THE LEGAL ASPECTS OF WATER AS A HUMAN RIGHT ACCORDING TO THE 2030 AGENDA: A COMPARATIVE ANALYSIS BETWEEN BRAZIL AND THE UNITED STATES OF AMERICA

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I. INTRODUCTION

This research article demonstrates the legal aspects of water as a human right by utilizing the United Nations (UN) 2030 Agenda on Sustainable Development as the primary comparative tool. Brazil and the United States of America (USA) are the objects of research for this legal analysis. Both countries were the subjects of analysis because of the author's interest in developing cooperation in legal, environmental, sustainable, and human rights research throughout and between both regions.

To begin, the Human Right to Safe Drinking Water and Sanitation (HRtWS) was first mentioned during the Mar del Plata Conference in Argentina in 1977; however, water did not become universally recognized as a human right until United Nations General Assembly ("General Assembly") Resolution 64/292 officially concluded in 2010.[1] The Human Rights Council explicitly affirmed the HRtWS in October of 2010 before the General Assembly.[2] However, to achieve this affirmation, the HRtWS endured a tumultuous upbringing. Mar del Plata concluded with a community water supply action plan, which declared that everyone, no matter their social or economic condition, has "the right to have access to drinking water in quantities and of a quality equal to their basic needs."[3]

The origin of HRtWS has roots not only in legal perspectives but also within historical, philosophical, and theological perspectives. For instance, a famous philosopher, Thales from Miletus, also known as the father of Western philosophy, stated that "Hydor (water) is the beginning of everything[.]"[4] Other

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1. G.A. Res. 64/292, ¶ 1 (Aug. 3, 2010).
2. Human Rights Council Res. 15/9, U.N. Doc. A/HRC/RES/15/9, ¶¶ 2-3 (Oct. 6, 2010).
3. Peter H. Gleick, *The Human Right to Water*, 1 WATER POL'Y 487, 493 (1998).
4. Carlo M. Marenghi, *Editorial*, *in* WATER AND HUMAN RIGHTS: A CATHOLIC PERSPECTIVE ON THE HUMAN RIGHT TO WATER 5 (Alice de La Rochefoucauld & Dr. Carlo M. Marenghi eds., 2010).

philosophers, such as Grotius, helped develop the *natural law* upon which the HRtWS was founded.[5] In addition to its philosophical origins, the HRtWS also has theological roots based on religious scripture and sacraments.[6] Christian scripture mentions the importance of drinking water in several passages.[7] Other religions have stories that depict the importance of drinking water to deities and specific situations, such as bathing, sacrifices and purification.[8] These perspectives helped set the stage for crafting the HRtWS.

Following Mar del Plata, the next mention of HRtWS principles came within the 1986 Declaration on the Right of Development.[9] Article 8 established that there should be an equal opportunity to access "basic resources."[10] Alhough Article 8 does not explicitly specify drinking water and sanitation as "basic resources," later rhetoric did correlate drinking water and sanitation as essential resources that should be enjoyed by all.[11]

Next, the 1992 International Conference on Water and Environment ("Dublin Conference") concluded with a new view on drinking water.[12] At the Dublin Conference, four fundamental principles were established, which aim to emphasize affordability and the economic value of water.[13]

The first principle establishes that freshwater is a finite resource essential to support life and the environment.[14] The second principle commemorates the importance of public participation in decision-making processes regarding

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5. *See generally* EVELYNE FIECHTER-WIDEMANN, THE HUMAN RIGHT TO WATER: JUSTICE . . . OR SHAM?: THE LEGAL, PHILOSOPHICAL, AND THEOLOGICAL BACKGROUND OF THE NEW HUMAN RIGHT TO WATER (Andrene Everson trans., Pickwick Publications, 2017).

6. *See generally* JAMES SALZMAN, DRINKING WATER: A HISTORY (2nd ed. 2012).

7. Water is mentioned in the Bible 722 times. The importance of drinking water is illustrated in the Bible within, for example, *Revelations* 22:7: "The Spirit and the bride say, 'Come.' And let everyone who hears say, 'Come.' And let everyone who is thirsty come. Let anyone who wishes take the water of life as a gift." The Biblical importance of water is also emphasized in *John* 4:14: "but if anyone drinks the living water I give them, they will never be thirsty again. For when you drink the water I give you, it becomes a gushing fountain of the Holy Spirit, flooding you with endless life!" See Tucker Jr, Dwight, *Remembering God's Gift of Water*, (June 5, 2014), https://sites.duke.edu/theconnection/2014/06/05/remembering-gods-gift-of-water/#:~:text=Water%20is%20mentioned%20a%20total,for%20water%20to%20be%20mentioned [https://perma.cc/Z36D-63VX].

8. *See generally* SALZMAN, *supra* note 6.

9. G.A. Res. 41/128, art. 8 (Dec. 4, 1986).

10. *Id.*

11. U.N. Off. High Comm'r for Hum. Rts., *The Right to Water: Fact Sheet No. 35* (Aug. 2010), https://www.ohchr.org/sites/default/files/Documents/Publications/FactSheet35en.pdf [https://perma.cc/B7WP-FSWH].

12. Sharmila L. Murthy, *The Human Right(s) to Water and Sanitation: History, Meaning, and the Controversy Over- Privatization*, 31 BERKELEY J. INT'L L. 89, 93 (2013).

13. *See generally* Int'l Conf. on Water & Env't: Dev. Issues for 21st Century, *The Dublin Statement and Report of the Conference*, 71-ICWE92-9739, at 4 (Jan. 26-31, 1992).

14. *Id.*

principles contained within the HRtWS.[15] The third principle acknowledges the importance of women in decision-making processes regarding water rights.[16] The fourth principle, one which many scholars deem both the most influential and the most controversial, recognizes that "[w]ater has an economic value and should be recognized as an economic good."[17] These principles helped develop the specifics of the HRtWS, such as the affordability aspect of principle four and the availability aspect of principle one.[18]

The HRtWS has also found its foundation in international conventions and conferences consisting of humanitarian law principles. For instance, the 1949 Geneva Conventions forbid nations during war and conflict from preventing access to water.[19] More specifically, Article 20 of Geneva Convention III requires that the Detaining Power "supply prisoners of war who are being evacuated with sufficient food and potable water," and Article 26 specifically outlines that drinking water "be supplied to prisoners of war."[20] Furthermore, Article 29 establishes that "sanitary measures [are] necessary to ensure the cleanliness and healthfulness of camps," including sufficient amounts of water for baths, showers, toilets, and laundry.[21] In sum, the Geneva Conventions underscore the importance and necessity of drinking water and sanitation measures, even during dire humanitarian conflicts.

Over the years, several other instances regarding HRtWS have emerged. In 1994, the UN International Conference on Population and Development established three principles which gave State governments the responsibility of prioritizing safe drinking water and sanitation in the development and effective implementation of environmental management strategies in urban areas.[22] Additionally, the UN Agenda 21 (Agenda 21) acknowledged that access to drinking water and sanitation should come without discrimination.[23] Agenda 21 also acknowledged a link between sanitation and drinking water because the disease is borne from contaminated sources.[24] The progression of adopting the HRtWS picked up speed after the UN Economic and Social Council, Commission on Human Rights, and Sub-Commission on Prevention of Discrimination and Protection of Minorities issued a working paper on the topic. Issued in 1998, this

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15. *Id.*

16. *Id.*

17. *Id.*

18. *See id.* at 12.

19. Julian Montoya, *Global Water Crisis and Human rights: A Glass Half Empty*, 13 INTERCULTURAL HUM. RTS. L. REV. 175, 198 (2018).

20. Geneva Convention Relative to the Treatment of Prisoners of War arts. 20, 26, Aug. 12, 1949, 6 U.S.T. 3316, 75 U.N.T.S. 135.

21. *Id.* at art. 29.

22. Int'l Conf. on Population & Dev., *Report of the International Conference on Population and Development*, 17-18, U.N. Doc. A/CONF.171/13/Rev.1 (5-13 Sept., 1994).

23. U.N. Conf. on Env't & Dev. Rio de Janerio, Brazil, 3 to 14 June 1992, *Agenda 21*, ¶¶ 2.22, 17.118, 20.13, 21.19, 24.1, 24.5, 26.1, & 39.3. (June 3-14, 1992).

24. *Id.* ¶ 18.47.

working paper discussed the allocation of safe drinking water to all people, regardless of status.[25] The next year, the General Assembly issued a resolution which reaffirmed "that, in the full realization of the right to development, [. . .] [t]he rights to food and clean water are fundamental human rights and their promotion constitutes a moral imperative both for national Governments and for the international community. . . ."[26] This action was the first time the General Assembly mentioned the HRtWS.

