

Application in Brazil of the decision-making support tool related to SDG6 (SDG-PSS)



THE FEDERATIVE REPUBLIC OF BRAZIL

Luiz Inácio Lula da Silva

President of the Republic

MINISTRY OF INTEGRATION AND OF REGIONAL DEVELOPMENT

Walder Góes

The Honorable Minister

NATIONAL WATER AND SANITATION AGENCY

EXECUTIVE BOARD

Veronica Sánchez da Cruz Rios (Chief Executive Officer)

Mauricio Abijaodi Lopes de Vasconcellos

Ana Carolina Argolo Nascimento de Castro

Filipe de Mello Sampaio Cunha

Luis André Muniz (Acting Director)

NATIONAL WATER AND SANITATION AGENCY
MINISTRY OF INTEGRATION AND OF REGIONAL DEVELOPMENT

Application in Brazil of the decision-making support tool related to SDG 6 (SDG-PSS)

BRASÍLIA – DF
ANA
2023

© 2023, National Water and Sanitation Agency - ANA

Setor Policial Sul, Área 5, Quadra 3, Edifício Sede Bloco M

Postal Code 70.610-200 – Brasília/DF

Telephone: (+ 55 61) 2109-5400 | (+ 55 61) 2109-5252

Web site: www.gov.br/ana/pt-br

Editorial Committee

Joaquim Guedes Corrêa Gondim (Coordinator)

Flávio Hadler Tröger

Humberto Cardoso Gonçalves

Nazareno Araújo (Executive Secretary)

Editorial Team

Editorial supervision

Regina Coeli Montenegro Generino

Marcus André Fuckner

Revision of originals

Gisela Damm Forattini

Raimundo Alves de Lima Filho

Fernanda Abreu Oliveira de Souza

Regina Coeli Montenegro Generino

Marcus André Fuckner

Marcela Ayub Brasil

Graphic design, editing, cover art and illustrations

Jean dos Santos Calhau

Photographs

Stock photos, with authorized right of use.

Production

The National Water and Sanitation Agency

Jean dos Santos Calhau

Translation into English:

Central de Traduções & Global Languages

The illustrations, tables and graphs for which a source is not indicated were prepared by ANA. All rights reserved. The data and information contained in this publication may not be reproduced without citing the respective source.

Cataloging at source: CEDOC/LIBRARY

A265a National Water and Sanitation Agency (Brazil).

Application in Brazil of the decision-making support tool related to SDG 6 (SDG-PSS) / National Water and Sanitation Agency – Brasília: ANA, 2023.

68 p. : il.

ISBN: 978-65-88101-34-6

1. Drinking Water. 2. Sanitation. 3. Water – Management. I. Title.

CDU 628

Prepared by Fernanda Medeiros – CRB-1/1864

Overall coordination

Gisela Damm Forattini
Raimundo Alves de Lima Filho
Regina Coeli Montenegro Generino

Technical and Executive Coordinating Body

Gisela Damm Forattini
Raimundo Alves de Lima Filho
Regina Coeli Montenegro Generino
Fernanda Abreu Oliveira de Souza
Marcus André Fuckner
Marcela Ayub Brasil

Collaborators

National Water and Sanitation Agency

Gisela Damm Forattini
Raimundo Alves de Lima Filho
Fernanda Abreu Oliveira de Souza
Regina Coeli Montenegro Generino
Marcus André Fuckner
Marcela Ayub Brasil
Nazareno Araújo
Renata Rozendo Maranhão
Mariane Moreira Ravanello
Consuelo Franco Marra
Ricardo Brasil Choueri

Other institutions

Adivane Teresinha Costa – UFOP/MG
Ângelo José Rodrigues Lima – Water Governance
Observatory
Aristeu de Oliveira Júnior – SVS/MS
Carolina Carvalho – OPAS/OMS
Denise Maria Penna Kronemberger – IBGE
Eduardo Cyrino – Embrapa Cerrados
Fábio Soares Eon – UNESCO of Brazil
Gabriel Campos Vieira – CGVAM/MS
Gesmar Rosa dos Santos – IPEA
Gilbrando Medeiros Trajano Júnior – APEA/RN
Helder Rafael Nocko – APEAM/PR
Igor Andrade Vidal Barbosa – MRE
Jorge Werneck – ADASA
José Carlos Cesar Amorim – IME
Liane de Moura Fernandes Costa – FNEAS and
AEAS/DF
Livia Soalheiro e Romano – SEAS/RJ

Lucio Alberto Pereira – Embrapa Semi-arid Region
Luiz Belino Ferreira Sales – SVS/MS
Marcelo de Miranda Reis – IME
Marcelo Henrique Otenio – Embrapa Dairy Cattle
Marcia Divina Oliveira – Embrapa
Marco Aurélio Chaves Ferro – UFF/RJ
Marco Neves – SEMAD/GO
Mariana Clauzet – Networks and Partnerships of the
Water and Sanitation Institute
Pilar Carolina Villar – Unifesp/SP
Priscila Campus Bueno – OPAS/OMS
Roselany Corrêa – Embrapa
Rubens Bernardes – Embrapa Instrumentation
Tiago de Brito Magalhães – Ministry of Health
Valéria Sucena Hammes – Embrapa ODS Network
Vanessa Romário de Paula – Embrapa
Vinícius Ternerio Ragghianti – ACESA/SC

Consultant

Sandro Filippo

Acknowledgements

Paula Lobão Barroso de Souza
Flávia Nasiasene Gomes
Luciana Roberta Sarmento Silva



Contents

	Presentation	07
1	SDG 6 in Brazil: ANA's vision of the indicators	09
2	The tool to support decision-making related to SDG 6	13
3	Tool application to the Brazilian case	21
4	Result and analysis of SDG 6 in Brazil	29
5	SWOT matrix (strengths, weaknesses, opportunities and threats)	37
6	Collaborators main perceptions about the use of SDG 6 tool in the Brazilian scenario	43
7	Proposal for actions to achieve SDG 6 targets in Brazil	51
8	Proposal for replicating the experience of using the tool in technical cooperation actions with developing countries	63
9	Final considerations	65





Source: Adobe Stock



Presentation

The Sustainable Development Goals (SDG) are part of an international resolution approved in 2015 by the General Assembly of United Nations (UNGA), which established the 2030 Agenda. This Agenda defined a global strategy, composed of 17 objectives and 169 goals, for the planning of actions and public policies that contribute to sustainable development.

The National Water and Sanitation Agency (ANA, in Portuguese) is responsible for implementing the National Water Resources Policy (Law No. 9433/1997), and for establishing reference standards for the regulation of sanitation public services (Law No. 14,026/2020).

In our field of action is Sustainable Development Goal (SDG) 6: Clean Water and Sanitation, which we recognize as one of the greatest challenges of countries, and in particular, Brazil.

ANA's first major step in promoting SDG 6 was the publication, in 2019, of the report **"SDG 6 in Brazil: ANA's Vision of the Indicators"**, which presents the monitoring of its 8 targets, including the results historical series, different levels of spatial disaggregation, analyses and suggestions for methodological improvements, as well as step-by-step methodological sheets for replication. In 2022, ANA launched the second edition of the report, during the 9th World Water Forum, in Dakar, Senegal, with the update of the historical series and improvement of its calculations due to methodological advances and new available data. The report was prepared following a methodology discussed with UN agencies and was attended by several partner institutions.

The experience and knowledge acquired by Brazil

with the calculation and monitoring of SDG 6 indicators were recognized by the United Nations agencies as a model for other countries. Currently, ANA is the focal point for 7 of the 11 indicators.

In this trajectory, ANA signed, in 2020, a partnership with the United Nations University – Institute of Water, Environment and Health (UNU-INWEH), aiming at the exchange of information and experience for the application of the tool to support decision-making related to SDG 6, called, by UNU, SDG 6 Policy Support System (SDG-PSS). The tool was developed by UNU, as part of the Project "Water in the World We Want", and aims to offer subsidies on how countries can advance, considering their reality and context, on the SDG 6 targets achievement. It generates evidence from the insights of experts who participate in the tool application. Several countries have already joined this initiative and, in 2021, Brazil joined the group. Due to its participation and engagement, UNU invited Brazil to be a Regional Hub of the SDG-PSS tool in Latin America and the Caribbean.

The result of the SDG-PSS application for Brazil is this publication that we are pleased to present. It will be possible to observe Brazil's experience in the tool implementation process, the application methodology, the results obtained, proposals to support the achievement of SDG 6 targets and identification of the main actors involved with the theme.

This exercise was attended by approximately 30 Brazilian specialists in SDG 6 from different entities and representations, such as: ministries, research institutions, federal, state and district government bodies, academic institutions, class associations and civil society organizations – giving legitimacy to



Check out this publication at:

<https://www.gov.br/ana/pt-br/centrais-de-conteudos/publicacoes/ods6>



the contextualization, approach, analysis of results and proposals for the tool use in the country and in international technical cooperation actions.

ANA's experience with the Policy Support System for SDG 6 has already been replicated to Portuguese-speaking countries in July 2022, in the context of the project "Support for the Management and Monitoring of Water Resources in the Countries of the Community of Portuguese Language Countries (CPLP)" – Pr57/Lis/13, coordinated by ANA, Brazilian Cooperation Agency (ABC/MRE, in Portuguese) and the Executive Secretariat of CPLP.

This document – Application in Brazil of the decision-making support tool related to SDG 6 (SDG-PSS) – was written observing the principles of simple language and intends to offer, to all technical and

curious audiences of the subject, evidence of the situation and gaps of SDG 6 indicators in Brazil with-in large components, such as: Status, Capacity, Finance, Policy & Institutional, Gender, DRR/Resilience and Integrity, in order to support propositions of effective public policies and actions for the targets achievement, considering our reality.

In addition to the significant contribution to ANA's international cooperation, we hope that this document can encourage reflections and actions from different institutions related to the Sustainable Development Goal (SDG) 6: Clean Water and Sanitation, a topic of high relevance in the national and international agenda.

ANA Board of Directors





1. SDG 6 in Brazil: ANA's view on indicators

One of the Sustainable Development Goals (SDG), according to the UN, is to ensure the availability and sustainable management of water and sanitation for all. In order to contribute to the monitoring and fulfillment of these targets, the National Water and Sanitation Agency (ANA) prepared the report "SDG 6 in Brazil: ANA's vision of the Indicators".

In the documents, information produced on all eight SDG 6 targets was systematized, including the results historical series, different levels of spatial disaggregation, analysis and suggestions for methodological improvements, comparison of Brazil with other countries and regions of the world, as well as step-by-step methodological sheets for replication. The scenarios of water resources availability, demands and uses of water for human activities, conservation actions of aquatic ecosystems and waste reduction and access to water supply, sanitary sewage and sewage treatment were evaluated.

In March 2022, ANA presented the second edition of the report "SDG 6 in Brazil: ANA's vision of the indicators", containing updates of the indicators' historical series and improvements in their calculation due to methodological advances and new data available. In Brazil, most SDG 6 indicators have ANA as a focal point for updating, monitoring and communicat-

ing with Custodian Agencies. In some of them, ANA works in an integrated way with the Brazilian Institute of Geography and Statistics (IBGE), Ministry of Health (MS), Ministry of Regional Development (MDR) and the Geological Service of Brazil (CPRM).

The indicators were updated comprising historical series and disaggregations in different spatial cut-outs. The reviews were carried out with the UN Custodian Agencies, also counting on participation in international workshops to reconcile methodologies and exchange experiences between countries.

Some updates made by ANA generated a very positive impact due to the volume of data reported and efforts to systematize it, such as indicator 6.3.2, which deals with water quality.

In addition, ANA seeks to disaggregate the indicators whenever possible, which also resulted in an innovative work on the indicators 6.4.1, related to water use efficiency, and 6.4.2, related to water stress.

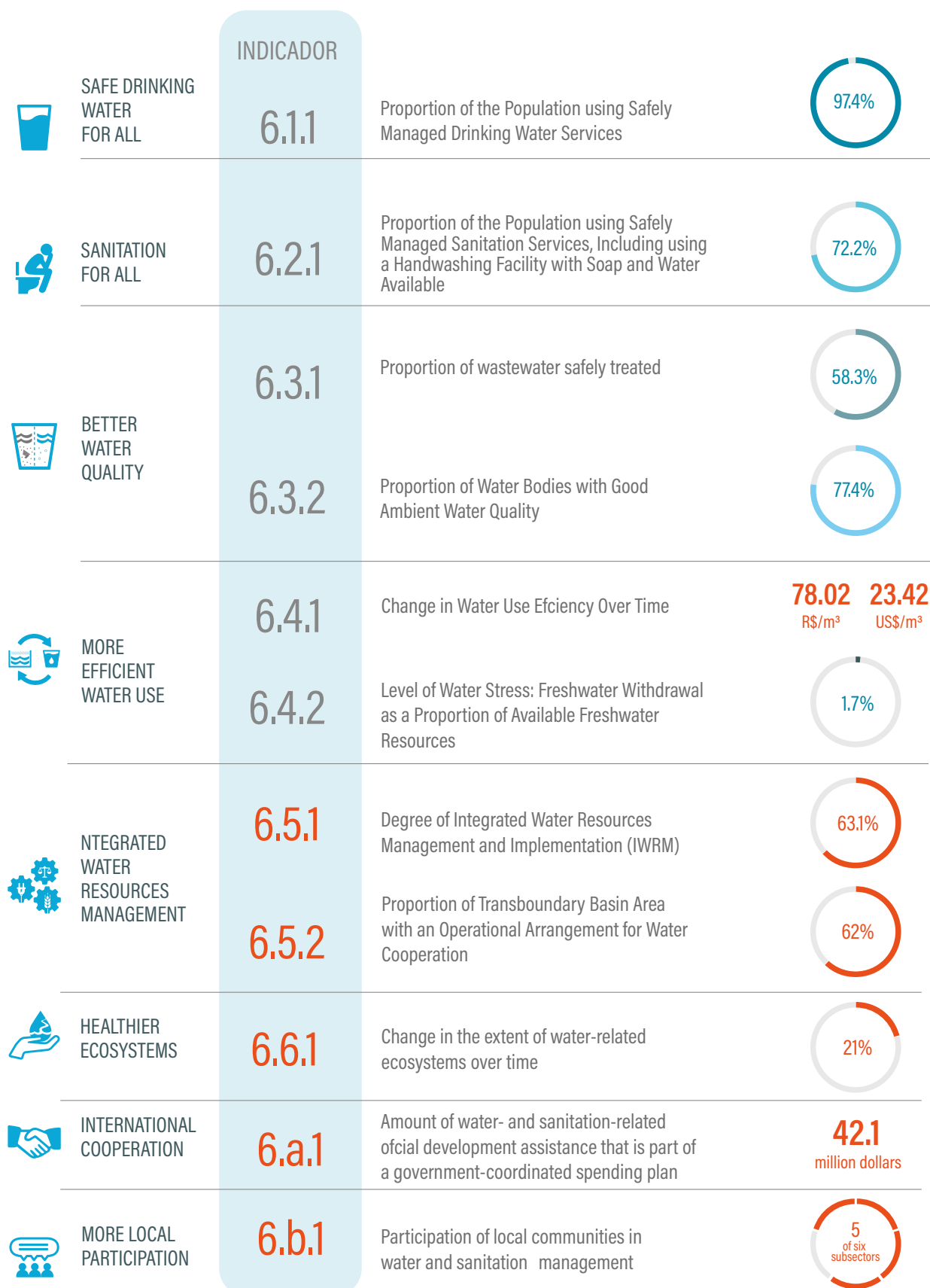
ANA's performance with the custodian agencies also contributed to improvements in the calculation methodology of some indicators, such as 6.4.2 and 6.6.1 (changes in aquatic ecosystems).



