste in Brazil is being directed to regular landfills while 40% is directed to dumps. Source: Overview of Solid Waste in Brazil, 2021 (ABRELPE, 2021).



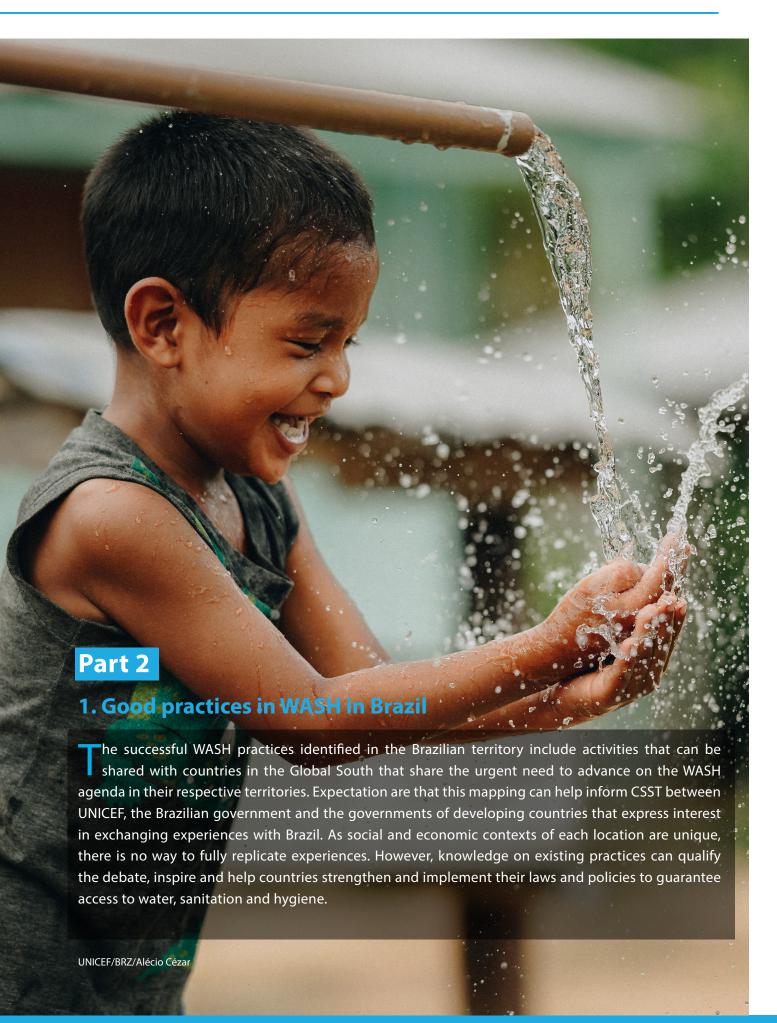
Conclusion Part 1

The first part of this document presented how the basic sanitation sector has come to evolve in Brazil over the last decades, both in terms of legal frameworks as well as in terms of governance and coordination between the different sectors and responsible bodies.

Brazil has made important advances in recent decades in promoting access to WASH services for children and their families. This progress has aroused interest from several places, especially among countries in the Global South that seek to learn from the Brazilian example. In line with this context, Brazil has expanded its technical South-South Cooperation agenda to share technical knowledge and positive development experiences with other countries.

Considering the size of the country and its diversity, although Brazil has advanced on many fronts, the efforts have had different levels of impact throughout the country. This means that while the knowledge and good practices available in Brazil can benefit other countries, the country itself can also benefit from exchanges of experiences within the country and through mutual learning among stakeholders from different regions and sectors.

It is from this perspective that part II of this document presents the result of the mapping of good Brazilian practices in the field of basic sanitation.





2. Methodology

rom the point of view of public management, good practice are in the context of this mapping exercise referred to as:

"Initiatives that show concrete and measurable results for the quality of life of the population and that have great potential to gain scale and can be adapted to other realities. They help cities identify possible solutions to a given problem or point out ways to solve it" (Sustainable, 2017).

As mentioned in the introduction to this document, with regards to the WASH terminology this work follows the concept of basic sanitation in accordance with Brazilian legislation¹⁵, including the perspective of solid waste management.

The initiatives systematized through this mapping were organized around four pillars, namely:

- Governance strategies
- Normative instruments
- Structuring actions
- Structural actions

¹⁵ Law 14.026, of July 15, 2020: Updates the Legal Framework for Basic Sanitation in Brazil.