To understand the importance of the HRtWS, the United Nations Human Rights Council (HRC) appointed an independent expert to analyze numerous human rights obligations related to the HRtWS as part of Resolution 7/22.[27] Several obligations were tasked to the independent expert to "prepare a compendium of best practices, study the content of human rights obligations in relation to access to safe drinking water and sanitation, and make recommendations toward the realization of the Millennium Development Goals. . . ."[28]

Later, the independent expert transitioned to Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation. The Special Rapporteur, Catarina de Albuquerque, made several findings in her thematic and country reporting, such as detecting "discrimination in drinking water and sanitation services" in the United States and identifying sustainable development as an essential aspect of realizing the HRtWS principles.[29] Soon thereafter, Special Rapporteur Leo Heller helped further the cooperation between the states and focused on the affordability aspect of the HRtWS.[30] The role of Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation has further developed international discourse regarding state action and understanding of the HRtWS.[31]

Safe drinking water and sanitation were explicitly established as a human right in the international forum after Bolivia introduced a resolution to the General Assembly in 2010.[32] One hundred twenty-two States voted to adopt a

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25. El Hadji Guissé (Special Rapporteur), *The Realization of Economic, Social and Cultural Rights: The Right of Access of Everyone to Drinking Water Supply and Sanitation Services*, U.N. Doc. E/CN.4/Sub.2/1998/7 (June 10, 1998).

26. G.A. Res. 54/175, at 4 (Feb. 15, 2000).

27. Ved P. Nanda, *The Human Right to Water: Challenges of Implementation*, 50 U. PAC. L. REV. 13, 17 (2018).

28. *Id.*

29. *Id.*

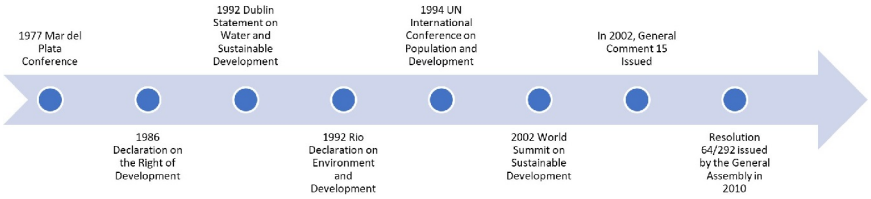
30. *See* Colin Brown & Léo Heller, *Affordability in the Provision of Water and Sanitation Services: Evolving Strategies and Imperatives to Realise Human Rights*, 5 INT'L J. WATER GOVERNANCE 19 (2017).

31. *See* Henry F. Carey, *The Special Rapporteur on the Human Rights to Safe Drinking Water and Sanitation: An Assessment of Its First Dozen Years*, 16(2) UTRECHT L. REV. 33-47 (2020).

32. Murthy, *supra* note 12, at 102.

resolution recognizing the HRtWS.[33] As part of Resolution 64/292, the General Assembly ensured that the HRtWS would be recognized internationally.[34] Later, the HRC adopted the HRtWS in Resolution 15/9.[35] This resolution affirmed that safe drinking water and sanitation are related to "an adequate standard of living" and "the right to the highest attainable physical and mental health."[36] Resolution 15/9[37] also served as the solidifying action that established the HRtWS on an international level.[38] After this resolution, many states adopted the HRtWS through national implementation.

Throughout the upbringing of the HRtWS, several international human rights treaties explicitly provided for human rights within specific provisions.[39] The timeline below demonstrates the international evolution of the HRtWS globally, as previously presented:



After examining and understanding how the HRtWS was developed, this article presents the connection of water as a human right (Section 2), followed by the concept of sustainable development and the 2030 Agenda (Section 3). The purpose of presenting these topics in this sequence is to analyze, dissect, and appreciate the main theoretical concepts behind each topic.

Then, Section 4 of this paper introduces two Sustainable Development Goals (SDGs)—SDG6 and SDG14—explaining their connection to water protection. Section 5 focuses on the first part of the comparative analysis, presenting the

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33. Press Release, U.N. G.A., General Assembly Adopts Resolution Recognizing Access to Clean Water, Sanitation as Human Right, by Recorded Vote of 122 in Favour, None Against, 41 Abstentions, U.N. Press Release GA/10967 (July 28, 2010).

34. *See id.*

35. H.R.C. Res. 15/9, *supra* note 2.

36. *Id.*

37. *Id.*

38. *Id.* ¶ 10.

39. *See generally* U.N. Off. to support Int'l Decade for Action 'Water for Life' 2005-2015/UN-Water Decade Programme on Advocacy and Communication (UNW-DPAC), The Human Right to Water and Sanitation: Milestones, https://www.un.org/waterforlifedecade/pdf/human_right_to_water_and_sanitation_milestones.pdf [https://perma.cc/K7KN-ENN9] (outlining the significant HRtWS milestones throughout international law history).

discussion of water as a human right in Brazil, followed by Section 5.1, which analyzes SDGs 6 and 14 in Brazil. Lastly, Section 6 focuses on the United States and attempts to explain the same topic of water as a human right in the USA, followed by Section 6.1, which analyzes SDGs 6 and 14 in the USA.

II. WATER AS A HUMAN RIGHT

Water is linked to almost everything in the world and is "a precondition for human existence."[40] Consequently, having access to safe drinking water is a necessity to sustain human life. Such access prevents waterborne diseases, protects public health, and sustains better living conditions.[41] Access to these services also prevents the chance of dying from dehydration and inadequate living conditions,[42] which involves another fundamental human right and the dignity of life.[43]

International human rights law requires a progressive reduction of inequalities and attempts to obtain this reduction by tackling, for example, discrimination. In this case, discrimination often leads to the exclusion of individuals from water access. Thus, it is important to understand what the right to water encompasses. This right entitles people to have access to sufficient, safe, acceptable, affordable, and physically accessible water for personal and domestic use.[44] In other words, each person must have a sufficient supply of drinking water, and the general water supply must be copious enough for continuous personal and domestic uses, including consumption, personal sanitation, washing of clothes, and food preparation.[45] It also must have an acceptable color, odor, and taste. Otherwise, unsafe drinking water will detrimentally affect people's health.[46] Aside from water potability, all water facilities and services must be "sensitive to gender, life-cycle and privacy requirements."[47] Everyone must have a physically accessible right to a water and sanitation service that is physically accessible within or in the immediate vicinity of the household, educational

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40. U.N. Water, *"Water is a Precondition for Human Existence," Says UN Deputy Secretary-General for World Water Day* (Mar. 18, 2015), https://www.unwater.org/lorem-ipsum-dolor-sit-amet-5/ [https://perma.cc/8QC9-D42J].

41. *See* Gleick, *supra* note 3.

42. Logan D. Gilbert, *Implementing the Human Right to Safe Drinking Water and Sanitation: Addressing the Water Affordability Crisis in the United States* (Seminar Paper, Apr. 22, 2019) (on file with author).

43. *See* U.N. Off. High Comm'r for Hum. Rts. & World Health Org., *The Right to Health: Fact Sheet No. 31* (June 1, 2008), https://www.ohchr.org/sites/default/files/Documents/Publications/Factsheet31.pdf [https://perma.cc/K65N-6VGR].

44. *See* Gleick, *supra* note 3.

45. *See id.*

46. Farhana Sultana, *Water Justice: Why It Matters and How to Achieve It*, 43 WATER INT'L 483, 483 (2018).

47. U.N. Comm. on Econ., Soc. Cultural Rts., General Comment No. 15: The Right to Water (arts. 11, 12 of the Covenant), E/C.12/2002/11, ¶ 12(c)(i) (2003).

institution, workplace, and health institution. Not only must water be accessible, but also water, water facilities, and services must be affordable for all.[48]

Furthermore, as a general understanding on the human right to water, the HRC affirmed that this right "entitles everyone . . . to have access to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic use."[49] In other words, water must be sufficient and continuously available to people's needs; water infrastructure must be located and built accessibly; water quality and sanitation must be safe for human consumption and domestic hygiene; everyone must be able to afford water services; and water must be acceptable in terms of its physical characteristics.[50] The human right to water will entitle people to five dimensions: availability; accessibility; quality and safety; affordability; and acceptability.[51] In the applicability of the right to water, Brazilian courts, for example, have granted some of these categories such as the right to access water (availability), the right to water (affordability) and the right to water distribution (accessibility).