1st and 2nd editions available at:
www.gov.br/ana/pt-br/centrais-de-conteudos/publicacoes/ods6/ods6



A summary of the most current results of SDG 6 indicators is presented in the figure below:



Source: 2nd edition of the report "SDG 6 in Brazil: ANA's vision of the indicators"



Brazil still has some challenges in relation to data for SDG 6 monitoring, such as indicator 6.3.1, in which we do not have systematized data on the treatment of industrial effluents, also included in its calculation.

In the hand washing component with soap and water, indicator 6.2.1, Brazil does not have specific research for this data collection, so an approximation is adopted regarding the existence of a bathroom for exclusive use of the household; as well as, for indicator 6.3.2, the monitoring of groundwater quality is still not very representative, despite the advances observed.

Regarding indicator 6.6.1, the challenge is the selection of the most appropriate databases and data sources, among those available, in addition to the tools suggested by the UN; as for indicator 6.a.1, Brazil does not have systematized data on the effective use of official assistance resources for development received; and, finally, as for indicator 6.b.1, the biggest doubts concern the methodology and calculation method of the indicator, which are not yet clear.

In general, the SDG 6 indicators results for Brazil showed a positive evolution in relation to what was presented in the publication's first edition, with emphasis on the advances in safely managed sanitary sewage services and in the integrated water resources management. There are also some indicators that have shown good performance for a few years already, such as access to drinking water.

Among the SDG 6 targets, target 6.1, which refers to universal access to drinking water, is close to being achieved by 2030, considering the indicator's reach throughout the analyzed period. Similarly, targets 6.3 (water quality improvement), 6.4 (water-use efficiency and sustainability), 6.5 (implementation of integrated water resources management), 6.6 (protection and restoration of water-related ecosystems), 6.a (expansion of international cooperation) and 6.b (strengthening local communities' participation) have the potential to be achieved in the Brazilian case, as the indicators have shown significant improvements.

One of the biggest challenges for our country is the universalization of safely managed sanitary sewage services, target 6.2. However, it is important to note that this was one of the targets with the greatest increase verified in the period from 2009 to 2019, in which 47.8 million Brazilians started to have this access.

From the data and conclusions of the publication "SDG 6 in Brazil: ANA's Vision of the Indicators" initial recommendations were prepared to improve institutional, technical, legal and economic arrangements for the implementation and monitoring of SDG 6 targets in Brazil, due to the interface between the SDG 6 targets and the Action Plan of the National Water Resources Plan.







2. The tool to support decision-making related to SDG 6

From 2016 to 2018, the United Nations University Institute for Water, Environment and Health (UNU-IN-WEH), in partnership with the United Nations Office for Sustainable Development (UNOSD/DSDG/UNDESA), the Korea Environment Corporation (K-eco) and the Ministry of Environment of the Republic of Korea, and national partners from Ghana, Tunisia, Pakistan and Costa Rica, developed and delivered the “Water in the World We Want” project, raising options to support policies and the decision-making process in situations with limited water and sanitation data. The result was the development of the SDG 6 Policy Support System (SDS-PSS), considered as the first phase of the project.

This tool is a response to the challenge of bringing information from multiple tools in a single environment, through an evidence structure that aims to benefit the development of public actions and policies in their context of use. Its components were built based on more than 20 tools, processes and practices used by several countries and international water management programs.

The motivation for the SDG-PSS development came from the finding that most countries lack adequate

evidence and data to guide the decision-making process in achieving the targets of SDG 6. Therefore, the tool aims to help countries use their data, and, through a collaborative process of experts, generate evidence related to each of the SDG 6 indicators, showing the gaps and the most pressing needs to achieve the targets, according to the reality of each country.

During the project’s second phase (2018–2020), the tool was officially launched on an online platform and disseminated through regional workshops; in the third and current phase of the project (2021–2023), the SDG-PSS tool is available in six languages (English, Spanish, French, Portuguese, Arabic and Korean) and 34 countries¹ use it and contribute to its improvement, sharing their experiences and challenges.

The third phase of the project is conducted mainly through regional workshops in order to engage more countries, promote multinational collaboration and ensure knowledge exchange in the use of the SDG-PSS tool, spreading, to other stakeholders, the possibility of structuring a conducive environment to SDG 6 targets achievement.

¹ Armenia, Bangladesh, Bahrain, Brazil, Cambodia, Chile, Costa Rica, Colombia, Egypt, Ethiopia, El Salvador, Ghana, Guatemala, Iran, Jordan, Kenya, Kuwait, Madagascar, Mexico, Mongolia, Morocco, Pakistan, Panama, Paraguay, Republic of Korea, Saint Kitts and Nevis, Saudi Arabia, Sri Lanka, Tajikistan, Tanzania, Trinidad and Tobago, Tunisia, Turkey and Vietnam.



In 2021, UNU identified Brazil, Korea, Pakistan and Tunisia as the Regional Hubs of the SDG-PSS tool in Latin America and the Caribbean (Brazil), Asia (Korea and Pakistan) and Africa (Tunisia).

In this context, the use and promotion of the tool in Brazil were driven and coordinated by the National Water and Sanitation Agency, that, in 2020, signed a partnership with the United Nations University Institute for Water, Environment and Health (UNU-INWEH) the established partnership, the bases of the tool

implementation process in Brazil were structured, which began effectively in February 2021 – lasting approximately 4 months – and the results obtained are the object of this publication.

The SDG-PSS tool is free. It presents the possibility of analyzing six critical components, which generate evidence for each of the SDG 6 indicators, in order to help support the decision making of public policy makers, providing the means to visualize priorities, needs and gaps related to each SDG 6 targets, for



The SPS-SDG tool is available at the link: <https://sdgpss.net/en/>

SDG 6 Policy Support System (SDG-PSS)

SDG-PSS is designed as part of the project 'Water in the World We Want' to enable government actors and stakeholders to better collaborate to create national-level evidence around SDG 6, its targets and indicators.

Introduction

Components

Summary
View

Online
course



the fulfillment of the 2030 Agenda. The six components are: Capacity; Finance; Governance (Policy & Institutional); Gender; DRR/Resilience; and Integrity.

In addition to these components, the SDG-PSS tool has the “Status” component, which allows the insertion and presentation, by users, of the data and

information related to each target and indicator of SDG 6, including the values for the base year, current year, and target for 2030. This component helps users visualize their data, allowing them to generate scenarios from different set goals.



A brief conceptualization of the components can be presented as follows:



CAPACITY



Consisting of three subcomponents that evaluate: 1) the country's current capacity to achieve 2030 Agenda goals ("What degree of capacity at the national level is currently available to achieve the agreed 2030 target for this indicator?"); 2) the existence of strengthening mechanisms to build capacity and/or adjust them to the new challenges ("Which mechanisms have been adopted to build capacity at national level and/or adjust them to the new challenges under this indicator?"); and 3) the overall progress through evidence on whether or not the government is on track to build critical human capacity through the implementation of long-term policy and related mechanisms ("Is there evidence that the federal government is on track to build critical human capacity for the implementation of long-term policy and mechanisms related to this indicator? Long-term policy options and mechanisms for:");



FINANCE

Consisting of four subcomponents that assess whether: 1) the financial resources for SDG 6 follow an adequate flow of planning, commitment and utilization; 2) there are adequate sources and financing mechanisms, even if the resources are insufficient; 3) financial resources are applied to encourage environmentally sustainable technologies and to reduce inequities; and 4) there are mechanisms to ensure financial accountability/transparency. It should be noted, however, that none of these points fully addresses the issue of sufficient funding for the SDG 6 targets;



GOVERNANCE (Policy & Institutional)

Consisting of three subcomponents that evaluate: 1) policy for equity ("Do water-related policies, with respect to the indicator, have specific measures to target the following population groups? Poor populations, populations living in informal settlements, Populations living in remote or hard-to-reach areas, indigenous populations, internally displaced persons and/or refugees, women and girls, ethnic minorities, people with disabilities and populations with high incidence of diseases"); 2) coordination and cooperation ("Has the Government Lead Ministry/Institution developed cooperation mechanisms with private institutions or business entrepreneurs that could contribute to the achievement of this indicator?"); 3) public awareness ("How are the federal government's efforts to improve public awareness for this indicator?");



GENDER

Formed by three subcomponents: 1) national policy, which assesses the existence of gender-specific objectives and commitments (or gender strategy) in national policies; 2) governance, which assesses the incorporation of the theme (gender inclusion) in government actions (incorporation of gender issues in studies, analyses and research; policies to align and report on investments to meet gender inclusion goals; resources allocation to meet gender inclusion goals; participation of gender experts in decision-making processes; and institutional commitment to promote gender equality); 3) Training ("Is there capacity building on the gender theme to raise awareness on gender equality issues in leading Ministries/Institutions at least once a year?");



DRR/RESILIENCE

Consisting of three subcomponents that evaluate: 1) the national DRR (disaster risk reduction) strategies with regard to the Sendai Framework and climate change, and the existence of funding mechanisms to address DRR;

2) information and assessments (existence of multi-risk analysis for DRR, implementation of strategies, availability of hazard and risk data to the public, and awareness of disaster risks); and 3) infrastructure (adoption of critical infrastructure protection plans and allocation of financial resources);

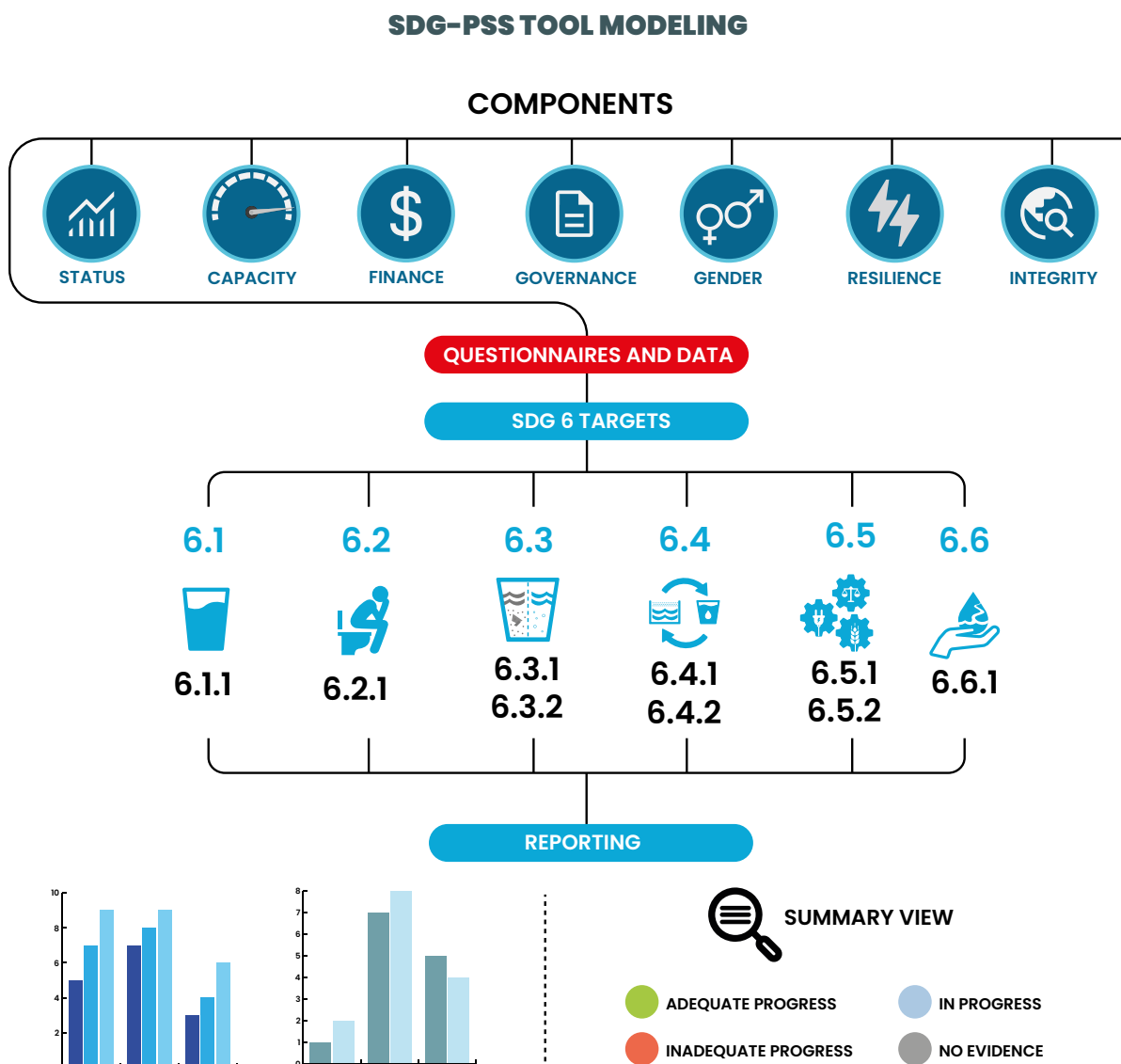


INTEGRITY

Consisting of three subcomponents that evaluate: 1) Policy and Integrity, characterizing integrity in water sector policy, taking into account the existence of control, inspection and transparency structures to prevent and detect fraud and corruption and fair and equitable access to public policies development and implementation; 2) Public sector integrity ("Which mechanisms are in place to assure public sector integrity in lead Ministries/Institutions for this indicator?"); and 3) Whistleblower protection ("Which mechanisms are in place to ensure whistleblower protection for this indicator?").



The implementation (application) process of SDG-PSS tool in Brazil, with the presence of the seven components, is presented below:



The tool application is a collaborative process, based on the completion of questionnaires related to each of the six components and which present questions that reflect the the interviewer perception in relation to the investigated topic. Thus, the collaborators list composition is crucial for the generation of evidence that portrays the country's real situation, and it is recommended that it be, preferably, specialists in SDG 6.

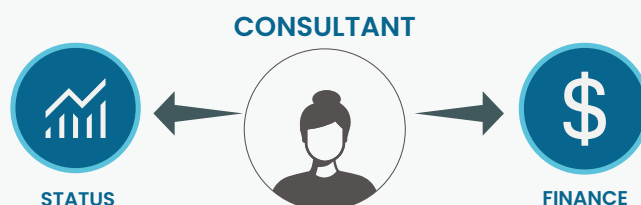
In Brazil, aiming at greater institutional representativeness, the questionnaires of the components "Capacity-Building", "Governance/Institutional and Policy", "Gender", "Integrity" and "Resilience/Disaster Risk Reduction" were answered by representatives or focal points of institutions involved, at different lev-

els of depth, in the theme of water resources, sanitation and SDG 6. Through the questionnaire, the representatives expressed their view or opinion, as experts in the subject, based on perception, experience and technical knowledge. The "Status" and "Finance" components, unlike the others, bearing a more quantitative character, were completed by a single specialist, based on a bibliographic survey. In the case of the "Status" component, the data from the publication "SDG 6 in Brasil: ANA's vision of the indicators" were used. The following figure illustrates the collaboration process of the focal points and the participation of the specialized consultancy for this initiative.