Figure 12: Definition of mapped initiatives as good practices

GOVERNANCE STRATEGIES

- Committees
- Councils
- Joint Decisionmaking bodies
- Setting of organizational agendas
- Computerization
- Indicators
- Generation and availability of data
- Funding
- Monitoring

NORMATIVE INSTRUMENTS

- Policies
- Legal instruments (Laws, Ordinances, Decrees, Normative Instructions)
- Regulation parameters

STRUCTURING ACTIONS

- Workshops and training
- Guidebooks and manuals
- Seminars, symposia and lectures
- Courses
- Communication strategies
- Group dynamics
- Socio-educational actions
- Research
- Support for the elaboration of Basic sanitation plans

STRUCTURAL ACTIONS

- Works
- Infrastructures
- Equipment
- Resources
- Maintenance

Regarding data collection, three main strategies were used: i) interviews with public managers; ii) interviews with UNICEF Seal partners¹⁶; and iii) research using secondary data. After searching for information, and based on the four pillars mentioned above, the results were organized into forms containing a series of standardized information (as shown in Table 1 below) and classified by preestablished criteria (listed in Figure 5).



¹⁶ The **UNICEF Seal** is an initiative of the <u>United Nations Children's Fund (UNICEF)</u> that seek to stimulate and acknowledge real and positive advances in the promotion, realization and guarantee of child rights in municipalities in the Semi-arid Region and the Brazilian Legal Amazon. By adopting the UNICEF Seal, the municipality makes a commitment to keep its public policy agenda for children and adolescents as a priority. The methodology includes the monitoring of social indicators and the implementation of activities that help the municipality to comply with the <u>Convention on the Rights of the Child</u>, which in Brazil is reflected in the <u>Child and Adolescent Statute (ECA)</u>. The UNICEF Seal is voluntary. The UNICEF Seal contributes to progress on 8 of the 17 <u>Sustainable Development Goals (SDGs)</u>, a global agenda agreed by all United Nations Member States with targets set for 2030.

Table 1: Sample form for presenting results

	WASH Sector
	Classification
	Sphere
	Location
	Implementing entity
ų	Intersectoral aspects
ATIN	Description
E	Target audience
NAME OF INITIATIVE	Reach
ME	Duration
S	Implementation strategies
	Diffusion strategies
	Monitoring strategies
	Financing mechanisms
	Relation to the SDGs
	Additional information

Source: created by the author.



Figure 13: Criteria for identifying a good practice in WASH for the mapping exercise

1. WASH initiative

- Initiative focused on drinking water and/or sanitation, and/or waste management, and/or rainwater drainage.

2. Low Cost

- Low cost technology (or strategy) of implementation and maintenance.

3. Sustainability

- The initiative promotes medium-to long-term development, in a balanced manner, considering social, economic and environmental aspects.

4. Climate resilience

- Capacity to withstand or adapt to the impacts suffered by climatic variations (when applicable).

5. Attention to children and adolescent

- Intersectoral approach, considering the rights of children and adolescents.

6. Social dissemination

- The proposals and actions of the initiative are known by the local population.

7. Adherence and continuity at local level

- Adherence to the initiative by the territory and perpetuation of activities after implementation.

8. Accessibility

- Clarity and availability of information (language, images, communication strategies).

9. Administrative efficiency

- The initiative has a facilitated management strategy. It achieves the proposed goals with effectiveness, impersonality, economy and transparency.

10. Alignment with at least the following SDGs:

- #1. Eradicate poverty
- #3. Health and well-being
- #4. Quality education
- #6. Clean Water and Sanitation
- #11. Sustainable Cities and Communities

11. Aspects of race and gender

- Actions that reflect improvement of the quality of life of black girls and women.

Source: created by the author.

The final presentation of the mapping is set out in sheets published on the <u>website of the Brazil-UNICEF Trilateral South-South Cooperation Program</u>, which present the criteria identified in each of the initiatives raised. For easy reference, the initiatives are also listed in chapter five of this document.