As water is a resource no one can live without and is a necessity for several other basic needs, it became a vital component of the 2030 Agenda for Sustainable Development ("2030 Agenda").[52] However, before presenting the connection between water and the 2030 Agenda, it is important to first understand its features.

III. SUSTAINABLE DEVELOPMENT AND THE 2030 AGENDA

The 2030 Agenda represents a new attempt to establish a global framework to face challenges such as poverty, disparities of opportunity, gender inequality, climate change, and freshwater scarcity.[53] The United Nations General Assembly adopted the document on September 25, 2015[54] in the wake of the Organization's

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48. *Id.* ¶ 12(c)(ii).

49. H.R.C. Res. 70/169, U.N. Doc. A/RES/70/169, ¶ 2 (Feb. 22, 2016).

50. *See* Catarina de Albuquerque (Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation), *Handbook for Realizing the Human Right to Safe Drinking Water and Sanitation*, U.N. Doc. A/HRC/27/55/Add.3, at 13-14 (July 1, 2014) (outlining the various items that States must monitor to ensure the human right to water, including monitoring availability, accessibility, inequality, quality affordability, acceptability, among sustainability, among other factors).

51. Colin Brown et al., *The Human Right to Water and Sanitation: A New Perspective for Public Policies*, 21 CIENCIA & SAUDE COLETIVA 661, 662 (2016).

52. *See generally* U.N. Dev. Programme, *The SDGs in Action*, https://www.undp.org/sustainable-development-goals?utm_source=EN&utm_medium=GSR&utm_content=US_UNDP_PaidSearch_Brand_English&utm_campaign=CENTRAL&c_src=CENTRAL&c_src2=GSR&gclid=Cj0KCQjwuMuRBhCJARIsAHXdnqMBu6T32ssk-9JrWdZHKbOZHziwFa6tlsRQxTdrHnxsXXryEeav-ZgaArEPEALw_wcB [https://perma.cc/D4ZR-TN5U] (stating that the SDGs were formally adopted in 2015 as a part of the 2030 Agenda).

53. *See* G.A. Res. 70/1, ¶¶ 1-3, 7-8 (Oct. 21, 2015).

54. *Id.*

seventieth anniversary.[55] The goal of the 2030 Agenda was to build upon a long tradition of efforts to mobilize the international society towards a "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" – also known as sustainable development.[56] The 2030 Agenda's broad scope, composed of 17 Sustainable Development Goals (SDGs) and 169 associated targets, aims to go beyond the Millennium Development Goals (MDGs) from 2000,[57] accounting for both an increasing diversification of needs and the growing interdependence of countries and global actions.[58]

Although the 2030 Agenda is undeniably valuable, it is crucial to understand that it is a non-legally binding document and its review mechanisms are quite soft.[59] Therefore, it serves as an example of international "soft law" rather than "hard law."[60] On the other hand, this is not to say that the SDGs are completely detached from the international legal system. In fact, many of the SDGs strengthen legal commitments previously made by countries who have signed other international instruments, such as the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights.[61] Additionally, a common role of the soft law is to serve as a "legal stimulant," or the root for a legally binding obligation.[62] In this case, the 2030

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55. *Id.*

56. U.N. Secretary-General, Report of the World Commission on Environment and Development, at 54, U.N. Doc. A/42/427 (Aug. 4, 1987).

57. The MDGs, according to Sachs, "mark a historic and effective method of global mobilization to achieve a set of important social priorities worldwide." Jeffrey D. Sachs, *From Millennium Development Goals to Sustainable Development Goals*, 379 LANCET 2206, 2206 (June 9, 2012). The MDGs were a part of the UN's initiative to end poverty, lasting from 2000 until 2015, with eight specific goals. For more information on the report about the MDGs, *see generally* U.N. Press Room, *We Can End Poverty: Millennium Development Goals and Beyond 2015*, https://www.un.org/millenniumgoals/news.shtml [https://perma.cc/G5HL-KB2F].

58. Kristinn Sv. Helgason, *The 2030 Agenda for Sustainable Development: Recharging Multilateral Cooperation for the Post-2015 Era*, 7 GLOB. POL'Y 431, 433 (2016).

59. Ries Kamphof, *EU and Member State Implementation of the UN Agenda 2030 and Sustainable Development Goals* 13 (U.N. Univ.'s Inst. on Compar. Reg'l Integration Stud., Working Paper No. 1, 2018) (on file with author).

60. For purposes of understanding the concepts of "soft law" and "hard law" in this article, the author adopted the positivism theory which defines "soft law" as a non-binding commitment while defining "hard law" as a legally binding commitment. For more information, *see* Gregory Shaffer & Mark A. Pollack, *Hard and Soft Law: What Have We Learned?*, *in* INTERNATIONAL LAW AND INTERNATIONAL RELATIONS: INSIGHTS FROM INTERDISCIPLINARY SCHOLARSHIP (Jeffrey L. Dunoff & Mark A. Pollack eds., 2012).

61. U.N. Econ. & Soc. Comm. for W. Asia, *International Human Rights Law and the 2030 Agenda for Sustainable Development: Social Development Bulletin, Vol 6 No. 3*, 2 (2017), https://archive.unescwa.org/sites/www.unescwa.org/files/publications/files/international-human-rights-law-agenda-2030-english.pdf [https://perma.cc/GR6M-JPPQ].

62. *Id.* at 3.

Agenda can be seen as a kind of "*lex ferenda*," a proposal that, even though lacking normative force, enables the creation of new rules, either by codifying the rules in the form of a treaty or by recognizing that the rules have reached the level of international custom.

This change in legal nature, from *soft* to *hard* law, depends on the behavior of the States. If an expressive number of States act in accordance with the 2030 Agenda, chances are that the document becomes closer to integrating into international custom, for example.[63] However, using external powers to force a country to obey the SDGs is not an option. Rather, the spirit of the 2030 Agenda resides in the idea of "'ownership'of it by national governments and societies."[64] In other words, national policy should guide State commitment. Therefore, the concept of national public sector accountability remains key to the 2030 Agenda's viability.

In regard to the MDGs and accountability, it was difficult to attribute the failure to fulfill the MDGs to specific international actors. In order to avoid the same accountability issues, the SDGs must define better tools to improve this matter.[65] One of these tools should be a "*robust information system*" coordinated by the UN, feeding not only the Organization but also all the countries who have signed the 2030 Agenda as well as civil societies, making it possible to assess and compare the progress made.[66] Among the 17 SGDs, two refer specifically to water as a human right.[67] Goal 6 seeks to "[e]nsure availability and sustainable management of water and sanitation for all," while Goal 14 seeks to "[c]onserve and sustainably use the oceans, seas and marine resources for sustainable development."[68] The UN has databases for each of these goals, which will be referred to in the next sections of this article.[69]

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63. Alan Boyle, *Soft Law in International Law-Making*, *in* INTERNATIONAL LAW (Malcolm D. Evans ed., 2014). Boyle cites an interesting international legal example of how soft law may become customary law—the Universal Declaration on Human Rights (UDHR). Although the UDHR is not a legally binding instrument, some of its provisions are followed by almost all countries, reaching the necessary legal threshold level as international custom, thus morphing into binding international customary "hard" law.

64. José Antonio Ocampo & Natalie Gómez-Arteaga, *Accountability in International Governance and the 2030 Development Agenda*, 7 GLOB. POL'Y 305, 310 (2016).

65. *Id.* at 307.

66. *Id.* at 310.

67. G.A. Res. 70/1, at 14 (Oct. 21, 2015).

68. *Id.*

69. Having the ability to monitor and cross-analyze SDG data between countries is an important deepening mechanism of accountability for attaining the SDGs, for it improves the critical capacity and awareness of civil society. *See generally* U.N. Stat. Div. of Dep't of Econ. & Soc. Aff., *Home: Welcome to the Sustainable Development Goal Indicators Website*, https://unstats.un.org/sdgs/ [https://perma.cc/CWA7-3EBZ].