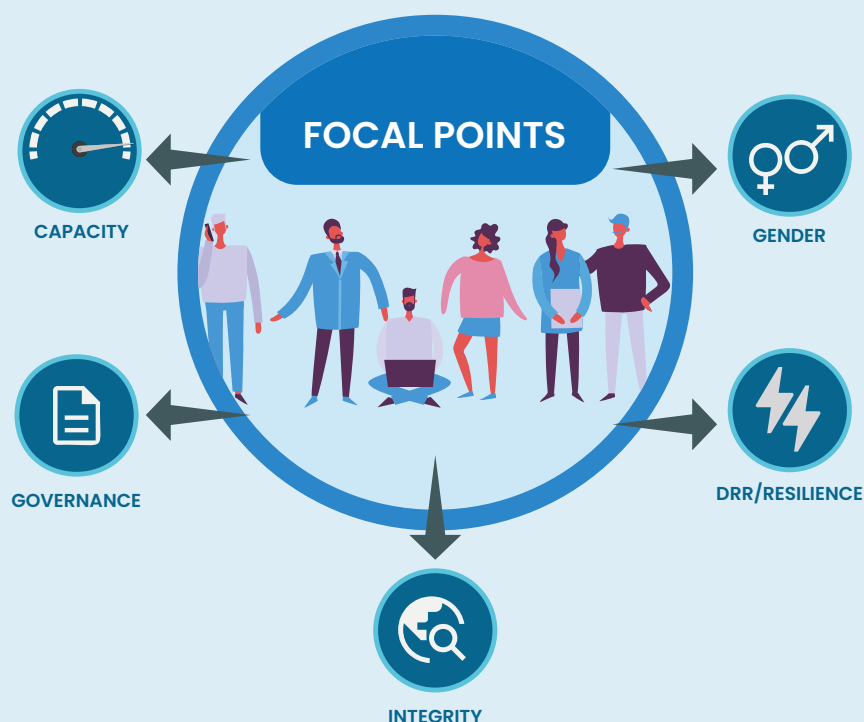


COLLABORATION PROCESS OF FOCAL POINTS

More direct or objective character



More subjective character based on perception, knowledge and experience



Representatives of various institutions of the Federal Government, State and District Governments, the Academic (Universities), Civil Society and UN System Organizations were invited, as listed below:

- Federal Government: ANA – National Water and Sanitation Agency; IBGE – Brazilian Institute of Geography and Statistics; MRE – Ministry of Foreign Affairs; IPEA – Institute for Applied Economic Research; MS – Ministry of Health; MDR – Ministry of Regional Development; Presidency of the Republic – Government

Secretariat; ENAP – National School of Public Administration; EMBRAPA – Brazilian Agricultural Research Corporation;

- State and District Governments: SEAS-RJ – State Secretariat for Environment and Sustainability of Rio de Janeiro; SEMAD-GO – State Secretariat for the Environment and Sustainable Development of Goiás; ADASA-DF – Regulatory Agency for Water, Energy and Sanitation of the Federal District;



•Academic (Universities): IME – Military Institute of Engineering; UFF – Fluminense Federal University; PPED/IE/UFRJ – Post-Graduation in Public Policies, Strategies and Development from the Institute of Economics of the Federal University of Rio de Janeiro; Cathedra UNESCO of USP of São Carlos; Cathedra of UFOP – Federal University of Ouro Preto;

• Civil Society: OGA Brazil – Water Governance Observatory; APEAM – Paranaense Association of Environmental Engineering; ACIDA – Santa Catarina Association of Sanitary and Environmental Engineering; AEAS-DF – Association of Environmental Engineers and Sanitarians of the DF; FNEAS – National Federation of Environmental and Sanitary Engineering Associations; APEA-RN – Association of Profes-

sional Environmental Engineers of Rio Grande do Norte; CREA-RN – Regional Council of Engineering and Agronomy of Rio Grande do Norte; Global Compact Brazil, Water and Sanitation Institute;

•United Nations System Organizations (UN): UNDP – United Nations Development Program; UNESCO Representation in Brazil; and PAHO/WHO – Pan American Health Organization.

The results obtained reflect these experts' opinion on each of the tool components, applied to each of the SDG 6 indicators, considering their experience and knowledge and contributing to an analysis of the Brazilian scenario on the subject.



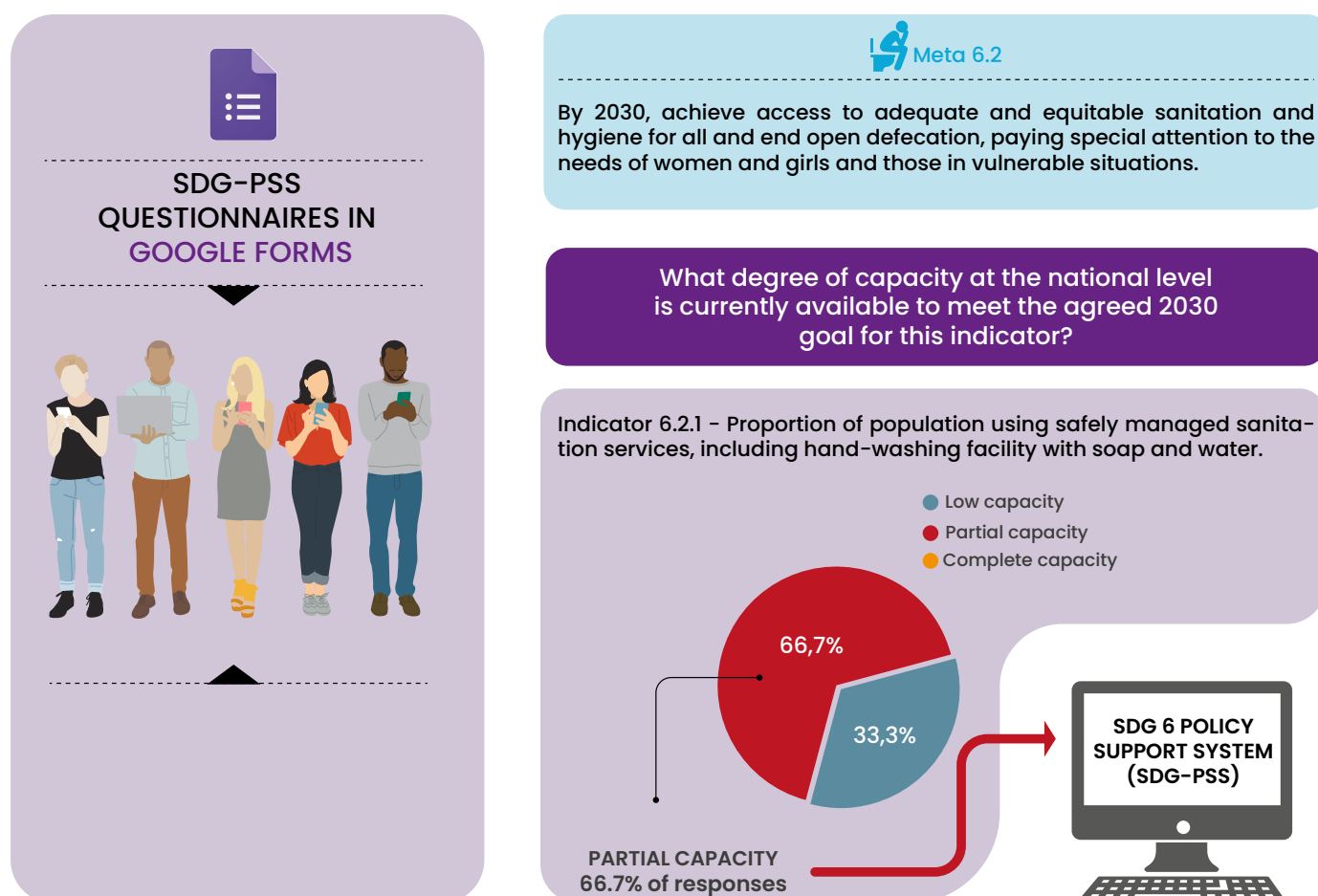


3. Tool application to the Brazilian case.

In the exercise of implementing the decision-making support tool related to SDG 6 to the Brazilian reality, the SDG-PSS questionnaires were translated to the Portuguese language², developed in the “Google

Forms” platform and the answers were consolidated by the mode criterion, as shown in the following figure.

COLLECTION PROCESS OF FOCAL POINTS INFORMATION (HYPOTHETICAL EXAMPLE)

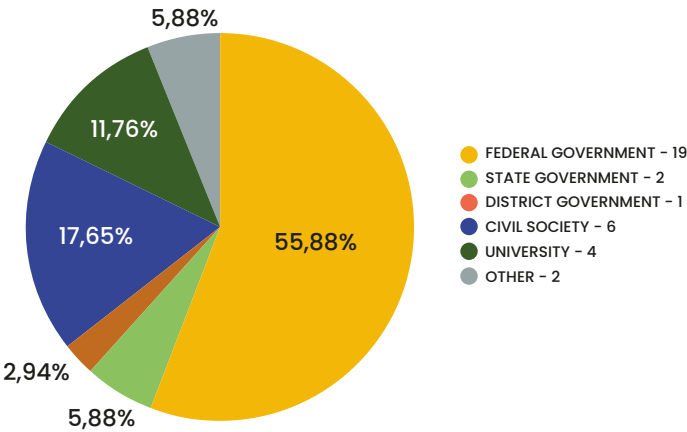


The following graphs express the representativeness of collaborators (focal points), by sector, for each of the SDG-PSS tool components – “Capacity”, “Policy and Institutional”, “Gender”, “Integrity” and “Disaster Risk Resilience/Resilience”.

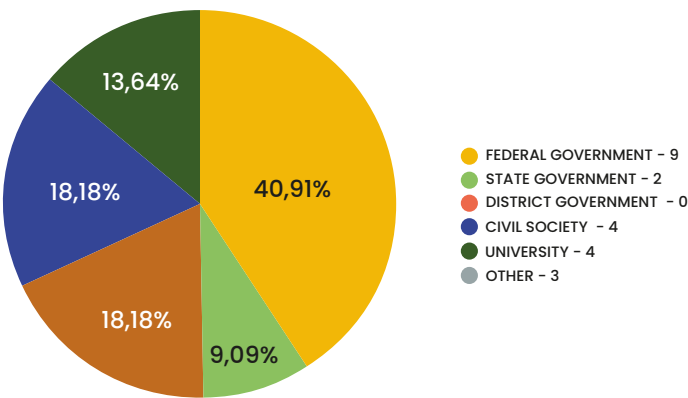
² When the tool was implemented in Brazil, the platform was offered in English, French, Korean and Spanish. Therefore, to facilitate the work of the specialists, the questionnaires were translated into Portuguese.



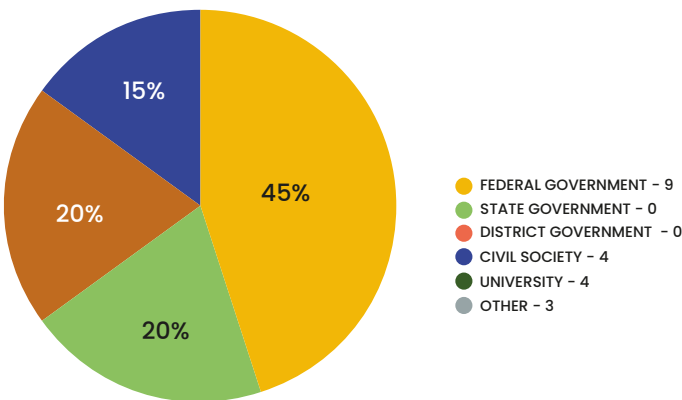
**“CAPACITY” QUESTIONNAIRE
PARTICIPATION BY SECTOR
34 COLLABORATORS**



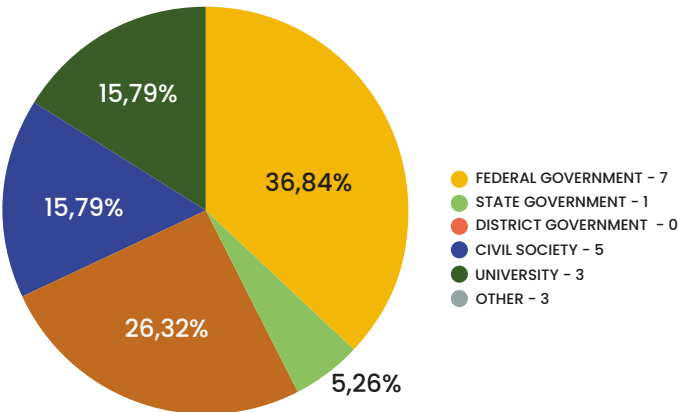
**“GOVERNANCE” QUESTIONNAIRE
PARTICIPATION BY SECTOR
22 COLLABORATORS**



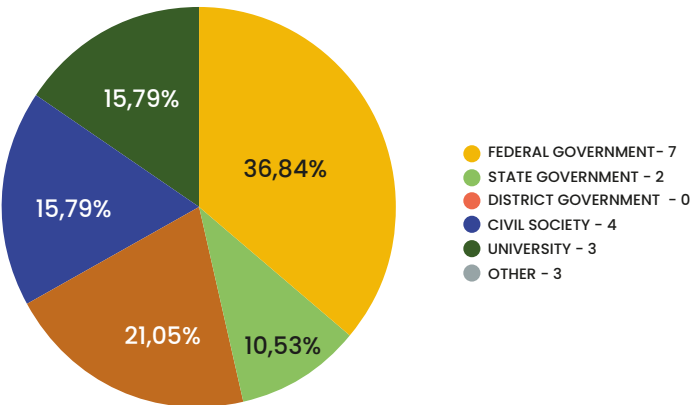
**“GENDER” QUESTIONNAIRE
PARTICIPATION BY SECTOR
20 COLLABORATORS**



**QUESTIONNAIRE “DRR/RESILIENCE”
PARTICIPATION BY SECTOR
19 COLLABORATORS**



**“INTEGRITY” QUESTIONNAIRE
PARTICIPATION BY SECTOR
19 COLLABORATORS**

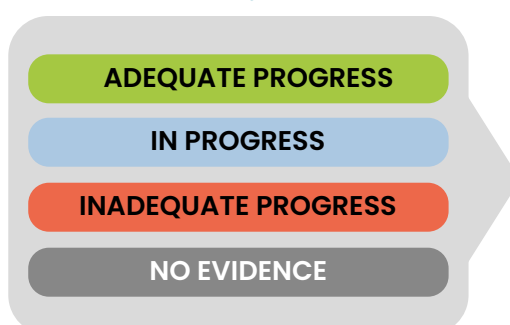
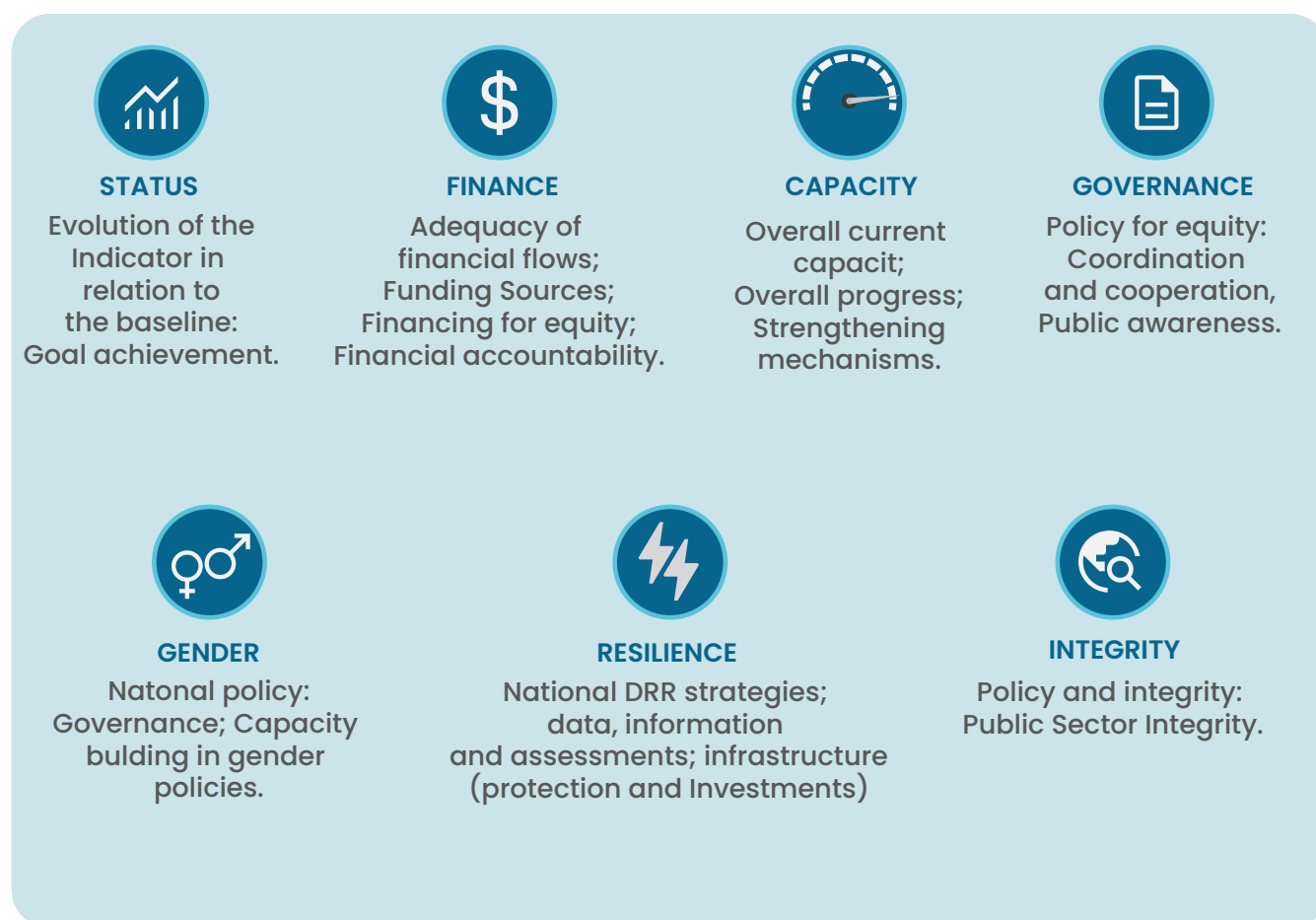




The following figure illustrates the components and sub-components analyzed by the SDG-PSS tool and presented in the summary view. The following pages present the final result of the implementation of the SDG-PSS tool, for the Brazilian case study (Summary View), in which the areas of adequate progress (dark green), progress (blue), inadequate progress (red) or areas that are without evidence (gray) are identified, to achieve the goals of SDG 6 in Brazil.