2.1 Methodological considerations on the applied criteria

- There are practices listed in the mapping that have the nature of pilot experiences. These were selected upon indication of managers (or technicians) of the entity responsible for implementation through interview or by filling out a form. These pilot practices were included in the mapping records for knowledge purposes, as they can serve as references in other contexts.
- For all initiatives involving collectors of recyclable materials, the "Attention to children and adolescents" criterion was attributed because they are public initiatives that directly influence the increase in income of families in vulnerable situations, reflecting on the improvement of the living conditions of children and adolescents of these families.
- ✓ All mapped initiatives comply with the "Sustainability" criterion, since the description adopted for this term is "an initiative that promotes medium to long-term development, in a balanced manner, considering social, economic and environmental aspects."
- The "Climate resilience" criterion was considered for those initiatives whose own description points to some aspect that relates to issues related to the climate or biome, with terms such as: i) water scarcity; ii) drought period; iii) intermittent water courses; iv) semi-arid region; v) Amazon region, among others.
- The "Aspects of race and gender" criterion was considered for practices in which the description itself points out terms related to: i) women; ii) maternal health; iii) female gender; iv) black or Afro-descendant race; v) ethnicities; and vi) special communities (riverside, indigenous and quilombola).
- Regarding the "Low cost" criterion, it was not possible to measure exactly what would be considered high or low cost as initiatives of very different natures and magnitudes were evaluated. Thus, this criterion was adopted for those that are declared by the implementing body itself as a low-cost initiation. Emphasizing that, in many cases, this criterion was not considered because this evaluation metric was not predefined, thus becoming an analysis made with a certain degree of subjectivity.

2.2 Delimitations

Considering the magnitude of the country, one of continental size, with different biomes and climates, and the complexity of the organization of the governance of the basic sanitation sector in Brazil, the great challenge of acquiring specific information from the 5,570 Brazilian municipalities on WASH-related initiatives must be considered.

However, when researching initiatives of municipalities or regions that share similar spatial, geographical, socioeconomic and socio-political characteristics with other places, one can obtain a regional perception and trends that occur in certain territories.

That said, it is important to highlight that the work presented in this document outlines some successful

initiatives. This means that the mapping does not exhaust, nor does it limit the many existing initiatives that were not included in the exercise. With the continuity and evolution of the work at hand, other experiences can be contemplated in a later stage.

2.3 Initiatives

The good practices mapped out in this exercise are presented below. The majority were implemented at the federal level (42 initiatives), followed by the regional level (10 initiatives), state and municipal level (3 initiatives each), and federal and international level (2 initiatives).

The following graphs systematize the results in relation to:

- 1. WASH sector.
- 2. Distribution by implementing entities.
- 3. Classification based on criteria.

Figure 14: WASH sector of mapped initiatives.

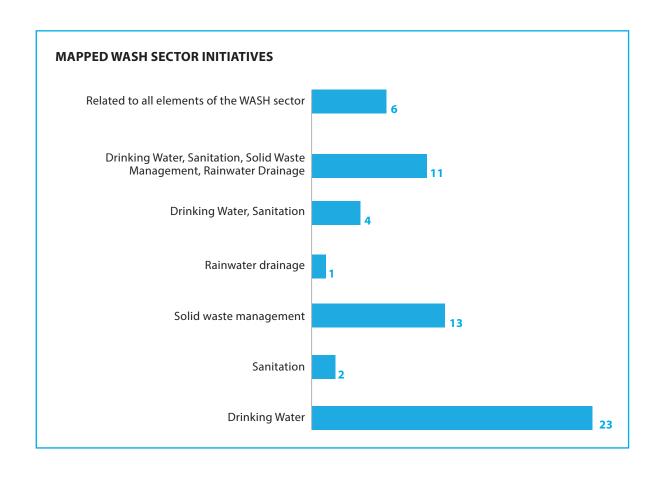


Figure 15: Distribution by implementing entities.

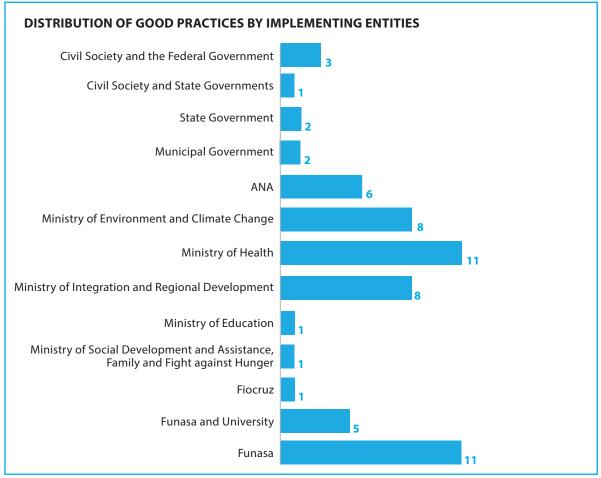
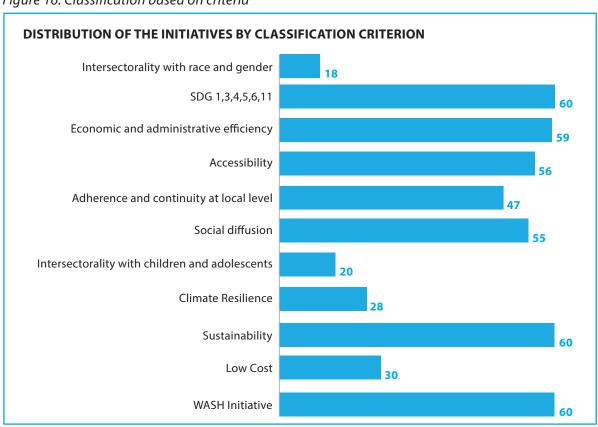


Figure 16: Classification based on criteria



The following summary table lists all experiences included in the mapping exercise.