IV. SUSTAINABLE DEVELOPMENT GOALS 6 AND 14 – "WATER GOALS" TOWARDS HUMAN PROTECTION

Water is directly connected to SDGs 6 and 14.[70] At a rapid glance, it appears that SDG 14 focuses exclusively on oceans; however, note the importance of oceans to rainwater and drinking water regulation, weather, climate, and food, all of which serve as examples of the significance of SDG 14 to water in general.[71] Thus, while the main difference between SDG 6 and SDG 14 is that SDG 6 focuses on freshwater while SDG 14 addresses ocean water, the interconnection of freshwater resources and ocean water is undeniable. For example, most rivers of the world ultimately end up in the oceans, also known as river inflow, underscoring the SDGs' interrelation.[72] In turn, this river inflow phenomenon also affects the ocean's physical, chemical, and biological processes.[73]

More specifically, the importance of river water for humankind is related to the global hydrological cycle in supplying freshwater.[74] Singh makes an interesting connection when he presents the co-relation of SDG 14 with all other SDGs (except SDG 17).[75] In terms of connections, the SDGs, therefore, relate target 14.2 to target 6.6 and target 14.7 to targets 6.1, 6.2, and 6.3.[76]

Table 1. Connections between SDGs 14 and 6[77]

Target	SDG 14	Target	SDG 6
14.2	Protect and restore ecosystems	6.6	Protect and restore water-related ecosystems
14.7	Increase the economic benefits from the sustainable use of marine resources	6.1	Safe and affordable drinking water
		6.2	End open defecation and provide access to sanitation and hygiene.
		6.3	Improve water quality, wastewater treatment, and safe reuse.

The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) made another interesting connection among SDGs 6 and 14.[78] In this case, the main comparison honed in on SDG 6, comparing the SDG

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70. David Le Blanc et al., *Mapping the Linkages Between Oceans and Other Sustainable Development Goals: A Preliminary Exploration* 8-10 (U.N. Dep't of Econ. & Soc. Aff., Working Paper No. 149, ST/ESA/2017/DWP/149, 2017).

71. *Id.*

72. *See* I. A. Shiklomanov, et al., *The Dynamics of River Water Inflow to the Arctic Ocean*, *in* THE FRESHWATER BUDGET OF THE ARCTIC OCEAN 281 (Edward Lyn Lewis ed., 2000).

73. *Id.* at 281.

74. *Id.*

75. *See* Gerald G. Singh et al., *A Rapid Assessment of Co-Benefits and Trade-Offs Among Sustainable Development Goals*, 93 MARINE POL'Y 223, 225 (2018).

76. *Id.* at 226-28.

77. This table was made using information from Singh et al., *supra* note 75, at 223.

78. *See generally* U.N. Econ. & Soc. Comm. for Asia & Pac., *Integrated Approaches for*

in an integrated approach to all other SDGs.[79] In the UNESCAP's simplified system causal model, the connections were established between target 6.3 to targets 14.1, 14.2, and 14.3, and, at the same time, between target 6.6 to target 14.2, as indicated in Table 2 below:

Table 2. Connections between SDGs 6 and 14[80]

Target	SDG 6	Target	SDG 14
6.3	Improve water quality, wastewater treatment, and safe reuse	14.1	Reduce marine pollution
		14.2	Protect and restore ecosystems
		14.3	Reduce Ocean acidification
6.6	Protect and restore water-related ecosystems	14.2	Protect and restore ecosystems

As Tables 1 and 2 demonstrate, there is a direct connection between SDGs 6 and 14, which means that to achieve water sustainability in the world, the targets must be accomplished in an integrated manner. Additionally, SDG 6 and SDG 14 present a higher level of synergy among all SDGs.[81] At the same time, however, the connection is specifically concentrated on an analysis of SDG 6 and SDG 14 compared to the remaining fourteen (excluding SDG 17) SDGs. Consequently, it is undeniable that, to achieve sustainability, all SDGs and their respective targets must be analyzed in a cohesive and integrated manner. Moreover, further analysis must be conducted if any specific target, once achieved, interferes in the reach of another or if contradictions arise[82] when accomplishing all the SDGs. But, this second-step analysis is not the focus of the present article. The next section of this Article shifts toward a comparative analysis for this water-focused SDG research, beginning with a discussion of water as a human right in both Brazil and the USA.

Sustainable Development Goals Planning: The Case of Goal 6 on Water and Sanitation (May 2017), https://www.unescap.org/sites/default/d8files/knowledge-products/Integrated%20Approaches%20for%20SDG%20Planning3.pdf [https://perma.cc/HK9T-9LMH].

79. *Id.* at 13-18.

80. *Id.* at 43-51.

81. APOLLONIA MIOLA ET AL., JOINT RSCH. CTR., INTERLINKAGES AND POLICY COHERENCE FOR THE SUSTAINABLE DEVELOPMENT GOALS IMPLEMENTATION: AN OPERATIONAL METHOD TO IDENTIFY TRADE-OFFS AND CO-BENEFITS IN A SYSTEMIC WAY 15 (2019).

82. For more information, see Peter Hangoma & Gavin Surgey, *Contradictions Within the SDGs: Are Sin Taxes for Health Improvement at Odds with Employment and Economic Growth in Zambia*, 15 GLOBALIZATION & HEALTH 82 (2019); Jason Hickel, *The Contradiction of the Sustainable Development Goals: Growth Versus ecology on a Finite Planet*, 27 SUSTAINABLE DEV. 1 (2019); Mary Menton et al., *Environmental Justice and the SDGs: From Synergies to Gaps and Contradictions*, 15 SUSTAINABILITY SCI. 1621 (2020).

V. WATER AS A HUMAN RIGHT IN BRAZIL

Although the UN recognizes water as a human right, water is not expressed as a human right in Brazilian legislation.[83] However, in terms of interpretation, Article 225 of Brazil's Federal Constitution from 1988 expresses the right to a clean and healthy environment, emphasizing the importance of protecting lives.[84] It follows, therefore, that Brazil deems water as essential and may be linked to the environmental protection mandates of Article 225.

In addition to the 1988 Constitution, Brazilian Courts have held that water is a human right, understood as the right to access water,[85] the right to water,[86] and the right to water distribution[87] are some examples, as discussed within Section 2 of this Article. The sign of the Brazilian Courts' recognition of water rights is also apparent from the amendment proposal for the Constitution entitled "PEC 4/2018," or "PEC of drinking water," which aims to add an item on art.5° from the Federal Constitution of Brazil, recognizing water as a fundamental and guaranteed right.[88] The Federal Senate initially proposed the amendment in 2018,

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83. Celso Maran de Oliveira, *Sustainable Access to Safe Drinking Water: Fundamental Human Right in the International and National Scene*, 12 AMBIENT AGUA 985, 994-97 (2017).

84. CONSTITUIÇÃO FEDERAL [C.F.] [CONSTITUTION] Oct. 5, 1988, art. 225 (Braz.) (stating that "[a]ll have the right to an ecologically balanced environment, which is an asset of common use and essential to a healthy quality of life, and both the Government and the community shall have the duty to defend and preserve it for present and future generations."). See Brazilian Constitution in English at https://www.stf.jus.br/arquivo/cms/legislacaoConstituicao/anexo/brazil_federal_constitution.pdf.

85. For the right to access water, see T.J.M.G., Agravo de Instrumento AI No. 1.0521.17.002668-1/001, Relator: Des. Carlos Roberto de Faria, 27.10.2017, Diário da Justic¸a Eletroˆnico [D.J.e], 08/11/2017, (Braz.).; T.J.R.J., Agravo de Instrumento No. 0026608-35.2020.8.19.0000, Relator: Des. Wilson do Nascimento Reis, 03.09.2020, Diário da Justic¸a Eletroˆnico [D.J.e], 03/09/2020, 58 (Braz.).; S.T.J., Recurso Especial No. 1.629.505 – SE, Relator: Ministro Herman Benjamin, 31.08.2016, 2042, Diário da Justic¸a Eletroˆnico [D.J.e], 31/08/2016, 2042 (Braz.).

86. For the right to water, see T.J.B.A., Apelação 8039724-90.2019.8.05.0001, Relator: Des. Mário Augusto Albiani Alves Júnior, 19.06.2020, D.J.E.B.C., 29/4/2020, 413, (Braz.).; S.T.J., Agravo de Instrumento No. 4005357-41.2019.8.04.0000, Relatora: Ministra Assusete Magalhães, 01.02.2022, Diário da Justic¸a Eletroˆnico [D.J.e], 02/02/2022, 3325, (Braz.); T.J.M.G., Agravo de Instrumento-Cv No. 1.0000.19.162234-9/001, Relator: Des. Carlos Roberto de Faria, 27.05.2021, D.O.E.M.G., 09/06/2021, (Braz.).

87. For water distribution, *see* T.J.M.G., Agravo de Instrumento No. 1.0000.19.162234-9/001, Relator: Des. Carlose Roberto de Faria, 07.05.2021, Diário da Justic¸a Eletroˆnico [D.J.e], 09/06/2021, (Braz.); T.J.M.G., AP Civel 1.0301.15.014182-0/003, Relator: Des. Moacyr Lobato, 27.02.2020, Diário da Justic¸a Eletroˆnico [D.J.e], 03/03/2020, (Braz.); AP Civel 8039724-90.2019.8.05.0001, Relator: Des. Mário Augusto Albiani Alves Júnior, 07.05.2021, Diário da Justic¸a Eletroˆnico [D.J.e], 19/06/2020, (Braz.).