From this matrix, it is possible to identify, more specifically, the areas that need greater action in terms of action and public policy from the analysis of the 19 (nineteen) subcomponents – arranged in the columns – and the 9 (nine) SDG 6 indicators – arranged in the lines –, making a total of 171 (one hundred and seventy-one) fields of results and, consequently, subsidies for a decision-making process in Brazil. A thorough outcome analysis of each of these fields is presented in topics 5, 6 and 7 of this publication.

COMPONENTS AND SUBCOMPONENTS OF THE SDG-PSS TOOL



COURSE CORRECTION

IMPROVEMENT OF PRACTICE AND PLANS



SUMMARY VIEW

TARGET		INDICATOR		CAPACITY			FINANCE			
				Overall current capacity	Strengthening mechanisms	Overall progress	Adequacy of financial flow	Funding Sources	Financing for equity	Financial accountability
6.1	By 2030, achieve universal and equitable access to safe and affordable drinking water for all	6.1.1	Proportion of the population using safely managed drinking water services							
6.2	By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.	6.2.1	Proportion of the population using (a) safely managed sanitation services and (b) a hand-washing facility with soap and water							
6.3	By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse locally.	6.3.1	Proportion of wastewater safely treated							
		6.3.2	Proportion of water bodies with good ambient water quality							

[illegible]



TARGET		INDICATOR		CAPACITY			FINANCE			
				Overall current capacity	Strengthening mechanisms	Overall progress	Adequacy of financial flow	Funding Sources	Financing for equity	Financial accountability
6.4	By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.	6.4.1	Change in water use efficiency over time							
		6.4.2	Level of water stress: freshwater withdrawal as a proportion of available freshwater resources							
6.5	By 2030, implement integrated water resources management at all levels, including through transboundary cooperation	6.5.1	Degree of integrated water resources management implementation (0-100)							
		6.5.2	Proportion of transboundary basin areas with an operational arrangement for water cooperation							
6.6	By 2020, protect and restore water-related ecosystems, including mountains, forests, wetlands, rivers, aquifers and lakes, reducing the impacts of human action	6.6.1	Change in the extent of water-related ecosystems over time							

[illegible]

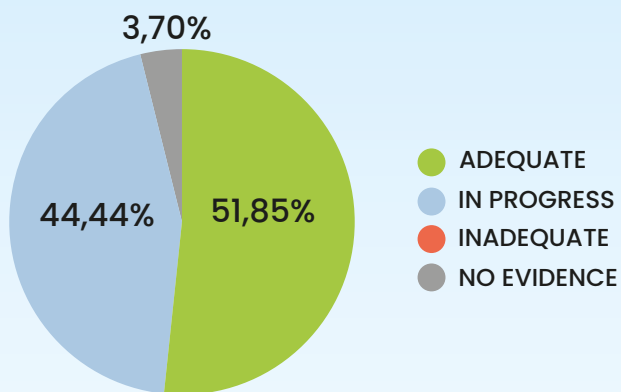




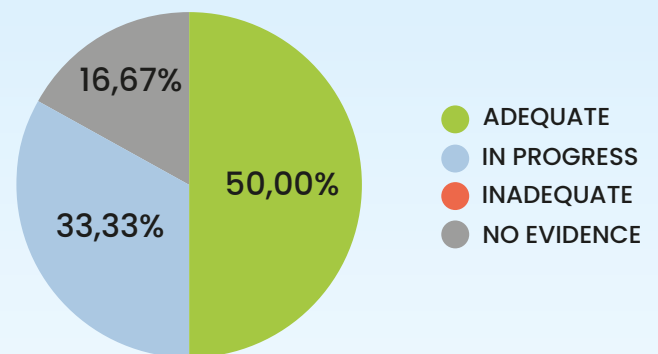
4. Result and analysis of SDG 6 in Brazil

The general consolidation of the evidence generated per component of the SDG-PSS tool is presented in the following figure:

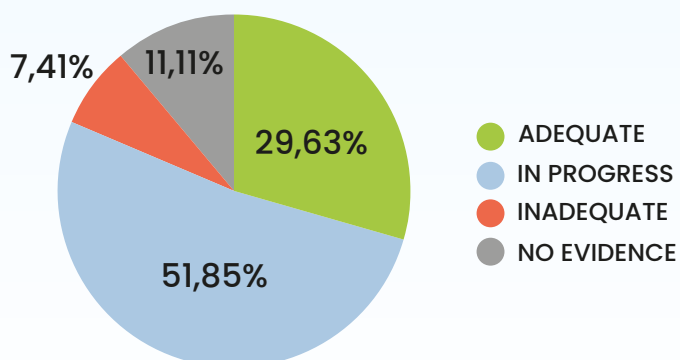
CAPACITY - SDG6



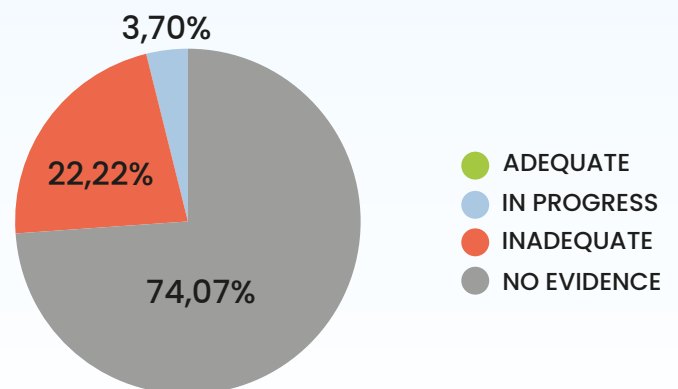
FINANCE - SDG6



GOVERNANCE - SDG6

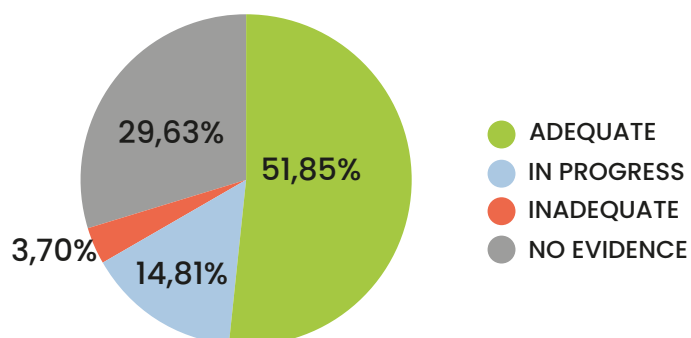


GENDER - SDG6

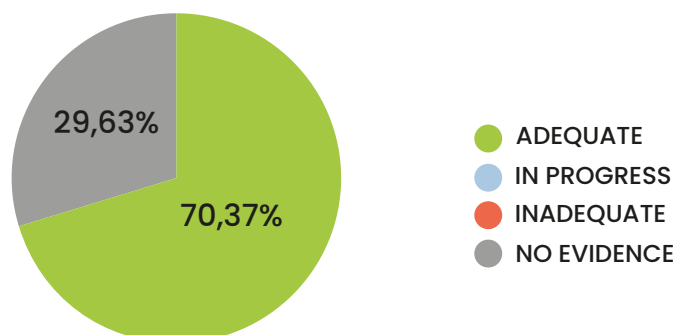




DRR/RESILIENCE – SDG6



INTEGRITY – SDG6



Therefore, the main conclusions and findings can be summarized as follows:



Source: Freepick

- The components “Capacity”, “Finance”, ““DRR/Resilience” and “Integrity” presented “adequate evaluations” in 50% or more of the analyzed fields, and the component “Integrity” was the one that presented the best performance, with more than 70% of the fields evaluated as “adequate”;
- The result of the “Governance” component requires reflection, since almost 63% of the fields were evaluated as “in progress” and “inadequate”;
- Another result to be highlighted concerns the “Gender” component, which presented the majority of “no evidence” evaluations, as well as a higher percentage of evaluations considered “inadequate”.

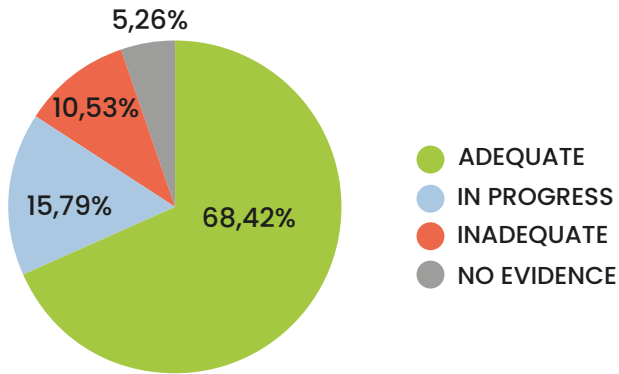
Another point to highlight is that the survey obtained positive (adequate) results in all SDG 6 indicators for the subcomponents: financial accountability/transparency, public sector integrity, and whistleblower protection mechanisms. It is possible to assume that the SDG-PSS tool mainly evaluates the existence of instruments and mechanisms for controlling/verifying transparency/financial accountability and integrity, without, however, evaluating the effectiveness and its applications.

Finally, it is important to note that, although the “Finance” component achieved a relatively positive result (50% considered adequate and 33.33% in progress), none of the subcomponents fully addresses the issue of sufficient financing to achieve the SDG 6 targets, which is a point of suggestion from Brazil for the improvement of the SDG-PSS tool.

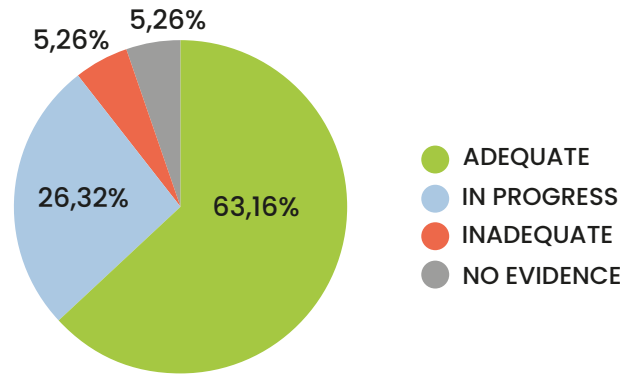
From another perspective, the following graphs present the general consolidation of the evidence generated for each indicator of SDG 6.



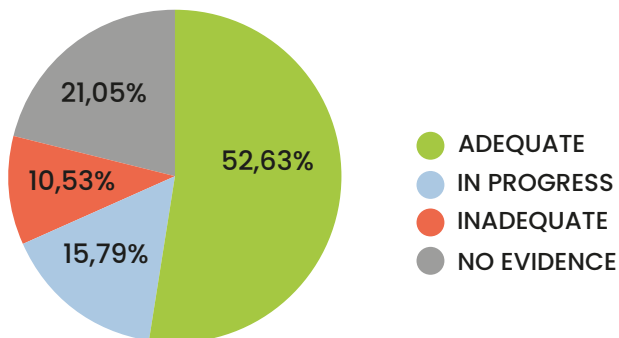
Indicator 6.1.1 – Proportion of population using safely managed potable water services



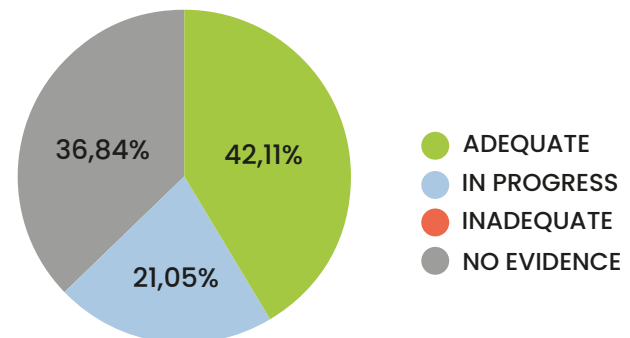
Indicator 6.2.1 – Proportion of the population using safely managed sanitation services and hand washing facilities with soap and water



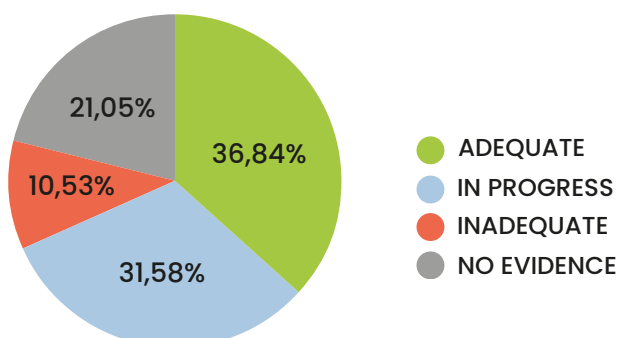
Indicator 6.3.1 – Proportion of wastewater safely treated



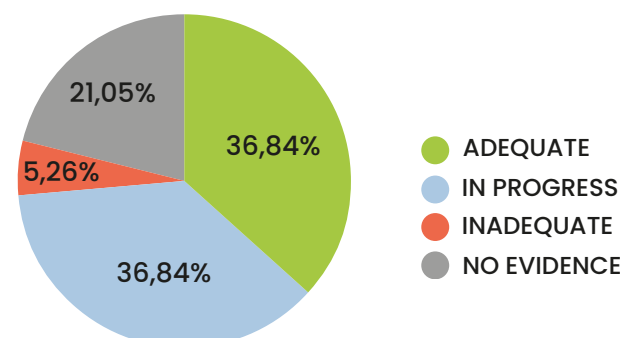
Indicator 6.3.2 – Proportion of water bodies with good ambient water quality



Indicator 6.4.1 – Change in water use efficiency over time

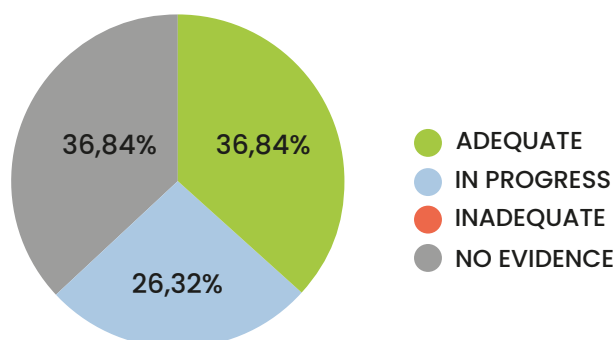


Indicator 6.4.2 – Level of water stress: freshwater withdrawal as a proportion of available freshwater resources