Table 2: List of mapped good practices in WASH

#	Initiative Name	WASH Sector	Classification	Sphere
1.1	National Health Plan (PNS)	Related to all elements of the WASH sector	Governance strategy	Federal
1.2	Qualification Program for Indigenous Health Agent (AIS) and Indigenous WASH Agent (AISAN)	Related to all elements of the WASH sector	Governance strategy	Federal
1.3	National Water Quality Monitoring Program (VIGIAGUA)	Drinking Water	Governance strategy	Federal
1.4	Information System for Drinking Water Quality Monitoring (SISAGUA)	Drinking Water	Governance strategy	Federal
1.5	Guidelines for Monitoring of Drinking Water Quality in Indigenous Communities (DMQAI)	Drinking Water	Governance strategy	Federal
1.6	Funasa's Water Security Plan	Drinking Water	Governance strategy	Federal
1.7	National Sanitation Information System (SINISA)	Drinking Water; Sanitation; Solid Waste Management; Rainwater drainage;	Governance strategy	Federal
1.8	National Water Security Plan (PNSH)	Drinking Water	Governance strategy	Federal
1.9	National Solid Waste Management Information System (SINIR)	Solid Waste Management	Governance strategy	Federal
1.10	National Solid Waste Plan (PLANARES)	Solid Waste Management	Governance strategy	Federal
1.11	Integrated Solid Waste Management Plan	Solid Waste Management	Governance strategy	Federal
1.12	Direct Money at School Program (PDDE)	Drinking Water	Governance strategy	Federal
1.13	National Water Resources Management System (SINGREH)	Drinking Water	Governance strategy	Federal
1.14	National Water Resources Information System (SNIRH)	Drinking Water	Governance strategy	Federal

1.15	Working Group of the Brazilian Basic Sanitation Plan (GT - PLANSAB)	Drinking Water; Sanitation; Solid Waste Management; Rainwater drainage	Governance strategy	Federal
1.16	National Agenda for Urban Environmental Quality	Solid Waste Management	Governance strategy	Federal
2.1	National Health Promotion Policy (PNPS)	Related to all elements of the WASH sector	Normative instrument	Federal
2.2	National Health Surveillance Policy (PNVS)	Related to all elements of the WASH sector	Normative instrument	Federal
2.3	National Policy on Health Care for Indigenous Peoples (PNASPI)	Related to all elements of the WASH sector	Normative instrument	Federal
2.4	Integrated Agreed Programming of the Health Surveillance area (PPIVS)	Drinking Water	Normative instrument	Federal
2.5	Decree No. 5.440, of May 4, 2005 – Establishes definitions and procedures on water quality control of supply systems and establishes mechanisms and instruments for disseminating information to the consumer on the quality of drinking water	Drinking Water	Normative instrument	Federal
2.6	Ordinance GM/MS No. 888, of May 4, 2021 – Provisions on procedures for controlling and monitoring the quality of drinking water and its potability standard	Drinking Water	Normative instrument	Federal
2.7	National Rural Sanitation Program (PNSR)	Drinking Water; Sanitation; Solid Waste Management; Rainwater drainage	Normative instrument	Federal
2.8	Federal Basic Sanitation Policy	Drinking Water; Sanitation; Solid Waste Management; Rainwater drainage	Normative instrument	Federal
2.9	National Basic Sanitation Plan (PLANSAB)	Drinking Water; Sanitation; Solid Waste Management; Rainwater drainage	Normative instrument	Federal