88. Federal Senate of Brazil, *Proposta de Emenda a Constituicao 4 de 2018*, Congresso Nacional (Dec. 14, 2021), https://www.congressonacional.leg.br/materias/materias-bicamerais/-

the amendment was approved in March 2021, and then the amendment was sent to the Federal House of Representatives in April 2021.[89] In expounding upon why Brazil should have this right granted in the Constitution, the amendment went as far as to include UN Resolution 64/292 which recognizes water as a Human Right.[90]

Another indication of Brazil's recognition of water as a human right is demonstrated by how Brazil protects its waters.[91] Brazil has had the National Water Resources Policy since 1997.[92] This Brazilian law defines water as a public good, acknowledges water as a limited natural resource (with economic value), and determines that, in case of scarcity, Brazil's water priorities will concentrate on human consumption and animal watering.[93] Although the National Water Resources Policy establishes that water management should contemplate multiple uses, agricultural use plays an important role in the consumption of fresh water, especially when considering the inequalities of water access and water distribution.[94] All these issues contribute to understanding the importance of water as a human right in Brazil.[95]

In sum, Brazil is on track to recognizing water as a human right in the Brazilian Constitution, Brazilian Courts have heard several cases which have been presenting water as a human right, and the connection between water and human rights already exists in Brazil, as can be seen in the National Water Resources Law. On the other hand, there is still room for improvement, as Brazilian history has illustrated that in critical moments when water shortages become a reality, low-income communities are affected the most, and water is still not guaranteed. After surveying the connection between water and human rights law in Brazil, Section 5.1 discusses how Barzil is complying with SDGs 6 and 14.

A. SDGs 6 and 14 in Brazil

In Brazil, the National Water and Sanitation Agency (ANA in Portuguese) monitors Brazil's progress toward achieving SDG 6.[96] Every year since 2009, the

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/ver/pec-4-2018-sf [https://perma.cc/EP2G-8GMY].

89. *Id.*

90. *Id.*

91. *See generally* National Waters Resources Policy, Brazilian Law 9433/1997 (Jan. 8, 1997), http://www.planalto.gov.br/ccivil_03/leis/l9433.htm [https://perma.cc/F33G-3J34].

92. *Id.*

93. BRAZIL, *Politica Nacional de Recursos Hidricos – Lei 9433/1997*, PLANALTO, http://www.planalto.gov.br/ccivil_03/leis/l9433.htm [https://perma.cc/HN8C-ZLBL].

94. Jocemar Santos de Souza & Beatriz Stoll Moraes, *Análise das Políticas Públicas Implementadas para a Gestão dos Recursos Hídricos no Brasil*, 38 CIÊNCIA E NATURA 913, 915-17 (2016).

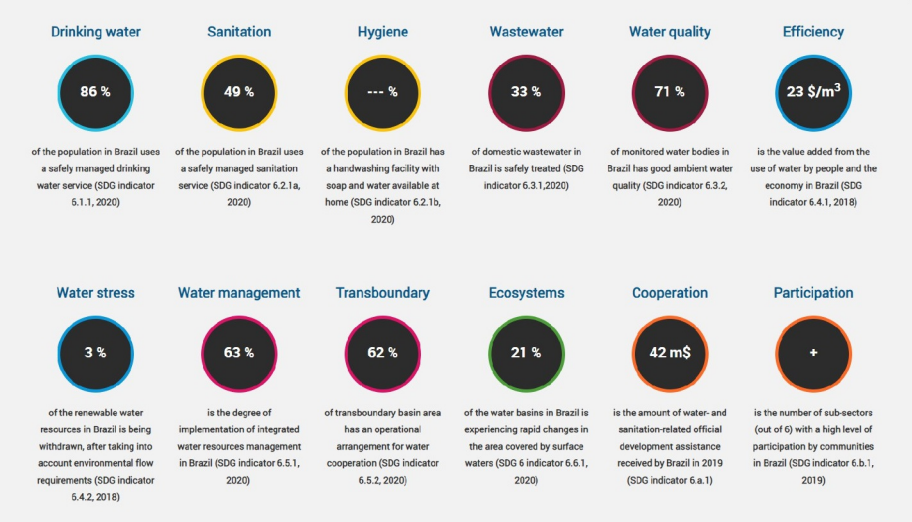
95. de Oliveira, *supra* note 83, at 986.

96. Agência Nacional de Águas, *Conjuntura dos Recursos Hidricos*, SNIRH, https://www.snirh.gov.br/portal/centrais-de-conteudos/conjuntura-dos-recursos-hidricos

agency has published a national report on the state of Brazil's water.[97] With data collected from this report, which is compiled within the National Water Information System,[98] agency employees can assess the data in accordance with SDG 6 targets.

As a country with twenty-six states, the compilation of data is made by states, five regions, and twelve national hydrographic regions.[99] The data is then shared with the UN system, and in the graph below, Figure 1 shows the latest data, as of 2020, tracking Brazil's progress towards attaining the targets outlined in SDG 6.

Figure 1: 2020 Data on SDG 6 for Brazil[100]



Because the first report on the state of Brazil's water was initially published in 2009, the data on certain SDGs dates back to 2009.[101] For example, target 6.1 shows that in 2009, seventy-nine percent of the population had safely managed to drink water service.[102] As seen in Figure 1, by 2020, Brazil had reached eighty-

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[https://perma.cc/HLK6-CRYP].

97. *Id.*

98. *See generally* Agência Nacional de Águas, *Sobre o SNIRH*, SNIRH, https://www.snirh.gov.br/portal/snirh-1/o-que-e [https://perma.cc/2RC2-3DZR].

99. Agência Nacional de Águas, *ODS 6 No Brasil – Visão da ANA Sobre os Indicadores*, ANA (Dec. 10, 2021), https://www.gov.br/ana/pt-br/centrais-de-conteudos/publicacoes/ods6/ods6.pdf.

100. *See SDG 6 Snapshot in Brazil,* UNITED NATIONS, https://sdg6data.org/country-or-area/Brazil [https://perma.cc/VHA6-3L5E].

101. AGÊNCIA NACIONAL DE ÁGUAS, CONJUNTURA DOS RECURSOS HIDRICOS NO BRASIL (2009) [hereinafter *Conjuntura*].

102. *SDG 6 Snapshot in Brazil*, *supra* note 100.

six percent.[103] Next, target 6.2, which represents the percentage of the population that uses a safely managed sanitation service, jumped from thirty-nine percent in 2009 to forty-nine percent in 2020.[104] In addition to reviewing data, it is important to note that in 2020 Brazil approved Law 14.026, which updated the National Sanitation Plan.[105] The National Sanitation Plan must now promote and incentivize scientific research in sustainable development, and ANA will now be the agency responsible for implementing legislation regarding sanitation.[106]

Next, target 6.2.1b covers hygiene.[107] Target 6.2.1b is blank because there is no data from the World Health Organization (WHO) or United Nations International Children's Emergency Fund (UNICEF),[108] the two organizations that monitor the UN's Water (2020) data.[109] The National Water Agency compiles this information with target 6.2.1.[110] But, this data is presented differently from other data, as there is only information available from 2011 when Brazil reached hygiene levels of fifty-seven percent, and the most updated data is from 2016, when Brazil reached hygiene levels of sixty-three percent.[111]

Target 6.3 tackles the need to improve water quality[112] and is broken down into both a wastewater category and a water quality category. The WHO data in Figure 1 shows that in 2020 Brazil reached thirty-three percent of domestic wastewater safely treated, but at the same time, official data from ANA (2020) demonstrates that this target was markedly higher at 51.9 percent in 2018.[113] These statistics show that some discrepancies among the SDG assessment data were found, and yet the explanation for such discrepancies is not available. [114] Shifting to target 6.3.2, which covers water quality, Figure 1 shows Brazil at seventy-one percent while Brazil data from 2018 shows 75.1 percent for the same target.[115]

Target 6.4 is related to water use efficiency, meaning how economic activities

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103. Conjuntura, *supra* note 101.

104. *SDG 6 Snapshot in Brazil*, *supra* note 100.

105. *Lei Nº 14.026, de 15 de Julho de 2020*, PLANALTO (July 15, 2020), http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2020/lei/l14026.htm [https://perma.cc/6LW4-R4FD].

106. *Id.*

107. *SDG 6 snapshot in Brazil*, *supra* note 100.