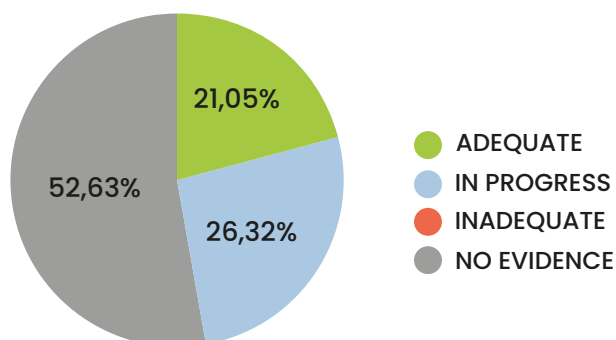




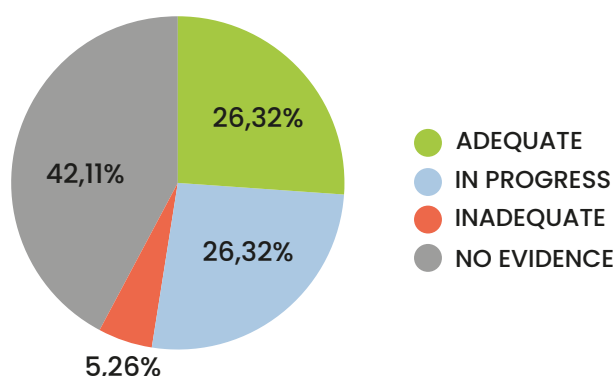
Indicator 6.5.1 – Degree of integrated water resources management implementation (0–100)



Indicator 6.5.2 – Proportion of transboundary basin area with an operational arrangement for water cooperation



Indicator 6.6.1 – Change in the extent of water-related ecosystems over time



The main conclusions and findings can be summarized as follows:

- The indicators corresponding to sanitation (6.1.1: Access to drinking water; 6.2.1: Sanitary sewage; and 6.3.1: Wastewater treatment) were the ones with the best overall assessment, with “adequate” percentages higher than 50%³;

- The sanitation indicators (6.1.1 and 6.2.1) strengths were the components “Capacity”, “Finance”, “DRR/Resilience” and “Integrity”. However, the “Gender” issue regarding access to safely managed drinking water and sanitation services was considered inadequate by most collaborators, especially in the national policy aspect;

- Indicator 6.3.1 (wastewater treatment) lacks adequate measures to reduce inequalities, especially in the most socioeconomically vulnerable societies and in minority groups, such as populations living in rural areas, traditional communities and indigenous peoples, for example;

- Indicator 6.3.2, which measures the quality of water bodies, presented most of the fields evaluated as “adequate”, but it appears that investment planning should ensure adequate and more regular (or continuous) sources, as well as efforts to improve public awareness of the importance of wastewater treatment before release into the receiving bodies;

- Indicators 6.4.1 and 6.4.2 – which deal with water use efficiency and water stress level, respectively – had most evaluations divided between “adequate” and “in progress”, highlighting as strengths the components “Capacity” and “Integrity”. For these indicators, some aspects of governance and gender should be improved, especially in terms of coordination, cooperation, policy for equity and public awareness;

- Indicators 6.5.1 and 6.5.2 – which deal with integrated water resources management – and indicator 6.6.1 – which deals with the protection and restoration of water-related ecosystems – were the ones that presented most evaluations as “no evidence”, mainly in the following aspects: sources of financing; gender inclusion; strategies, information and analyses for disaster risk reduction/resilience; and policy and integrity. The strengths of these indicators stand out: capacity-building mechanisms; financial accountability; critical infrastructures protection; coordination and cooperation; and public sector integrity.

³ The best situation of the sanitation indicators is not in terms of meeting the targets, but in the evaluation in relation to the evaluation in relation to SDG-PSS tool components, which demonstrates the extent to which action should be taken to help the targets progress.



• Also, the data collected on indicator 6.6.1 show that there should be a greater public awareness about the need for protection and restoration of water-related ecosystems, an aspect considered negative/inadequate.

• The following are the main conclusions obtained from a detailed and combined analysis of the results of the sub-components and SDG 6 indicators:



CAPACITY COMPONENT

• The sub-component “overall current capacity” predominated as “in progress” for all SDG 6 indicators;

• The sub-component “strengthening mechanisms” was generally considered as “adequate”, despite the fact that, in the specific case of indicator 6.5.2, the strengthening mechanisms were considered as “no evidence”. It was observed that indicators 6.3.1 and 6.6.1 need to evolve in the implementation of long-term policies and mechanisms to achieve the goals;

• The sub-component “overall progress”, for most SDG 6 indicators, showed that the country is on track to build critical human capacity for the implementation of long-term policies, except regarding the mechanism of “inclusion, participation, equity and empowerment of excluded groups”.



FINANCE COMPONENT

• The sub-component “adequacy of financial flows” was considered “adequate” for the sanitation indicators (6.1.1, 6.2.1 and 6.3.1) and “in progress” for the other indicators;

• For the sanitation indicators (6.1.1, 6.2.1 and 6.3.1), the funding sources were considered adequate and for the other indicators there is no evidence;

• For the sub-component “financing for equity”, the tool pointed out the “adequate” diagnosis for the sanitation indicators (6.1.1, 6.2.1 and 6.3.1) and in progress for the others;

• The sub-component “financial accountability/transparency” was considered “adequate” for all SDG 6 indicators (existence of annual tax report, ex-

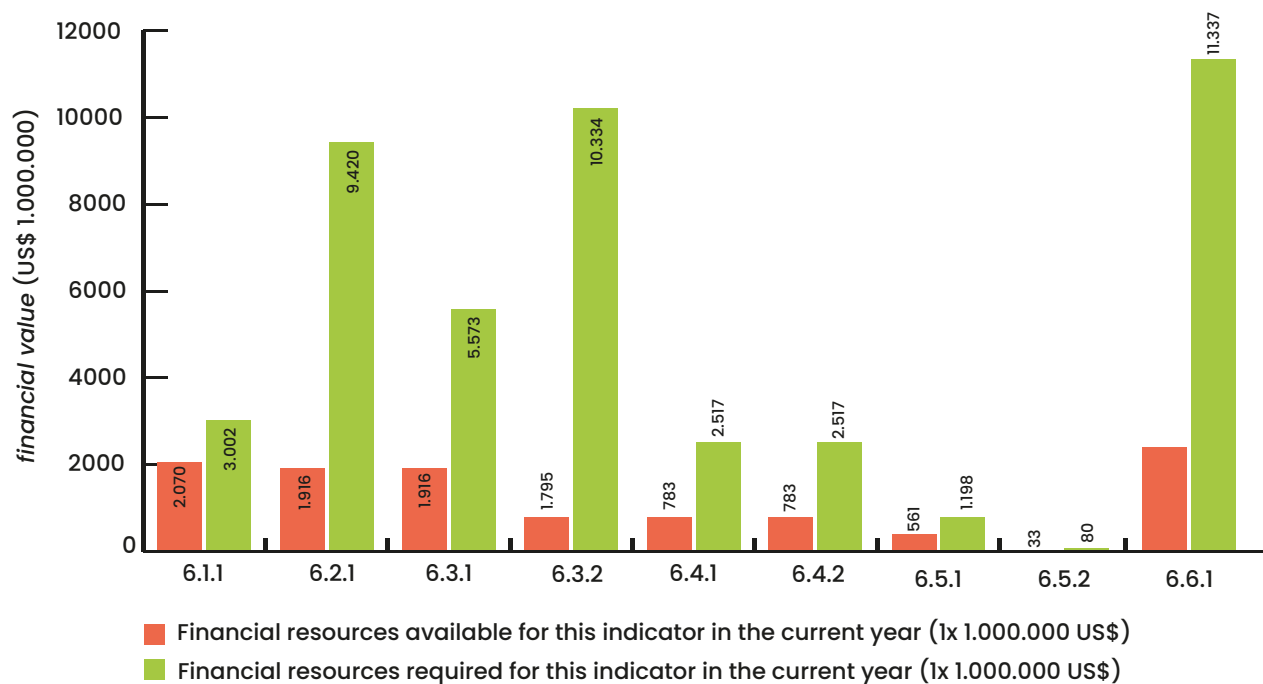
ternal audit by designated and independent third parties, and possibility of analysis of audit reports by Congress);

• It is noteworthy that no subcomponent measures whether or not the resources are sufficient to achieve the targets.

• Outside of the tool context, the following figure, prepared from consultation to national databases – National Sanitation Plan (Plansab, 2019) and the National Sanitation Information System (SNIS, 2019) –, presents an estimate of the financial resources available or invested in 2021 and the annual financial resources necessary to achieve the goals in 2030:



ANNUAL FINANCIAL RESOURCES AVAILABLE/INVESTED VS. ANNUAL FINANCIAL RESOURCES REQUIRED



• It is observed that, for all SDG 6 indicators, the financial resources applied annually are insufficient to achieve the targets foreseen in the year 2030. The indicator of accessibility to drinking water (6.1.1)

is the one that presents a little better situation, with 69% of the necessary financial resources invested in 2019, considered as current year of the SDG-PSS tool.





GOVERNANCE COMPONENT

- Only for the indicator of access to drinking water (6.1.1) is there evidence that there are specific measures in water policies to reach minority or socially less favored groups. For indicators 6.3.2 and 6.5.2, there is no evidence; for 6.3.1 the situation was considered inadequate; and, for the other indicators, the policy for equity was considered “in progress”
- In the sub-component “coordination and cooperation”, the “adequate” diagnosis predominated for most indicators, with the exception of indicators 6.4.2 (in progress) and 6.6.1 (no evidence);
- For the sub-component “public awareness”, the analysis pointed out the diagnosis “in progress” for all SDG 6 indicators, except indicator 6.6.1, which was considered “inadequate”.



GENDER COMPONENT

- Regarding the sub-component “national policy”, there is a lack of articulation of gender-specific objectives in the main national policies and strategies for SDG 6; the absence of gender analysis in the evaluation of national policies related to SDG 6; and the absence of addressing issues of women’s participation and representation in national policies and focus on vulnerability pockets to promote equity;
- Also, in the sub-component “national policy”, indicators 6.1.1, 6.2.1, 6.4.1, 6.4.2 were classified as “inadequate” and indicators 6.3.1, 6.3.2, 6.5.1, 6.5.2, and 6.6.1, as “no evidence”;
- The sub-component “governance” identified that “there is no evidence” for indicators 6.3.1, 6.3.2, 6.4.2, 6.5.1, 6.5.2 and 6.6.1. For indicators 6.1.1 and 6.4.1, governance was considered “inadequate” and only for indicator 6.2.1 was governance considered “in progress”;
- The sub-component “training on gender issues” was classified as lacking evidence for all SDG 6 indicators.





DRR/RESILIENCE COMPONENT

•For the subcomponents “strategies” and “information and assessments”, most indicators were considered as “no evidence”. Indicator 6.3.1 was considered inadequate for the sub-component “strategies” and indicator 6.4.2, in progress, for the sub-component “information and assessments”;

•For the sub-component “infrastructure”, it was found that for all indicators there is evidence that leading agencies adopt and implement critical infrastructure protection plans and that financial resources are allocated for post-disaster rehabilitation for SDG 6.



INTEGRITY COMPONENT

•Regarding the sub-component “policy and integrity”, it was found that, for sanitation indicators 6.1.1 and 6.2.1 (water and sewage), the diagnosis is adequate. For the other indicators, there is no evidence, especially in relation to the existence of mechanisms used to prevent and detect fraud and corruption in projects and programs financed by donors;

•The sub-components “public sector integrity” and “whistleblower protection” were considered adequate for the vast majority of indicators.





5. SWOT matrix (strengths, weaknesses, opportunities and threats).

SWOT Analysis (strengths, weaknesses, opportunities and threats) is a simple tool, whose methodological scope can be used to carry out any type of scenario or environment analysis, with use in public management initiatives, with positive factors (Strengths and Opportunities) and negative factors (Weaknesses and Threats) analyzed from the perspective of the internal and external environments.

Strengths and weaknesses are analyzed in the internal environment, so that the positive points of institutions and their management are maintained and strengthened and that measures are taken to correct or avoid negative points or weaknesses.

In this study, the SWOT analysis considered the critical subcomponents as “internal factors” – understanding as internal the entire management for the process of achieving the SDG 6 targets – and, as “external factors”, the political, legal, institutional, economic and social aspects that may affect the fulfillment of the SDG 6 targets of the 2030 Agenda.

Making an integration of the SWOT Analysis with the results of the SDG-PSS tool, the aspects of the critical components considered “adequate” and “in prog-

ress” are the evidenced strengths that indicate that Brazil is on the right track to achieve the targets, and, therefore, current efforts should be maintained and increased.

The aspects considered “inadequate” or “no evidence” correspond to the points where there are weaknesses, indicating that Brazil must correct, avoid and improve them, in order to seek the achievement of the targets set out in the 2030 Agenda.

Regarding the analysis of the external environment (or external factors), the aspects that, in principle, cannot be manipulated or directly affected by the government’s leading bodies and institutions, mainly, are evaluated. However, these are aspects whose institutions must be aware, as they correspond to opportunities and threats that may positively or negatively affect, in this order, the fulfillment of 2030 Agenda goals.

In the survey carried out, the external political, legal, institutional, economic and social factors mentioned and that may affect the fulfillment of SDG 6 targets of 2030 Agenda are::



Policy factors:

- Continuity of plans and programs;
- Political stability (elections); and
- International agreements (technology, partnerships, etc.).



Legal and Institutional Factors:

- Update and review of the National Water Resources Plan (PNRH⁴, in Portuguese);
- Update and review of the National Sanitation Plan (Plansab);
- New regulatory framework for sanitation;
- Advances in public policies;
- Advances in environmental policies;
- Change in the structures of the Councils and Committees related to water resources, sanitation and the environment; and
- Improvement of related infrastructures to SDG 6.



Economic and Social Factors

- Investments with public resources;
- Inflation rate;
- Unemployment rate;
- Interest rate;
- Economic growth (GDP increase);
- Pandemics, such as Covid-19;
- Private sector participation/external investments;
- Credit/financing to the private sector;
- Investment in new technologies; and
- Energy crisis.

For each external factor listed, two characteristics were assigned – which define whether each factor corresponds to an opportunity or threat – and also the level of importance, based on a suggestion of a SWOT Analysis model spreadsheet.

The following tables present the approach of the country's current scenario in relation to external factors (opportunities and threats) for sanitation indicators.