2.10	National Solid Waste Policy (PNRS)	Solid Waste Management	Normative instrument	Federal
2.11	CONAMA Resolutions	Solid Waste Management	Normative instrument	Federal
2.12	National Reference Standards of the National Agency for Water and Basic Sanitation (ANA)	Drinking Water	Normative instrument	Federal
3.1	Healthy and Sustainable Territories	Drinking Water; Sewage	Structuring action	Regional
3.2	Support for the preparation of the Municipal Basic Sanitation Plan (PMSB)	Drinking Water; Sanitation; Solid Waste Management; Rainwater drainage	Structuring action	Federal
3.3	Terms of reference for the preparation of the PMSB	Drinking Water; Sanitation; Solid Waste Management; Rainwater drainage	Structuring action	Federal
3.4	FUNASA's Solid Waste Management Program	Solid Waste Management	Structuring action	Federal
3.5	Financing Public Notices for Environmental Health	Related to all elements of the WASH sector	Normative instrument	Federal
3.6	Financing Public Notices for Rainwater Drainage	Rainwater drainage	Normative instrument	Federal
3.7	Public Health Engineering Research Journals	Drinking Water; Sanitation; Solid Waste Management; Rainwater drainage	Structuring action	Federal
3.8	SanBas Project	Drinking Water; Sanitation; Solid Waste Management; Rainwater drainage	Structuring action	State
3.9	SanRural Project - Sanitation and Environmental Health in Rural and Traditional Communities of Goiás	Drinking Water; Sanitation; Solid Waste Management; Rainwater drainage	Structuring action	State
3.10	WASH and gender project: Transforming the lives of Marias	Drinking Water; Sanitation; Solid Waste Management; Rainwater drainage	Structuring action	Regional
3.11	Cooperation for Climate Protection in Urban Solid Waste Management – ProteGEEr	Solid waste management	Structuring action	Federal and international

3.12	Interáguas Program – Water Sector Development Program	Drinking Water	Structuring action	Federal
3.13	Regulasan Program	Drinking Water; Sewage	Structuring action	Federal
3.14	Integrated Solid Waste Management with Socio- Productive Inclusion of Waste Pickers	Solid Waste Management	Structuring action	Regional
3.15	Education and Training for the Regulation and Management of Water and Sanitation	Drinking Water	Structuring action	Federal and International
4.1	One Million Cisterns (P1MC) Program	Drinking Water	Structural action	Regional
4.2	One Land and Two Waters Program (P1+2)	Drinking Water	Structural action	Regional
4.3	Cisterns in schools - ASA	Drinking Water	Structural action	Regional
4.4	Simplified Collective Alternative Solution for Water Treatment for Human Consumption (SALTA-z)	Drinking Water	Structural action	Federal
4.5	Integrated Rural Sanitation System (SISAR)	Drinking Water	Structural action	State
4.6	Mobile Water Treatment Unit (UMTA)	Drinking Water	Structural action	Regional
4.7	Collection Unit for the Quality Control of Water for Human Consumption (UCCQA) and Mobile Unit for the Quality Control of Water for Human Consumption (UMCQA)	Drinking Water	Structural action	Regional
4.8	Cistern Program	Drinking Water	Structural action	Regional
4.9	Dignified Housing Program	Drinking Water; Sewage	Structural action	Federal
4.10	Re-ciclo Fortaleza Recycling Program	Solid Waste Management	Structural action	Municipal
4.11	Household Sanitation Improvements (MSD)	Drinking Water; Sewage	Structural action	Federal
4.12	Fresh Water Program	Drinking Water	Structural action	Federal
4.13	Zero Dumps Program	Solid Waste Management	Structural action	Federal

4.14	Brazilian Reverse Logistics Program	Solid Waste Management	Structural action	Federal
4.15	Recicla Fortaleza Recycling Program	Solid Waste Management	Structural action	Municipal
4.16	Simplified Sewerage	Sewage	Structural action	Regional
4.17	Tewetland	Sewage	Structural action	Municipal



3. Conclusion

While the first part of this document provided an overview of the legal and institutional frameworks that have allowed Brazil to advance in providing water, sanitation, and hygiene to its population, the second part provides a systematization of initiatives in the WASH sector in the country that have been identified as good practices.

Initiatives at federal, state, and municipal levels were highlighted and classified into four pillars, namely: governance strategies; normative instruments; structuring actions and structural actions. The data collected shows that in recent decades, the country has advanced on many fronts to improve quality basic sanitation services for its population, while increasing the coverage of these services.

Among the experiences available in Brazil in the sanitation sector, one should highlight the implementation of tools for efficiency and effectiveness in the provision of services; the definition of methodologies that consider technical and efficiency criteria; the improvement of the quality of services provided and at the same time promotion of social inclusion.

The important advances that Brazil has witnessed in recent decades in the promotion and protection of the rights of children and their families, focused on water, sanitation, and hygiene, have gained interest around the world, especially among countries in the Global South that seek to achieve such advances.

Despite Brazil's advances in WASH, the country still faces important challenges in its efforts to achieve the goal of universalization. Thus, although Brazil has advanced on many fronts in relation to its basic sanitation agenda, these developments have had different levels of impact across the country. This means that, while the available knowledge and good practices of Brazil can benefit other countries, the country itself can benefit from the learning that these practices can provide.

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