108. *Id.*

109. *Id.*

110. *See generally Sustainable Development Goals – 6 Clean Water and Sanitation*, AGÊNCIA NACIONAL DE ÁGUAS, https://app.powerbi.com/view?r=eyJrIjoiNjI3NGNkYTktZjMwNS00YjYxLTkxZjItNDJmMDZkMGZhYTViIiwidCI6ImUwYmI0MDEyLTgxMGItNDY5YS04YjRkLTY2N2ZjZDFiYWY4OCJ9 [https://perma.cc/V823-EXQ8].

111. *Id.*

112. *SDG 6 Snapshot in Brazil*, *supra* note 100.

113. *Sustainable Development Goals – 6 Clean Water and Sanitation*, *supra* note 110.

114. These discrepancies happen because each state in Brazil must inform the National Water Agency, but some states do not regularly update this information.

115. *SDG 6 Snapshot in Brazil*, *supra* note 100.

leverage water such as through the agriculture, industry, and service sectors.[116] The Food and Agriculture Organization (FAO) is the custodian agency for this indicator, and the target's measurement methodology was developed for the first time with experts from around the globe.[117] There is also a discrepancy between Figure 1 and ANA's report, favoring Brazil in the later data for this target.[118] Target 6.5 covers integrated water management.[119] Figure 1 shows Brazil at sixty-three percent for target 6.5[120] which does not reflect a similar percentage to that presented by Brazil[121] (at 53.8 percent), a percentage calculated based on information from 2016.[122]

Target 6.6 deals with the changes in water-related ecosystems.[123] Target 6.a focuses on international cooperation and capacity building and 6.b focuses on community participation.[124] These indicators reported by ANA[125] are data from 2019, and the numbers favored Brazil as the overall score for target 6.6 is 10.3 percent, the amount used in international cooperation and capacity building was 6.a 105 million and community participation as indicator 6.b is forty-nine percent. In Figure 1, however, no data is provided for target 6.b.[126]

In concluding the analysis of Brazil's progress toward attaining SDG 6, it is clear to see that Brazil made headway in accomplishing the SDG; however, the question that remains is whether Brazil will achieve 100 percent of this target by 2030. For the data presented, there is an official system related to big data for the SDGs, which uses national and international information, as each country must report to the UN Statistical Commission.[127] Even with Brazil's efforts[128] in

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116. *Id.*

117. *Step-By-Step Methodology for Monitoring Water Use Efficiency (6.4.1)*, UNITED NATIONS (Oct. 18, 2018), https://www.unwater.org/publications/step-step-methodology-monitoring-water-use-efficiency-6-4-1/ [https://perma.cc/UNK2-RGQY].

118. *See generally Sustainable Development Goals – 6 Clean Water and Sanitation*, *supra* note 110.

119. According to Graziele Muniz Miranda and Emmanuel Reynard, "The concept of integrated water resources management (IWRM) emerged to promote the coordinated development and management of water, land and related resources." For more information on IWRM, see Graziele Muniz Miranda & Emmanuel Reynard, *Integrated Water Resources Management in Federations: The Examples of Brazil and Switzerland*, 12 WATER, 1914 (2020).

120. *SDG 6 Snapshot in Brazil*, *supra* note 100.

121. *ODS 6 No Brasil – Visão da ANA Sobre os Indicadores*, *supra* note 99.

122. *Id.*

123. *Id.*

124. *Id.*

125. *Id.*

126. *SDG 6 Snapshot in Brazil*, *supra* note 100.

127. G.A. Res. 71/313 (Jul. 10, 2017).

128. The Annual Sustainable Development Report from 2021 states Brazil's overall position is 61 out of 165 countries in terms of progress related to SDG 6. *See* JEFFREY SACHS ET AL., SUSTAINABLE DEVELOPMENT REPORT 2021 – THE DECADE OF ACTION FOR THE SUSTAINABLE DEVELOPMENT GOALS (2021).

reaching this target, achieving 100 percent for all targets of SDG 6 is dubious, as political involvement hinders the decision-making process.[129] The country faces serious issues related to corruption, which makes the enforceability of laws and regulations a real problem, and the consequence is the existence of good legislation that is not being complied with and the environmental results are not being achieved.[130]

In terms of SDG 14, life below water, the analysis is more complex than the previously analyzed SDG 6.[131] In a report published by the Applied Economics Research Institute from Brazil (IPEA in Portuguese, 2019), targets 14.1, 14.2, 14.7, and 14c do not have a global methodology to measure them.[132] Target 14.3 (minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels), 14.6 (degree of implementation of international instruments aiming to combat illegal, unreported and unregulated fishing), 14a (proportion of total research budget allocated to research in the field of marine technology), and 14b (provide access for small-scale artisanal fishers to marine resources and markets) have a known methodology, but there is not enough data in the country, although 14.6 is under construction along with 14b.[133] Targets 14.4 (proportion of fish stocks within biologically sustainable levels) and 14.5 (coverage of protected areas in relation to marine areas) have an established method, and there is vast available data, but for Brazil, there is only information on target 14.5. This SDG has the least number of methods globally established.[134]

In analyzing SDG indicator 14.5.1, Brazil shows that 26.62 percent of its marine territorial waters are protected as of 2018.[135] But at the same time, there is an urgent need to develop methods to achieve the other indicators and start seeing some positive changes in the oceans. At the current pace, SDG 14 in Brazil will not be achieved by 2030.[136] This can also be confirmed in the Sustainable Development Report 2021, which shows that major challenges remain for the

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129. *See* Stella Emery Santana & Gilberto Fonseca Barroso, *Integrated Ecosystem Management of River Basins and the Coastal Zone in Brazil*, 28 WATER RES. MGMT. 4927, 4938 (2014).

130. Michaël Aklin et al., *Who Blames Corruption for the Poor Enforcement of Environmental Laws? Survey Evidence from Brazil*, 16 ENV'T ECON. & POL'Y STUD. 241 (2014).

131. *See generally SDG 6 Snapshot in Brazil*, *supra* note 100.

132. Cadernos ODS, *ODS 14 Conservacao e Uso Sustentável dos Oceanos, dos Mares e dos Recursos Marinhos para o Desenvolvimento Sustentável*, IPEA, https://www.ipea.gov.br/portal/images/stories/PDFs/livros/livros/190711_cadernos_ODS_objetivo_14.pdf [https://perma.cc/D9BX-F4RJ].

133. *Id.*

134. *Id.*

135. *SDG 14 – Conserve and Sustainably Use the Oceans, Seas, and Marine Resources*, UN SDG TRACKER, https://sdg-tracker.org/oceans#targets [https://perma.cc/BUC9-ER5W].

136. *Spotlight Report on the 2030 Sustainable Development Agenda Synthesis III Brazil*, CIV. SOC'Y WORKING GRP. FOR 2030 AGENDA (2019), https://action4sd.org/wp-content/uploads/2019/10/relatorio_luz_ingles_final_v2_download.pdf [https://perma.cc/J55Z-DYC2].

country.[137] The next important part of this comparative analysis is to focus on water and human rights in the United States of America.

VI. WATER AS A HUMAN RIGHT IN THE USA

In the USA, the cost of water for a family of four is approximately 72.93 US dollars per month as of 2019.[138] Cities with increased water prices generally use the increased rate to improve infrastructure.[139] "Families pay a fixed price every month and a variable charge which refers to water consumption."[140] The way water is charged conveys the amount of inequality in the country. Approximately 35.6 percent of households will be unable to afford water rates by 2022.[141] In 2018, approximately 17,461 households in Detroit, Michigan, were at risk of water shut off due to the inability to pay the cost of water.[142] In 2014, citizens in Flint, Michigan, were exposed to inadequate drinking water conditions tainted with lead.[143]

In the USA, water content is acknowledged as more of a public good than an established human right because America's environmental policies vaguely address the equalization of drinking water.[144] Therefore, regarding UN Resolution 64/292[145], the USA (and other 40 countries) have abstained from adopting it as it recognizes water as Human Right.[146] Even though more policies surrounding water need to be enacted to ensure a dignified life for all United States citizens, it has been argued that, despite this need, the United States is required to provide its citizens the right to water as this right has been memorialized in customary

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137. Sachs, *supra* note 57.

138. Ian Tiseo, *Average Monthly Residential Cost of Water in the U.S. from 2010 to 2019 (in U.S. Dollars)*, STATISTA (June 21, 2021), https://www.statista.com/statistics/720418/average-monthly-cost-of-water-in-the-us/ [https://perma.cc/3X4V-RA8G].