Available on the website: <https://www.treasy.com.br/>



⁴ The new PNRH (for the period from 2022 to 2040) was approved after this work was carried out in March 2022



**TABLE 1 – EVALUATION OF EXTERNAL FACTORS (OPPORTUNITIES AND THREATS)
FOR INDICATORS RELATED TO SANITATION (6.1.1, 6.2.1 and 6.3.1)**

FACTOR	EXTERNAL FACTOR	CURRENT STATUS	IMPORTANCE	SCORE	ANALYSIS
Political Factors	Continuity of plans and programs	Neutral	Extremely Important	-2	THREAT
	Political Stability (elections)	Neutral	Extremely Important	-2	THREAT
	International agreements (technologies, partnerships, etc.)	Favorable	Important	4	OPPORTUNITY
Legal and institutional factors	Updating and review of PNRH	Favorable	Important	4	OPPORTUNITY
	Updating and review of Plansab	Favorable	Extremely Important	5	OPPORTUNITY
	New regulatory framework for sanitation	Favorable	Extremely Important	5	OPPORTUNITY
	Advances made in terms of public policies	Neutral	Extremely Important	-2	THREAT
	Advances made in terms of environmental policies	Unfavorable	Important	-4	THREAT
	Change in the structure of councils and committees	Neutral	Important	-1	THREAT
	Improvements to infrastructure related to SDG 6	Favorable	Important	4	OPPORTUNITY
Economic and social factors	Investments made with government funds	Unfavorable	Extremely Important	-5	THREAT
	Inflation rate	Unfavorable	Important	-4	THREAT
	Unemployment rate	Unfavorable	Important	-4	THREAT
	Interest rates	Unfavorable	Important	-4	THREAT
	Economic growth (increase in GDP)	Favorable	Extremely Important	5	OPPORTUNITY
	Developments in ongoing Covid-19 pandemic	Neutral	Extremely Important	-2	THREAT
	Private sector participation /external investments	Favorable	Extremely Important	5	OPPORTUNITY
	Private credit/financing	Favorable	Important	4	OPPORTUNITY
	Investment in new technologies	Neutral	Important	-1	THREAT
	Energy crisis	Unfavorable	Extremely Important	-5	THREAT

INDICATOR 6.1.1: Proportion of the Population Using Safely Managed Drinking Water Services

INDICATOR 6.2.1: Proportion of the population using safely managed sanitation services

INDICATOR 6.3.1: Proportion of wastewater safely treated



**TABLE 2 – EVALUATION OF EXTERNAL FACTORS (OPPORTUNITIES AND THREATS)
FOR INDICATORS 6.3.2, 6.4.1, 6.4.2, 6.5.1, 6.5.2 and 6.6.1**

FACTOR	EXTERNAL FACTOR	CURRENT STATUS	IMPORTANCE	SCORE	ANALYSIS
Political Factors	Continuity of plans and programs	Neutral	Extremely Important	-2	THREAT
	Political Stability (elections)	Neutral	Extremely Important	-2	THREAT
	International agreements (technologies, partnerships, etc.)	Favorable	Important	4	OPPORTUNITY
Legal and institutional factors	Updating and review of PNRH	Favorable	Extremely Important	5	OPPORTUNITY
	Updating and review of Plansab	Favorable	Important	4	OPPORTUNITY
	New regulatory framework for sanitation	Favorable	Important	4	OPPORTUNITY
	Advances made in terms of public policies	Neutral	Important	-1	THREAT
	Advances made in terms of environmental policies	Unfavorable	Extremely Important	-5	THREAT
	Change in the structure of councils and committees	Neutral	Extremely Important	-2	THREAT
	Improvements to infrastructure related to SDG 6	Favorable	Extremely Important	5	OPPORTUNITY
Economic and social factors	Investments made with government funds	Unfavorable	Extremely Important	-5	THREAT
	Inflation rate	Unfavorable	Important	-4	THREAT
	Unemployment rate	Unfavorable	Important	-4	THREAT
	Interest rates	Unfavorable	Important	-4	THREAT
	Economic growth (increase in GDP)	Favorable	Extremely Important	5	OPPORTUNITY
	Developments in ongoing Covid-19 pandemic	Neutral	Extremely Important	-2	THREAT
	Private sector participation /external investments	Favorable	Extremely Important	5	OPPORTUNITY
	Private credit/financing	Favorable	Important	4	OPPORTUNITY
	Investment in new technologies	Neutral	Important	-1	THREAT
	Energy crisis	Unfavorable	Extremely Important	-5	THREAT

INDICATOR 6.3.2: Proportion of water bodies with good environmental water quality

INDICATOR 6.4.1: Change in water use efficiency over time

INDICATOR 6.4.2: Level of water stress: freshwater withdrawal as a proportion of available freshwater resources

INDICATOR 6.5.1: Degree of integrated water resources management and implementation

INDICATOR 6.5.2: Proportion of transboundary basin area with an operational arrangement for water cooperation

INDICATOR 6.6.1: Change in the extent of water-related ecosystems over time



Briefly, the following table presents the SWOT Analysis Matrix with the main strengths, weaknesses, opportunities and threats of the implementation of 2030 Agenda's SDG 6 in Brazil.

	POSITIVE FACTORS	NEGATIVE FACTORS
	Strengths	Weaknesses
INTERNAL FACTORS	<ul style="list-style-type: none"> • Development of overall capacity; • Mechanisms for reinforcing capacity; • Planning, execution, control and monitoring of financial resources; • Financial accountability/transparency; • Mechanisms for cooperation with private institutions and companies; • Level of cooperation between Brazil and other countries; • Efforts to raise awareness disaster risk related to SDG 6; • Protection of critical infrastructure and allocation of financial resources for post-disaster restoration; • Structures for control, supervision and transparency aimed at preventing and detecting fraud and corruption in key ministries/institutions; • Mechanisms that guarantee integrity within the public sector; • Transparent and accessible regulatory processes; • Mechanisms for protection of whistleblowers. 	<ul style="list-style-type: none"> • Insufficient funds disbursement to targets achievement; • Little investment in environmentally sustainable and efficient technologies; • National planning only partially implemented; • Ineffective application of instruments for political and institutional governance; • Little effort made to raise public awareness with regards to SDG 6-related issues; • Low level of concern among citizens with regards to water policy; • Lack of monitoring and evaluation of results obtained under national water policies; • Lack of political commitment; • Incipient approach to issues surrounding the participation and representation of women and promoting equity among vulnerable groups as part of main national policies and strategies; and • Lack of investment from ministries/institutions in fulfilling objectives for gender inclusion.
	OPPORTUNITIES	Threats
EXTERNAL FACTORS	<ul style="list-style-type: none"> • Execution of agreements and development of international partnerships; • Updating and review of PNRH; • Updating and review of Plansab; • New regulatory framework for sanitation; • Improvements to infrastructure related to SDG 6 • Economic growth (increase in GDP); • Participation from private initiatives and increase in external investment; and • Increase in credit/financing from the private sector. 	<ul style="list-style-type: none"> • Lack of continuity in plans and programs; • Political instability; • Regression in terms of public policies; • Regression in terms of environmental policies; • Detrimental changes to the structure of councils and committees; • Lack of government resources for investments; • Increased inflation; • Increased unemployment rate; • Increase in interest rates; • Developments in ongoing Covid-19 pandemic • Little investments in new technologies; and • Water and energy crisis.



Source: Adobe Stock*
*Imagem editada.



6. Collaborators main perceptions about the use of SDG 6 tool in the Brazilian scenario.

The experience of SDG-PSS tool application in the Brazilian scenario enabled the identification of aspects that are adequate, inadequate, in progress and without evidence, for each of the six components analyzed by the SDG-PSS tool, from the per-

spective of specialists from different institutions. Organized by component, the collaborators main findings on the country's situation can be summarized as follows:



CAPACITY COMPONENT

» Brazil is on the right path to “capacity-building”, with emphasis on the implementation of long-term policies and mechanisms for the “human resources development and improvement” and “access to information and knowledge”;

» More efforts should be made in the technical training for the implementation of long-term policies and mechanisms for the inclusion, participation, equity and empowerment of excluded groups, such as minorities;

» It is more critical to develop capacities in key government institutions/agencies for the categories “well-funded science, technology and innovation” and “inclusion, participation, equity and empowerment for all citizens”; for the categories “skilled human resources”, “knowledge and data” and “partnerships”, capacity-building is less critical;

» There are adequate capacity-building mechanisms, with emphasis on the “involvement of civil society organizations”, “database” and “training, workshops and conferences”. The other mechanisms – “collaboration with the private sector”, “financial incentives”, “performance indicators” and “citizens’ participation” – are also adopted, though, less frequently. “Team performance monitoring” is the least used and/or has unknown application, in the collaborator’s perception;

» Water and sewage indicators, in general, are easier to develop capacities, as they are linked to the sector that is traditionally remunerated for the services provision and that has an interest in improving financial results;



» Although there are data, people, knowledge and structures, the lack of support and effectiveness of river basin committees is a critical situation, as they are not adequately managed as a space for inclusion, participation, equity and empowerment of citizens;

» In sanitation sector, the partnership with the private sector is opportune, especially provided for by the Law No. 14,026 of 2020. There are financial incentives, indicators and databases, but they are insufficient to achieve universalization; citizens' and civil society participation is still minimal.



FINANCE COMPONENT

» In general, the country shows advances in terms of planning, execution, control and monitoring of financial resources, as well as financing sources and mechanisms;

» Regarding financial accountability/transparency, the situation is appropriate for all SDG 6, with the existence of audit and accountability strong mechanisms;

» For sanitation indicators (6.1.1, 6.2.1 and 6.3.1), in relation to the availability of a financing plan/budget, it is easily accessible to public;

» It is understood that the expenditure reports are publicly available and accessible for the indicators related to sanitation (6.1.1, 6.2.1 and 6.3.1), highlighting the basis of the National Sanitation Information System (SNIS) and the Federal Budget Panel of the

Integrated Planning and Budget System (SIOP). For the other indicators, there is a lack of more explicit or publicly available information;

» In the infrastructure area, including water resources and sanitation, there are projects that can be financed through so-called concessions, with emphasis on the new regulatory framework for sanitation. Also, the National Water Security Plan (PNSH) presents strategic projects/interventions for the period from 2019 to 2035, which can be executed with public or private resources; and

» More and new efforts to encourage environmentally sustainable and efficient technologies should be invested in the budget plans for the SDG 6 indicators.



GOVERNANCE COMPONENT

» There is a need for greater commitment from national institutions to fully implement the actions provided for in the national plans that interface with the SDG 6 targets, aiming carry out political and institutional governance;

» The federal government carry out enhance efforts to raise public awareness of SDG 6 issues, including increasing awareness of the importance of 2030 Agenda and society participation in decisions on the topic;

» Emphasis on indicator 6.1.1 (Proportion of the population using safely managed drinking water services), which presents measures to reach some population groups, with emphasis on "poor populations" and "indigenous populations". For the "women and girls" group, these measures are still "in progress" for most indicators. Overall, specific measures to target most population groups are "in progress" or "unknown";



The collaborators perception is that, in the federal government, the obstacles to effective coordination between the different bodies to achieve the SDG 6 targets are:

- » Absence of strategic planning and decisions;
- » Mismatch between financing and administrative demands;
- » Citizens' lack of concern for water policy;
- » Absence of monitoring and evaluation of the results of national water policies;
- » Lack of government commitment in water policy;
- » Difficulty in implementing central government decisions at local and regional levels;
- » Lack of personnel and time;
- » Lack of information and references for policy makers.

An important factor highlighted by the collaborators is the need to build participatory governance to monitor all indicators.

On the other hand, the main governance challenges are the low capacity of local and regional governments, the application of environmental norms, economic regulation and limited public participation, especially in the formulation of public policies in water resources and sanitation.

In terms of national cooperation mechanisms, it was found that the leading institutions have cooperation mechanisms with private institutions and companies that contribute to the advancement of SDG 6 targets, and it is still positive the perception that the cooperation level between Brazil and other countries for exchanging information and learning from experiences is "significant".





GENDER COMPONENT

» In the universe of professionals and actors dealing with the planning, management and monitoring of SDG 6 targets at national level invited to collaborate in the SDG-PSS tool implementation, almost 2/3 (two thirds) are men and 1/3 (one third) are women. In representations in national councils, highlighting the National Council of Water Resources (CNRH), this proportion is even more unequal, with 74% of men and 26% of women, approximately;

» In general, the federal government and public policies do not include gender aspects; women and girls (included in target 6.2 of 2030 Agenda) are a social group directly impacted by the absence of specific gender-related devices;

» The main national strategies related to SDG 6 address, in an incipient way, issues in women's participation and representation, as well as vulnerability issues to promote equity;

» It is unknown whether there is an audit in leading institutions to identify gaps in gender issues and whether adequate resources are allocated to implement gender objectives and commitments;

» The incorporation of gender considerations in agency/institution studies, reviews or research is an aspect still in progress in the indicators related to basic sanitation. In the other indicators, this situation is considered "unknown" or "nonexistent";

» Data show that there are no policies in ministries/institutions on investments to meet gender inclusion targets for most SDG 6 indicators; regarding the allocation of adequate resources for this purpose, the situation is "unknown";

» There are important initiatives – however, little known – of the external public, such as the Pro-Gender Equity Committee (CPEG) of ANA, in addition to specific programs existence, especially the projects "More Women in Power" and "Qualifies Women", instituted by the Ministry of Women, the Family and Human Rights;

» Specifically at ANA, the aspects "documented institutional commitment to promote "gender equality" and "capacity building on gender theme" are positive.



Check out the 2020 Brazilian Water Resources Report for more information:
<https://bit.ly/conjuntura2020>





Briefly, the survey shows that, on the issue of “gender inclusion” for SDG 6, ministries/institutions need to increase efforts to promote gender inclusion in national policies related to SDG 6, improving governance in the following aspects:

- » Incorporation of gender considerations in studies, analyses or research;
- » Development of policies to align and report on investments for gender inclusion;

- » Allocation of adequate resources to implement gender inclusion targets;
- » Inclusion of gender experts in decision-making;
- » Strengthening institutional commitment to promote gender equality in key ministries/institutions; and
- » Promotion of training actions in the theme of gender.



DRR/RESILIENCE COMPONENT

» Despite some important gaps, such as the diagnosis of critical infrastructures and analysis of risk and hazard assessments, Brazil seeks to adopt and implement national DRR strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030;

» The actions of mapping/diagnosis of critical infrastructures and the performance of risk, hazard and vulnerability analyses are actions in progress in the recently approved National Policy for the Security of Critical Infrastructures (PNSIC);

» The “Digital Atlas of Disasters in Brazil” presents the estimate of monetary values referring to material damages and losses of the disasters that have already occurred in Brazil, disaggregated by municipalities and states and consolidated for the entire country. However, they are not disaggregated by critical infrastructure related to SDG 6;

» The database of the National Dam Safety Information System (SNISB), in ANA’s charge, exposes the risk category, the associated potential damage and the overall hazard level of the registered dams. It is suggested that this system be fed with the existing risk, hazard and vulnerability analyzes and with the damages and losses estimated values in case of accidents and disasters, if any;

» For most indicators, there are national funding mechanisms to address DRR in favor of meeting the SDG 6 targets, with emphasis on the inclusion of risk management programs in the Multiannual Plans (PPA) and official donations from international organizations (ODA);

» The federal government’s efforts to raise awareness of water-related disaster risks for SDG 6 are adequate and leading institutions/agencies adopt and implement adequate critical infrastructure protection plans;



»There is funding allocation toward post-disaster rehabilitation for most indicators, as provided for in budgets for post-disaster rehabilitation in risk management and recovery programs of PPAs;

»Specifically with regard to indicators 6.5.1 and 6.5.2, corresponding to the integrated water resources management implementation, there are river basin committees, but the issue of the treatment of contingency plans is unknown;

»Regarding indicator 6.4.2 (water stress level), there are some initiatives in ANA and in the sub-national Regulatory Agencies about water risk analysis;

»Critical infrastructure protection instruments are aimed more at protecting capital related to such structures than at planning integrated water resources management and/or protecting ecosystems and associated natural resources;

»There is post-disaster resources allocation, but the processes are lengthy, often arising from judicialization. The allocated values, in turn, also need a better definition and often come from actors other than the federal government.





INTEGRITY COMPONENT

» The diagnosis of the “integrity” component indicated as strengths the existing mechanisms to assure public sector integrity, regulatory processes transparency and accessibility and whistleblower protection;

» There are control, oversight and transparency structures to prevent and detect fraud and corruption, related to SDG 6, in the main ministries/institutions. The Brazilian federal legislation presents mechanisms and instruments that allow the existence and performance of internal and external control structures to these Federal Administration institutions, including integrated control systems and monitoring of public spending and acquisitions;

» On the part of the bodies responsible for implementing SDG 6 indicators regulation, regulatory processes are transparent and accessible. However, the process of simplifying regulations and eliminat-

ing unnecessary administrative bureaucracy from regulation is still “in progress”, with the exception of indicator 6.5.1 (integrated water resources management), which evaluation is considered appropriate;

» It is verified that the federal legislation provides mechanisms recommended by the SDG-PSS tool to ensure whistleblower protection, namely: i) institutional procedures and channels to facilitate the reporting of irregularities and corruption; ii) measures and sanctions to avoid retaliation actions of whistleblowers; and

» Clarity and simplicity aspects of regulatory processes are in progress. There is still a lack of evidence: i) fair and equitable access in the development and implementation of public policies, ii) the existence of mechanisms to prevent and detect fraud and corruption in donor-funded projects and programs.





Finally, it seems appropriate to point out that the monitoring of the 2030 Agenda is carried out by observing the indicators of the targets established by the leading institutions in Brazil, including ANA, IBGE, MDR and SEGOV/PR. This exercise allowed the identification of issues, evidence and needs to be considered in the decision-making process of achieving SDG 6, including:

- » Strengthen human capacity-building for the implementation of long-term policies and mechanisms for inclusion, participation, equity and empowerment of excluded groups;
- » Increase annual investments so that targets are achieved by 2030. Among the indicators, 6.1.1 (proportion of population using safely managed drinking water services) is the one that presents the greatest possibility of approaching the expected universalization goal;
- » Seek a greater commitment from institutions to fully implement the actions provided for in national plans related to SDG 6, still partially and/or inadequately implemented;
- » Make efforts to promote gender inclusion in national policies and strategies related to SDG 6;
- » Increase efforts to conduct risk, hazard and vulnerability analyses with a multi-risk approach in key

critical infrastructures, making them available to the public and stakeholders;

- » Provide clearer and simpler regulatory processes, which contribute to the development and implementation of public policies, in order to allow more fair and equitable access to society.

The SDG-PSS tool, by dividing the analysis by critical components of public management, brought a different approach/vision for the monitoring and diagnosis of 2030 Agenda goals, since the focus was concentrated on verifying the existence of legal conditions, mechanisms and support instruments for the establishment of appropriate policies and plans related to the sectors covered by SDG 6.

It is understood that this case study can contribute to the improvement of the implementation of the 2030 Agenda in Brazil by seeking to identify the main difficulties and gaps in public management, by critical component, that prevent SDG 6 targets progress. Responsible managers and decision makers can, based on the results shown here, complement and improve governance and the mechanisms/instruments provided for in public plans and policies and give more effectiveness in the results of the actions and measures.



Source: Freepick



7. Proposal for actions to achieve SDG 6 targets in Brazil.

In view of the above and based on the evidence pointed out by the SDG-PSS tool, proposals are presented for actions to remedy gaps and delays in achieving SDG 6 targets in Brazil, by critical component, with emphasis on the roles and responsibilities of the institutions⁵, especially those that participated in the study.



CAPACITY COMPONENT

PROPOSAL FOR ACTIONS TO REMEDY GAPS AND DELAYS FOR THE ACHIEVEMENT OF SDG 6 TARGETS

CAPACITY		
WEAKNESS	INITIATIVES	INSTITUTIONS
Little capacity within local and regional governments.	<p>Increase the training of governance bodies employees, mainly at the municipal level, in order to strengthen the management of sanitation and water resources and improve the level of integration between federated states.</p> <p>Stimulate an increase in managerial and technical capacity with management bodies, mainly at the municipal level, in order to carry out operations related to inspections and water supply services and sanitary sewage within their respective scope of activities (sanitation indicators 6.1.1, 6.2.1 and 6.3.1).</p> <p>Offer training programs and initiatives throughout Brazil's regions in order to develop personal and professional skills.</p>	SEGOV-PR SNS/MDR SNSH/MDR ANA IPEA
Lack of evidence of efforts to develop critical capacity with regards to policies and mechanisms that provide for inclusion, participation, equity, and empowerment among excluded groups.	<p>Disseminate specific initiatives and measures among leading ministries /institutions with regards to issues involving the implementation of policies, equity, and empowerment among excluded groups.</p> <p>Promote training programs and initiatives throughout Brazil's regions in order to improve personal and professional skills related to areas such as the implementation of policies, equity, and empowerment among excluded groups.</p>	SEGOV-PR SNS/MDR SNSH/MDR ANA ENAP

⁵ During the application of the tool, ANA was linked to the MDR.



CAPACITY		
WEAKNESS	INITIATIVES	INSTITUTIONS
Lack of evidence of efforts to develop critical capacity with regards to the implementation of long-term policies and mechanisms involving science, technology and innovation.	<p>Disseminate specific initiatives and measures among leading ministries /institutions with regards to issues involving the implementation of policies, science, technology, and innovation.</p> <p>Promote training programs and initiatives throughout Brazil's regions in order to develop personal and professional skills with regards to the implementation of policies and application of science, technology, and innovation.</p>	<p>SEGOV-PR SNS/MDR SNSH/MDR ANA ENAP MCTI MEC – Universities and Federal Institutes</p>
Lack of evidence regarding the implementation of appropriate capacity-building mechanisms	<p>Implement appropriate capacity-building mechanisms among leading ministries/institutions, including: collaboration with the private sector, financial incentives, indicators for performance and targets, participation from citizens, the involvement of civil society organizations, databases, training, workshops and conferences, as well as mechanisms for monitoring team performance.</p> <p>Increase publicity of capacity building mechanisms used by leading ministries /institutions.</p>	<p>SEGOV-PR SNS/MDR SNSH/MDR ANA ENAP</p>



Source: Freepick



FINANCE COMPONENT

PROPOSAL FOR ACTIONS TO REMEDY GAPS AND DELAYS FOR THE ACHIEVEMENT OF SDG 6 TARGETS

FINANCE		
WEAKNESS	INITIATIVES	INSTITUTIONS
<p>Insufficient regular financial resources to achieve the targets of SDG 6.</p> <p>Difficulties in estimating financial resources required to meet SDG 6 targets by 2030, particularly with regards to indicators for water resources and the environment (6.3.2, 6.4.1, 6.4.2, 6.5.1, 6.5.2 and 6.6.1).</p>	<p>Provide a function with the initiatives implemented under PPA (multi-year plan) programs that describes the SDG indicator to which a given action is addressed, in order to facilitate searches of the Brazilian federal government's Integrated Planning and Budget System - SIOP using filters.</p> <p>Minimize fluctuations in the country's economic situation and the subsequent reduction in investment levels through the rational application and more effective control of financial resources allocated to water, sanitation, and monitoring of results.</p> <p>Establish participation from regions and states in addressing deficits related to sanitation under indicators 6.1.1, 6.2.1 and 6.3.1 as a criteria for the distribution of investments, allocating resources in an optimal and rational manner across those areas and locations in which participation in the deficit is considered more critical.</p> <p>Prioritize the completion of sanitation and water resources works that are already underway when planning for the use of financial resources.</p> <p>Establish methodologies that can be used to prioritize actions and measures implemented within Brazil's national territory, taking the different levels of disaggregation up to the municipal level into consideration as part of the regular transfer of non-onerous resources for the purpose of investment in sanitation.</p> <p>Invest in PPA programs related to SDG 6, in which the execution of projects preferably present an advanced degree of maturity.</p> <p>Encourage participation from government service providers in Brazil's North and Northeast Regions through means of incentives such as making financing available at lower interest rates for service providers working with municipalities that present a high deficit in terms of sanitation.</p> <p>Seek to align SDG 6 targets with the objectives, targets, and initiatives established under the PPA and the federal government's Strategic Planning during each cycle.</p> <p>Establish mechanisms for incentives that increase private participation in initiatives and measures aimed at meeting SDG 6 targets.</p> <p>Encourage the granting of credits for the purposes of financing initiatives related to SDG 6 targets, including government subsidies for situations involving a reduced capacity for obtaining credits.</p>	<p>Brazilian National Congress</p> <p>ME</p> <p>SEGOV-PR</p> <p>MDR</p> <p>ANA</p> <p>MS</p>



FINANCE

WEAKNESS	INITIATIVES	INSTITUTIONS
Lack of evidence of adequate mechanisms and sources of funding.	Expand dissemination and knowledge of the following financial aspects related to SDG 6: percentage allocation of government resources in relation to the country's Gross Domestic Product - GDP and the percentage of official international assistance (ODA) providing support for policies, plans and activities, sources of funding involving a specific indicator, and the existence of adequate legal and institutional frameworks within Brazil that allow for a complete range of financial investments, for example.	SEGOV-PR SNS/MDR SNSH/MDR ANA ME



GOVERNANCE COMPONENT

PROPOSAL FOR ACTIONS TO REMEDY GAPS AND DELAYS FOR THE ACHIEVEMENT OF SDG 6 TARGETS

GOVERNANCE

WEAKNESS	INITIATIVES	INSTITUTIONS
National plans are in place, but are only being implemented in part.	<p>Take SDG 6 targets into consideration as part of national-level planning involving water resources and sanitation and monitor the execution of initiatives through means of participatory governance.</p> <p>Adopt a continuous governance model, considering the fact that, in order for the 2030 Agenda to be properly implemented, a coordinated and coherent set of policies and actions are required.</p> <p>Encourage the continuity of programs and projects aimed at improving indicators for SDG 6 within the scope of planning for national water resources and sanitation.</p> <p>Review the action plan for implementation of the 2030 Agenda, taking the country's current situation, the realities faced in Brazil, and regional differences into consideration. The action plan should include strategies for implementation and monitoring of the 2030 Agenda.</p> <p>Monitor the effectiveness of the execution of plans and programs by adopting indicators, targets and deadlines, updating them whenever necessary.</p> <p>Prepare and publish annual PPA monitoring reports and plans and programs involving water resources and sanitation, presenting the results obtained and the indicators used for controls.</p>	SEGOV-PR ANA SNS/MDR SNSH/MDR MS IBGE IPEA



GOVERNANCE

WEAKNESS	INITIATIVES	INSTITUTIONS
Lack of appropriate specific measures as part of water policies targeting minority or socially disadvantaged groups.	Provide specific measures for national sanitation and water resource plans (Plansab and PNRH) that are suitable for meeting the needs of minority or socially disadvantaged groups, taking advantage of current updates and revisions of these mechanisms.	CNRH ANA SNS/MDR SNSH/MDR MMFDH – Ministry for Women, Families and Human Rights
Reduced efforts made by the federal government in order to raise the level of public awareness surrounding indicators for SDG 6.	Expand educational campaigns focusing on the importance of SDG 6 targets and the rational use of water resources.	SEGOV-PR ANA SNS/MDR SNSH/MDR
Lack of information and monitoring data from specific groups and the way they are affected by water policies and planning	<p>Assess the need to integrate national policies into existing laws/regulations, to reach specific groups and channel initiatives and financial resources in order to reduce inequalities.</p> <p>Create a database in order to identify and gauge specific groups, including highly vulnerable populations.</p> <p>Use the database created by the federal government as part of emergency assistance measures implemented in response to the effects of the Covid-19 pandemic as a means of reaching the most vulnerable members of the population.</p> <p>Introduce research elements into IBGE's (Brazilian Institute of Geography and Statistics) National Household Sampling Survey (PNAD) that may assist in assessing the services required by specific groups, particularly with regards to indicators for sanitation</p>	SEGOV-PR ANA MDR IBGE IPEA MMFDH
Reduced political commitment to water resource and sanitation related policies.	<p>Include guidelines in both Plansab and PNRH that seek to improve communication between management bodies in the areas of water resources and sanitation, through all levels of government.</p> <p>Promote the improvement of river basin committees in Brazil's states and Federal District.</p> <p>Strengthen entities responsible for establishing national public policies, such as the MDR (Ministry of Regional Development), which is responsible for coordinating water resources and sanitation policies.</p> <p>Promote articulation between water resources and the sanitation plans, not only at the national level, but also regionally within states and municipalities.</p>	CNRH River Basin Committees ANA Water Agencies SNS/MDR SNSH/MDR



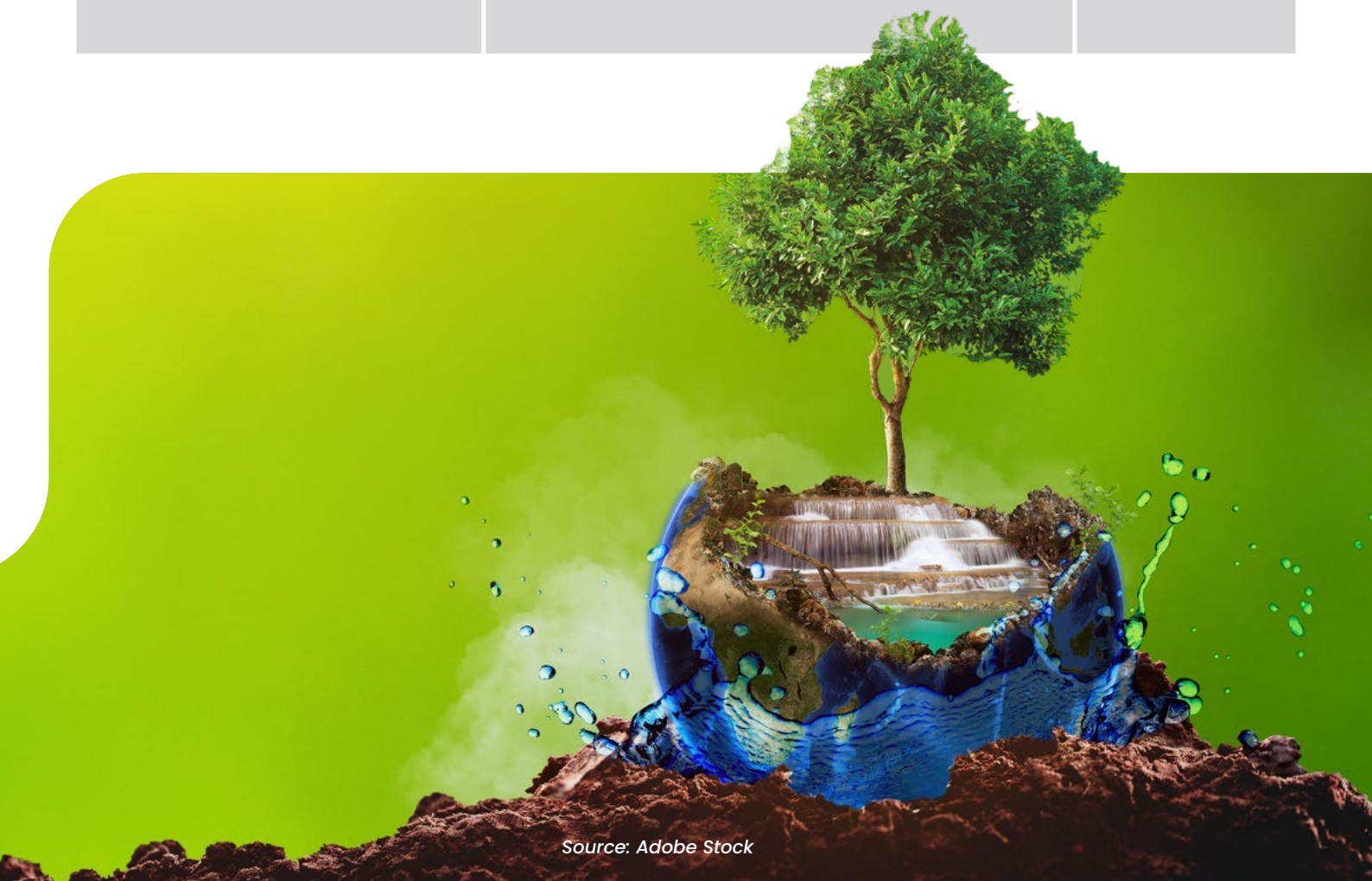
GOVERNANCE

WEAKNESS	INITIATIVES	INSTITUTIONS
Difficulties in implementing decisions from centralized government body at local and regional levels.	<p>Review the action plan for implementation of the 2030 Agenda, taking the country's current context, particularly with regards to its economic situation, the realities faced in Brazil, and regional differences into consideration, particularly with regards to water supply and sanitary sewage.</p> <p>Establish a regular agenda for communication with government bodies and entities from Brazil's federative units for the purposes of disseminating and implementing the SDGs at the state, district, and municipal levels, with support from SEGOV-PR's Special Secretariat for Federal Affairs.</p> <p>Include guidelines in both Plansab and PNRH that seek to improve articulation between management bodies in the areas of water resources and sanitation, through all levels of government.</p> <p>Promote the articulation between water resources and sanitation plans not only at the national level, but also at the regional, state and local levels.</p>	<p>ANA</p> <p>SEGOV-PR</p> <p>SNS/MDR</p> <p>SNSH/MDR</p> <p>MS</p> <p>IBGE</p>
There is a low level of concern among citizens with regards to water policy.	<p>Increase the level of exposure given to commitments and the federal government's performance with regards to Agenda 2030, taking advantage of existing digital platforms and panels, such as IBGE's Digital SDG Platform, which presents indicators and related sub-indicators for Brazil, Large-Scale Regions, states, and remaining territorial profiles.</p> <p>Expand campaigns aimed at spreading awareness regarding the use of water and current and future demands, in addition to possible impacts on its availability, as well as the quantity and quality of water</p> <p>Promote awareness regarding regularization of the water use and expand the training received by members of the National Water Resources Management System (SINGREH), CNRH (National Council for Water Resources) and Interstate River Basin Committees.</p> <p>Strengthen public awareness campaigns aimed at addressing the waste of water and promoting its rational use for human consumption.</p>	<p>SEGOV-PR</p> <p>IBGE</p> <p>ANA</p> <p>MDR</p>