139. *Id.*

140. *Id.*

141. Elizabeth A. Mack & Sarah Wrase, *A Burgeoning Crisis? A Nationwide Assessment of the Geography of Water Affordability in the United States*, 12 PLOS ONE 1 (2017). For more information on cities that were affected by an increase in water rates *see generally* Coty Montag, *Water/Color – A Study of Race and the Water Affordability Crisis in America's Cities*, NAACP LEGAL DEF. AND EDUC. FUND (Dec. 21, 2020), https://tminstituteldf.org/wp-content/uploads/2019/12/Water_Report_FULL_12_20_19.pdf [https://perma.cc/X5WD-8XJY].

142. Kat Stafford, *Controversial Water Shutoffs Could Hit 17,461 Detroit Households*, DETROIT FREE PRESS (Mar. 6, 2018), https://www.freep.com/story/news/local/michigan/detroit/2018/03/26/more-than-17-000-detroit-households-risk-water-shutoffs/452801002/ [https://perma.cc/Q4HG-WEYY].

143. *Id.*

144. Gilbert, *supra* note 42.

145. G.A. Res. 64/292 (Aug. 3, 2010).

146. Edith Lederer, *Access to Clean Water is 'Human Right', Says UN*, INDEP. (July 30, 2010), https://www.independent.co.uk/news/world/politics/access-to-clean-water-is-human-right-says-un-2039083.html [https://perma.cc/Q7XK-RBU5].

international law per the language of UN Resolution 64/292.[147]

Furthermore, UN Resolution 64/292 states that water is essential for the "full enjoyment of life and all human rights."[148] There is the right to health and life because, without water, life is at risk.[149] In the Declaration of Independence, Thomas Jefferson stated, "[w]e hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable rights, that among these are Life, Liberty and the Pursuit of Happiness."[150] Without basic water rights granted to every citizen, one may understand that men are not created equal and that their lives are worthless because they do not have access to clean water.

Although the USA has not adopted the UN Human Rights to Water and Sanitation, three states have adopted specific human rights to water legislation: Massachusetts,[151] Pennsylvania,[152] and California.[153] California was the first state to recognize the right to water as a human right through the enactment of Assembly Bill 685 (Bill) in 2012.[154] The Bill established that every person has a "right to clean, safe, and affordable drinking water."[155] In 2019, the governor provided funding to grant this important right to its citizens.[156] While California made this legislation, no other state in the USA has made the same legislative move. [157]

To comply with California's human right to water, the Office of Environmental Health Hazard Assessment (OEHHA) has developed a monitoring system known as the California Human Right to Water Framework and Data Tool.[158] The final version was published in 2021. This tool measures drinking water quality, accessibility, and affordability for community water systems in the

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147. *See* Adele J. Kirschner, *The Human Right to Water and Sanitation*, 15 MAX PLANCK Y.B. OF UNITED NATIONS L. 445, 464 (2011).

148. G.A. Res 64/292, *supra* note 145.

149. *See generally* Press Release, General Assembly, General Assembly Adopts Resolution Recognizing Access to Clean Water, Sanitation as Human Right, U.N. Press Release GA/10967 (July 28, 2010).

150. *Declaration of Independence: A Transcription*, NAT'L ARCHIVES, https://www.archives.gov/founding-docs/declaration-transcript [https://perma.cc/7YQW-3QUY].

151. MASS. CONST. art. XCVII (1780).

152. PENN. CONST. art. 1 § 27 (amended 1967).

153. CAL. WATER CODE § 106.3(a) (2012).

154. Jessica J. Goddard et al., *Water Affordability and Human Right to Water Implications in California,* 16 PLoS ONE, 3 (2021).

155. CAL. WATER CODE § 106.3(a) (2012).

156. *The Human Right to Water in California*, OFF. ENV'T HEALTH HAZARD ASSESSMENT (Jan. 28, 2021), https://oehha.ca.gov/water/report/human-right-water-california [https://perma.cc/V9MW-ZDVY].

157. *Id.*

158. *See generally Human Right to Water Data Tool*, OFF. ENV'T HEALTH HAZARD ASSESSMENT, https://oehha.maps.arcgis.com/apps/MapSeries/index.html?appid=a09e31351744457d9b13072af8b68fa5 [https://perma.cc/75Z5-F336].

state. This database is the first tool of its kind in the USA that measures the human right to water.[159] The online nature of this data tool makes it even more powerful as a database as it is accessible to anyone with internet access. This instantaneous access allows citizens of California to be advocates for maintaining water as a human right.

A. SDGs 6 and 14 in the USA

The USA National Statistics provides official information on the SDGs for the USA in collaboration with the USA Office of Management and Budget, Office of Information and Regulatory Affairs: the USA Department of State, Office of International Organizations; the USA General Services Administration; and the USA Office of Science and Technology Policy.[160] The official data's latest information is from 2017.

At the same time, the UN, through UN Water, also compiled official data from WHO and UNICEF.[161] Figure 2 shows the snapshot for the USA data.

Figure 2: 2020 Data on SDG 6 for the United States of America[162]

159. C. Balazs et al., *Monitoring the Human Right to Water in California: Development and Implementation of a Framework and Data Tool*, 23 WATER POL'Y 1189, 1191 (2021).

160. *U.S. National Statistics for the UN Sustainable Development Goals,* SDG DATA, https://sdg.data.gov/about/ [https://perma.cc/7QA3-4QPN].

161. *See generally Water Facts*, U.N. WATER, https://www.unwater.org/water-facts/ [https://perma.cc/UTS8-EA28].

162. *SDG 6 Snapshot in United States of America*, U.N. WATER, https://www.sdg6data.org/country-or-area/United%20States%20of%20America [https://perma.cc/J8HH-MXBA].

Indicator 6.1.1 represents the population's percentage that uses a safely managed drinking water service, the UN-Water[163] shows that ninety-seven percent of the population is covered while USA Statistics shows 92.8 percent.[164] Indicator 6.2.1a demonstrates ninety-eight percent of the population has safely managed sanitation.[165] Importantly, USA Statistics does not have official data related to indicator 6.2.1a.[166] In terms of indicator 6.2.1b, hygiene, there is no data from UN-Water or the USA Statistics.[167]

Indicator 6.3.1 shows that ninety-one percent of "domestic water in the United States is safely treated."[168] However, there is still room for improvement, especially when connected to indicator 6.3.2 which shows the proportion of bodies of water with good ambient water quality (data from 2017). In the case of indicator 6.3.2, the percentage is very low at thirty-four percent.[169] For these indicators, the USA Statistics does not have any available data. Furthermore, if there is a high level of domestic wastewater being safely treated, one must wonder why the bodies of water would be of such low quality. The impact of industries and agricultural runoff on bodies of water in the USA is very high, which in turn generates low-quality bodies of water.[170]

Regarding targets 6.4.1 and 6.4.2, the focus is on water use and scarcity, with data from 2017 in Figure 2. Interpreting data from indicator 6.4.1 related to water use efficiency over time, note that agriculture, forestry, and fishing consider the proportion of gross value added from irrigated agriculture since the activity is associated with water withdrawal.[171] Proportionally, with data from 2015, the water usage of water in the USA is thermoelectrical power 41.3 percent, irrigation 36.7 percent, public supply accounts for 12.1 percent, industrial 4.6 percent, domestic one percent, other uses 4.2 percent.[172]

Indicators 6.5.1 and 6.5.2 are related to water resources management.[173] As shown in Figure 2, seventy-seven percent is the country's level of integrated water resources management.[174] There is no data about transboundary basin area with

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163. *Id*.

164. *6 Clean Water and Sanitation,* SDG DATA, https://sdg.data.gov/clean-water-and-sanitation/ [https://perma.cc/8Q7K-C7F4].

165. *SDG 6 Snapshot in United States of America*, *supra* note 162.

166. *6 Clean Water and Sanitation*, *supra* note 164.

167. *SDG 6 Snapshot in United States of America*, *supra* note 162.

168. *Id.*

169. *Id.*

170. *See generally* C. R Proctor et al., *Wildfire Caused Widespread Drinking Water Distribution Network Contamination*, 2 AWWA WATER SCI., 1183 (2020).

171. *Indicator 6.4.1 Change in Water-Use Efficiency Over Time*, SDG DATA, https://sdg.data.gov/6-4-1/ [https://perma.cc/GE6D-FL34].

172. *US Water Supply and Distribution – Water Fact Sheet*, CTR. FOR SUSTAINABLE SYS. UNIV. OF MICH. (Sept. 20, 2021), https://css.umich.edu/sites/default/files/U.S.%20Water%20Supply%20and%20Distribution_CSS05-17_e2021.pdf [https://perma.cc/7NHS-EPV9].