GOVERNANCE

WEAKNESS	INITIATIVES	INSTITUTIONS
Lack or deficiency in monitoring and assessment of results obtained under national water policies	<p>Provide for the establishment of targets, deadlines and responsibilities as part of established actions and measures during the creation, revision, or updating of national plans and programs, as well as the required controls and monitoring instruments and tools, including performance indicators for the various stages of planning and programs.</p> <p>Periodically promote initiatives from the Interministry Committee on Sanitation (Cisb), which was created by the Federal Government in response to new legal frameworks for sanitation, in order to assess management of the National Sanitation Plan and provide for its integration into the National Water Resources Plan.</p> <p>Work in partnership with SEGOV-PR during the process of aligning priorities, objectives and targets established under the PPA with SDG targets.</p> <p>Prepare and publish annual PPA monitoring reports and plans and programs involving water resources and sanitation, presenting the results obtained and the indicators used for controls.</p> <p>Strengthen the Interministry Governance Committee (CIG), as well as Internal Governance Committees (CMG) within each sector, particularly with regards to performance during PPA monitoring, with a focus on aligning PPAs with strategic planning from ministries and targets under the 2030 Agenda.</p>	<p>SINGREH CNRH ANA MDR SEGOV-PR</p>





GENDER COMPONENT

PROPOSAL FOR ACTIONS TO REMEDY GAPS AND DELAYS FOR THE ACHIEVEMENT OF SDG 6 TARGETS

GENDER		
WEAKNESS	INITIATIVES	INSTITUTIONS
Policies related to SDG 6 address in an incipient manner the issues related to the participation and representation of women, as well as the issue of vulnerability to Promote Equity	<p>Induce programs in areas with a high level of social vulnerability.</p> <p>Promote the establishment of individual and collective water supply solutions in rural and urban areas experiencing a high level of social vulnerability, such as artesian wells and disinfection facilities, for example, through means of development programs under which regulations and means of control are established and monitoring by the responsible bodies.</p> <p>Plan social and educational initiatives that describe the benefits associated with access to properly managed drinking water, as well as care during its handling and personal hygiene and cleanliness in households, in addition to training and capacity-building among residents.</p> <p>Render Plansab's objectives, goals and actions compatible with those of the National Rural Sanitation Program (PNSR) with regards to sanitation in rural areas, emphasizing the need to reinforce the level of service provided to rural areas, particularly those experiencing a low level of water security and increased social vulnerability.</p> <p>Channel capacity-building efforts that can develop long-term policies and mechanisms that address issues related to inclusion, participation, equity, and empowerment among excluded groups.</p>	SEGOV-PR ANA SNS/MDR SNSH/MDR MS IBGE FUNASA MMFDH
Lack of involvement from specialists in gender inclusion in national policies, analyses and studies related to SDG 6, as well as in decision-making processes.	Include gender inclusion experts in national analyses, studies, and research, as well as in decision making processes.	SEGOV-PR ANA MDR IBGE
<p>Lack of information provided by ministries/institutions with regards to investment in gender inclusion.</p> <p>Policies aimed at aligning and providing information regarding investment in the gender inclusion issue remains inadequate.</p>	<p>Provide periodic notice of investments made for the purpose of implementing gender-related objectives and commitments within managing institutions.</p> <p>Reinforce specific measures as part of planning for budgeting and investment purposes in order to direct financial resources for reducing gender inequalities and disparity between ethnic groups and persons with disabilities.</p> <p>Channel capacity-building efforts that are capable of developing long-term policies and mechanisms that address issues related to inclusion, participation, equity, and empowerment of excluded groups.</p>	MMFDH



GENDER

WEAKNESS	INITIATIVES	INSTITUTIONS
<p>Little publicity given to ongoing initiatives implemented by leading institutions with regards gender inclusion in the policies of water resources, including training implemented.</p> <p>Inadequate articulation of specific objectives and gender-related commitments as part of national policies and strategies involving SDG 6 indicators.</p> <p>There is no evidence of institutional audits being conducted to identify gaps with regards to gender-related issues.</p>	<p>Expand the dissemination of current actions and initiatives that are not widely known among members of the external public with regards to pro-gender equity committees and specific programs that have been implemented.</p> <p>Promote the necessary articulation to foster the gender-specific goals and commitments in national policies and strategies related to the SDGs 6.</p> <p>Periodically hold training sessions and events aimed at addressing the gender inclusion issue within lead ministries/institutions.</p> <p>Assess the development of the gender inclusion issue in lead ministries/institutions through the use of indicators, as well as in the main structures of the National Water Resources Management System (SINGREH).</p>	<p>SEGOV-PR</p> <p>ANA</p> <p>MDR</p> <p>MMFDH</p>
<p>Reduced participation from women in managerial positions and representation in terms of council membership.</p>	<p>Provide a gender balance in management-level government positions and promote the representations of women on committees and councils, whenever possible.</p> <p>Encourage women's participation in managerial positions and in committees and councils</p>	<p>SEGOV-PR</p> <p>ANA</p> <p>MDR</p> <p>IBGE</p> <p>IPEA</p> <p>CNRH</p> <p>CONAMA</p> <p>River Basin Committees</p> <p>MMFDH</p>



DRR/RESILIENCE COMPONENT

PROPOSAL FOR ACTIONS TO REMEDY GAPS AND DELAYS FOR THE ACHIEVEMENT OF SDG 6 TARGETS

DRR/RESILIENCE

WEAKNESS	INITIATIVES	INSTITUTIONS
<p>Absence of a multi-risk approach to critical infrastructure assessments related to SDG 6.</p> <p>Lack of estimates for monetary amounts referring to potential pecuniary losses and damages to critical infrastructure resulting from natural disasters related to SDG 6.</p>	<p>Map out Brazil's primary critical infrastructures in Brazil with regards to SDG 6, particularly those involving water resources and sanitation.</p> <p>Strengthen specific measures implemented as part of the federal investment budget in order to direct resources towards enabling analyses of risks, hazards and vulnerability in critical infrastructures related to SDG 6.</p> <p>Reinforce the need to carry out risk analyses for critical infrastructures controlled by both the government and the private sector</p>	<p>Brazilian National Congress</p> <p>GSI/PR</p> <p>ANA</p> <p>MDR</p> <p>CPRM</p>



DRR/RESILIENCE

WEAKNESS	INITIATIVES	INSTITUTIONS
<p>Incipient availability/dissemination of risk analyzes to the public and to stakeholders.</p> <p>Lack of awareness and disclosure of risks involved in water-related disasters.</p>	<p>Create databases that are accessible to the public and stakeholders, with input from bodies responsible for the control and monitoring of critical infrastructures related to SDG 6.</p> <p>Expand campaigns aimed at spreading awareness regarding the use of water and current and future demands, in addition to possible impacts on its availability, as well as the quantity and quality of water available.</p>	<p>GSI/PR ANA MDR CPRM</p>
<p>Measures aimed at adapting to climate change poorly integrated into national strategies related to SDG 6.</p>	<p>Promote alignment between PNRH and Plansab with other policies, mainly environmental one, in the context of legal and institutional aspects involving areas that have important interfaces, including initiatives aimed at adaptation to the climate change foreseen in the Brazil's National Climate Change Policy.</p> <p>Integrate aspects related to SDG 6 targets, such as grants for the use and release of effluents, the protection of water reservoirs and springs, monitoring of water quality, hydrological and hydrogeological research, environmental licensing for hydraulic works, social controls regarding the use of water, activities carried out by river basin committees and programs aimed at reducing the use of water, among several other aspects.</p>	<p>SEGOV-PR SNS/MDR SNSH/MDR ANA MMA</p>
<p>There is no evidence of periodic analyses of results being carried out for the purpose of implementing DRR strategies.</p>	<p>Promote, through indicators, in articulation with responsible bodies, the analysis and monitoring of the result for the implementation of DRR strategies.</p>	<p>SEGOV-PR GSI/PR SNS/MDR SNSH/MDR ANA</p>



INTEGRITY COMPONENT

PROPOSAL FOR ACTIONS TO REMEDY GAPS AND DELAYS FOR THE ACHIEVEMENT OF SDG 6 TARGETS

INTEGRITY

WEAKNESS	INITIATIVES	INSTITUTIONS
<p>Reduced participation from the public in developing and implementing public policies (fairer and more equitable access).</p>	<p>Expand public participation and dialogue in all levels through channels that facilitate the proposal of ideas and constructive discussions, which are fundamental to the successful formulation and application of any policy.</p> <p>Implement policies that incorporate participation from the public as part of initiatives that benefit the fulfillment of SDG 6 targets, such as payment for environmental services, among other actions.</p>	<p>SEGOV-PR ANA MDR CNRH River Basin Committees</p>



INTEGRITY

WEAKNESS	INITIATIVES	INSTITUTIONS
<p>Little evidence of the existence of mechanisms put in place to prevent and detect fraud and corruption in donor-funded projects and international programs.</p> <p>Little evidence of the existence of mechanisms aimed at guaranteeing integrity in the public sector.</p>	<p>Expand dissemination of the results of audits carried out for projects and programs financed by international donors, as well as mechanisms used to prevent and detect fraud and corruption in the public sector.</p>	<p>Office of the Federal Controller General - CGU</p> <p>Federal Accounting Court - TCU</p> <p>MDR</p> <p>ANA</p>

Based on the identification, in this work, of proposals for actions to achieve the SDG 6 targets in Brazil, a second step would be necessary: a new articulation between the institutions indicated in this work, and others that may be pointed out later, in order to make the actions presented effective and, consequently, minimize or eliminate the weaknesses highlighted in this experience.



Source: Adobe Stock





8. Proposal to replicate the experience of using the tool in technical cooperation actions with developing countries

The National Water and Sanitation Agency has a broad international agenda, with emphasis on technical cooperation with developing countries – South America, Central America, the Caribbean and Portuguese-speaking African countries –, as well as partnerships with developed countries – Australia, the United States of America, France, the United Kingdom – and partnerships with United Nations System organizations, international networks, councils and international institutions dealing with water and sanitation.

Technical cooperation actions include: carrying out missions to exchange experiences in water resources management and regulation of the sanitation sector; capacity-building actions, including on-site courses and distance education; and, in some cases, the equipment donation to compose Situation Rooms and Alert and Hydrometeorological Networks (hydrological data collection platforms).

In ANA's thematic agenda, the approach on SDGs is relevant, especially SDG 6, which deals with the themes of institutional attribution of the Agency. As it is also an important issue on the international agenda, it was proposed to include this experience of using the UNU-INWEH SPS-SDG6 tool in cooperation actions with developing countries.

At first, this replication would take place in the context of the project "Support for the Management and Monitoring of Water Resources in the Countries of the Community of Portuguese Language Countries (CPLP)", which ANA implements with the Brazilian Cooperation Agency (ABC) and the CPLP Executive Secretariat.

To this end, a step-by-step approach is designed for this case study replication, which includes five (5) main steps: preparation, planning, execution, analysis of results, and technical document development. Briefly, each step aims to:



a) Preparation: comprehending SDG-PSS tool and its potential, defining key institution, making the tool available, identifying participating institutions, disseminating the tool methodology;

b) Planning: activities that precede the beginning of the case study development (work plan, schedule and definition of data and information research methodologies);

c) Execution: holding institutional meetings, applying the questionnaire, completing the Status, Capacity, Finance, Governance, Gender, DRR/Resilience and Integrity components;

d) Analysis of Results: graphs analysis, Summary View elaboration, identification of strengths and weaknesses of each component, performance of the SWOT Analysis; and

e) Preparation of Technical Document: containing each country's report and proposal of actions for the SDG 6 Indicators.

In July 2022, ANA's experience in applying the tool was replicated to Portuguese-speaking countries in

the context of the project "Support for the Management and Monitoring of Water Resources in the Countries of the Community of Portuguese Language Countries (CPLP)" – Pr57/Lis/13, coordinated by ANA-ABC-SE CPLP. An on-site workshop was held in Portugal, with the participation of technicians from Angola, Cape Verde, Guinea-Bissau, Mozambique, Portugal and São Tomé and Príncipe, when ANA presented the SDG 6 Policy Support System developed by UNU-INWEH and Brazil's experience in the tool's implementation process.

During this training it was possible to identify the main actors involved with SDG 6 in the CPLP countries for possible composition for the tool's implementation and map the main difficulties faced by the countries.

With the experience gained with the tool's use, ANA will be able to transform this application to the Brazilian case in a training course, on-site or in distance education modality, within the scope of technical cooperation actions of the Agency's international agenda.



Address to access the tool: <https://sdgpss.net/en/>



9. Final Considerations

The experience of applying the tool to support decision-making related to SDG 6, of the United Nations University, showed that, in general, there are more strengths than weaknesses in the SDG 6 management of 2030 Agenda in Brazil. This aspect was evidenced in the results of the Capacity, Finance, DRR/Resilience and Integrity components, which presented adequate evaluations in 50% or more of the analyzed fields. The components that Brazil needs more attention to progress on SDG 6 targets are Governance and Gender, in which evaluations, in general, were considered inadequate or without evidence in 57.4% of the fields analyzed.

A highlight was that the SWOT Analysis (Strength, Opportunities, Weaknesses and Threats) indicated that, for most SDG 6 indicators, strengths overcome weaknesses, demonstrating that Brazil is making efforts to seek the achievement of 2030 Agenda's SDG 6 targets. It is emphasized that this analysis translated the perception of collaborators from key institutions in the country.

In these final considerations, some points or results with more relevance in this initiative should be highlighted:

- Possibility of ANA acting as a regional focal point of the United Nations University Institute for Water, Environment and Health in the dissemination of the tool to support decision-making related to SDG 6 in countries of Latin America, the Caribbean and CPLP countries;
- Internally, the experience resulted recognizing the relevance of deepening the theme and creating a technical core, with the participation of the Special Advisory for Foreign Affairs (ASINT) and the Superintendence of Water and Socioeconomic Studies (SHE), and other technical areas of the Agency, to address the issue in approaches adjusted to ANA's institutional role;
- The participation of about thirty institutions in this initiative reinforces the opportunity to seek greater institutional interaction and partnership, so that the country can progress in meeting SDG 6 targets and 2030 Agenda.

The experience exposed here will certainly be a subsidy for the SDG-PSS tool improvement and enhancement and, mainly, it can contribute to public policies development, decision-making and prioritization of actions aimed at SDG 6 indicators, and Brazil's initiatives for the fulfillment of 2030 Agenda, this relevant global plan of sustainable development.







Application in Brazil of the decision-making support tool related to SDG 6 (SDG-PSS)