173. *6 Clean Water and Sanitation*, *supra* note 164.

174. *SDG 6 Snapshot in United States of America*, *supra* note 161.

an operation arrangement of water cooperation in the United States.[175] However, this does not mean transboundary management does not exist between the USA and its borders: Canada and Mexico. [176] Rather, this means there is no official data available.

Presenting the data on the percentage of water basins in the country experiencing rapid changes covered by surface waters (indicator 6.6.1), the data is from 2016, and the gain was eleven percent compared to baseline.[177] Unfortunately, there is no data on indicators 6.a.1 (the annual expenditure for drinking water, sanitation, and hygiene) and 6.b.1 (procedures in law or policy for participation by users/communities and level of participation).[178] Once again, this does not indicate that there is no participation in some water basins, but rather that there is no official data.[179]

Even with some high levels of achievement of indicators, like the ones presented above, high-income countries have serious issues reaching the entire population. Most specifically, in the United States, disparities exist among different races regarding access to water.[180] Native Americans, Alaskan Natives, Blacks, and Hispanics are more likely to lack indoor plumbing or basic sanitation.[181] These groups may face poor water quality, inadequate quantities of water, and unsafe waste management.[182] In general terms, SDG 6 for the USA appears in the Annual Sustainable Development Report as a country where challenges remain.[183]

Advancing to the analysis of SDG 14, life below water, the data used in this research comes from the USA National Statistics for the UN Sustainable

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175. *Id.*

176. *See generally* Richard K. Paisley et al., *Transboundary Water Management: An Institutional Comparison among Canada, the United States and Mexico*, 9 Ocean & Coastal L. J. 177 (2003-2004).

177. *SDG 6 Snapshot in United States of America*, *supra* note 161.

178. *6 Clean Water and Sanitation*, *supra* note 164.

179. For public participation in water resources management in the USA see James L. Creighton, *What Water Managers Need to Know about Public Participation: One US Practitioner's Perspective*, Water Policy, 2005, vol 7 (3), p. 269-278; Yorck von Korff et al., *Designing Participation Processes for Water Management and Beyond*, Ecology and Society, Vol. 15, n. 3, Sep. 2010, 29 pages; Sisira S. Withanachchi et al., *A Paradigm Shift in Water Quality Governance in a Transitional Context: A Critical Study about the Empowerment of Local Governance in Georgia*, Water, Vol. 10, issue 2, 2018, 98.

180. *See generally* Justine A. Neville et at., *Water Quality Inequality: A Non-Target Hotspot Analysis forAmbient Water Quality Injustices*, Hydrological Sciences Journal, (May 4, 2022); Kaitlin J. Mattos et al., *Reaching Those Left Behind: Knowledge Gaps, Challenges, and Approaches to Achieving SDG 6 in High-Income Countries*, 11 J. WATER, SANITATION & HYGIENE FOR DEV., 850, 850 (2021).

181. *Id.*

182. *Id.*

183. *See generally* Sachs, *supra* note 57.

Development Goals and from the SDG Tracker.[184] There is little data relating to Brazil's oceans; however, global methodology is currently being developed to achieve the SDG indicators.[185] In the SDG Tracker, indicator 14.1.1 relates to preventing and significantly reducing marine pollution of all kinds. The average amount of plastic items on beaches is two comma one four per square kilometer in the USA.[186]

According to the USA statistics, there is no available data for indicators 14.1 (reduce marine pollution); 14.2 (protect and restore ecosystems); 14.3 (reduce ocean acidification); 14.6 (end subsidies contributing to overfishing); 14.7 (increase the economic benefits from the sustainable use of marine resources); 14.a (increase scientific knowledge, research, and technology for ocean health); 14.b (support small scale fishers); and 14.c (implementing international sea law).[187]

On the other hand, SDG Tracker has information on these indicators for the USA, as shown in Table 3.

Table 3 – SDG 14 USA[188]

Indicator	Description	Data
14.1	Reduce marine pollution	2,114 plastic items per square km (2020)
14.5	Conserve coastal and marine areas	41.06% of territorial waters (2018)
14.7	Increase the economic benefits from the sustainable use of marine resources	0.01% as a proportion of GDP (2017)

The data contained in the 2021 Sustainable Development Report regarding SDG 14 shows that significant challenges remain in the USA.[189] The level of engagement is still very low, which will demand a deeper connection with SDG 6 to protect water for the entire population.

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184. *See generally U.S. National Statistics for the UN Sustainable Development Goals*, US SDG DATA, https://sdg.data.gov/ [https://perma.cc/AQP2-7MNA]; *SDG 14 – Conserve and Sustainably Use the Oceans, Seas, and Marine Resources*, SDG TRACKER, https://sdg-tracker.org/oceans#targets [https://perma.cc/UFC2-JT2B].

185. *See generally SDG 14 – Conserve and Sustainably Use the Oceans, Seas, and Marine Resources*, *supra* note 184.

186. *Id.*

187. *U.S. National Statistics for the UN Sustainable Development Goals*, *supra* note 184.

188. *SDG 14*, SDG TRACKER (Dec. 18, 2021), https://sdg-tracker.org/oceans#targets [https://perma.cc/K55Z-PNP9].

189. The data in this report shows that most of the SDGs are still yellow for the United States. To corroborate this information, the United States Sustainable Development Report 2021 also affirms that "at least 20 percent of indicators in every state are going in the wrong direction." *See* The United States Sustainable Development Report 2021 Executive Summary, SUSTAINABLE DEV. SOL'S. NETWORK (Nov. 6, 2021), https://www.sustainabledevelopment.report/reports/united-states-sustainable-development-report-2021/; *see generally* SACHS ET AL., *supra* note 128.

VII. FINAL REMARKS

The main goal of this research is to demonstrate the legal aspects of water as a human right in the 2030 Agenda and to compare Brazil and the USA. The comparison focuses on the applicability of water as a human right and how the two SDGs connected to water are being complied with by these two nations. There is a connection between water and human rights using the Sustainable Development Goals as a parameter; the focus is usually on SDG 6. In order to achieve high-quality water for all people, SDGs 6 and 14 must be achieved. Because the scarcity of drinking water on the planet is evolving rapidly and the distribution of water is unequal around the globe,[190] the 2030 Agenda would be a way to sustain life on the planet in a way that would provide this essential resource to all people. The language of SDG 6, known as the "water goal," contains information regarding internationally recognized human rights. Therefore, the social approach of SDG 6 combined with a more social approach of SDG 14 should focus on satisfying the water needs of present and future generations.

In comparing Brazil and the USA, Brazil does not have legislation guaranteeing water as a human right; however, its courts have granted several decisions in the country holding the right to water as a human right. On the other hand, as shown in Section 6, the USA does not maintain the understanding of water as a human right, but three states have declared this right legally: California, Pennsylvania, and Massachusetts. Tools developed by California will be an important model to be followed not only nationwide but worldwide as well.

When referring to how Brazil and the USA are achieving SDGs 6 and 14, even though the latter has a better overall ranking in the SDGs, both countries have a long way to go to achieve a sustainable present and future. To be more specific, SDG 14 is so far behind all other SDGs that it seems like it is ignored even though there is more ocean water on the planet than freshwater. Due to freshwater scarcity, desalination plants are a reality in 150 countries in more than 19,372 facilities.[191] This process, when controlled and with proper technology that will not cause even more harm to coastal and marine ecosystems, may be able to support SDG 6.[192]

Finally, to grant environmental justice in the countries analyzed, both SDGs need to be a part of local governments and communities, with the necessary innovative tools to enable information sharing, transparency, and participation. Innovative technology must be developed to help governments better manage these SDGs. Citizens should be able to access the development of each indicator and at

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190. Clara Machado & Rayza Ribeiro Oliveira, *Water for Life: Natural Resource and Essential Human Rights to Sustainable Development*, 11 REVISTA DE DIREITO DA CIDADE 302, 302 (2019).

191. NURIT KRESS, MARINE IMPACTS OF SEAWATER DESALINATION 6 (2019).

192. *Five Things to Know About Desalination*, UNEP (Dec. 17, 2021), https://www.unep.org/news-and-stories/story/five-things-know-about-desalination [https://perma.cc/D5BY-TRH6].

the same time participate in the process to become more responsible for the outcomes while also ensuring compliance on the part of government leaders. Academics and scholars must come together to achieve better sustainable results for society, in a way that leaves no one behind, no matter if it is a developed, developing, or non-developed nation.