


Prioritizing the Rights of Nature: A paradigm shift in Water Resources Governance

 <https://doi.org/10.56238/sevned2024.007-092>

Reinaldo Dias¹

ABSTRACT

This chapter examines the integration of Rights of Nature (RoN) into water resource governance, highlighting a paradigmatic transition from anthropocentric approaches to a more ecocentric perspective. Recognizing water bodies as subjects of inherent rights proposes a fundamental shift in environmental management, emphasizing sustainability and equity. We look at the theoretical and practical implications of adopting RoN, using case studies from the Whanganui River in New Zealand, the Atrato River in Colombia, and the Laje River in Brazil to illustrate challenges and potential benefits of this approach. Legislation that recognizes the rights of rivers as legal entities shows promise in protecting vital ecological functions and ensuring their availability for future generations. However, the effective implementation of RoN faces challenges such as conflicts with economic usages, the need for cultural change, and the development of robust legal frameworks. Successful adoption of RoN will depend on collaborative efforts between communities, policymakers, and scientists. Convergence towards a more integrative and respectful governance of natural rights is essential for the sustainability of water resources in the global context.

Keywords: Rights of Nature, Governance of Water Resources, Sustainability, Environmental Law, Ecocentrism.

¹ Doctor in Social Sciences - Unicamp
Associate Researcher at the CPDI of IBRACHINA/IBRAWORK
Unicamp Technology Park - Campinas - Brazil
ORCID: 0000-0002-8621-2658.
E-mail: reinaldias@gmail.com



INTRODUCTION

Water is an indispensable fundamental resource for life, sustaining ecosystems, human health, and economic activities, and its effective management is crucial to meeting the current and future needs of humanity. Recognized as a fundamental human right by the United Nations General Assembly in 2010, the importance of water is highlighted in the Sustainable Development Goals (SDGs), with emphasis on Goal 6, which aims to "ensure the availability and sustainable management of water and sanitation for all" (United Nations, 2015). However, water governance, which spans political, social, economic, and administrative systems, faces significant challenges such as water scarcity, which affects more than 40% of the global population (UN-Water, 2021), over-extraction, pollution, and degradation of ecosystems (Pahl-Wostl et al., 2012).

The urgency to address water governance issues is highlighted by the fact that water scarcity affects more than 40% of the global population and is expected to increase (UN-Water, 2021). In addition, the recognition of water as a fundamental human right by the United Nations General Assembly in 2010 underscores the importance of equitable and sustainable water governance (UNGA, 2010).

An innovative response to these challenges is the emerging concept of Rights of Nature (RoN), which proposes to recognize natural entities, including bodies of water, as subjects of inherent rights. This paradigm represents a transformation from traditional anthropocentric models to a more ecocentric approach, where nature is seen as a legal subject with intrinsic value (Burdon, 2011). The legal recognition of these rights in several jurisdictions, such as in Ecuador in 2008 and in New Zealand's Whanganui River legislation in 2017, illustrates a growing international interest in this perspective (Kauffman & Martin, 2018; O'Donnell and Talbot-Jones, 2018).

The aim of this chapter is to explore how the integration of the Rights of Nature into water governance can address contemporary environmental challenges and contribute to the sustainable management of water resources. By aligning legal and ethical considerations with ecological needs, this framework offers a new path to improving the sustainability and equity of water management practices. This chapter will delve into the theoretical underpinnings of water governance and the Rights of Nature, examining their historical evolution and presenting case studies that illustrate the practical application and challenges of integrating these rights into water governance. We will conclude with a discussion of the implications and future directions for policy and practice in this emerging field, critically assessing the impact and scalability of Rights of Nature laws.



BACKGROUND

Water governance has evolved over time, reflecting a shift from traditional approaches centered on efficiency and economic productivity to more integrated and holistic frameworks. Initially focused on engineering solutions for flood supply and control in the early 20th century (Molle, 2009), water management saw the need for a more inclusive model that recognized the interconnectedness of water systems. This insight led to the development of Integrated Water Resources Management (IWRM) in the late 20th century, an approach that promotes the coordination of the development and management of water, land and related resources, with the aim of achieving economic and social well-being without compromising the sustainability of vital ecosystems (Global Water Partnership, 2000).

At the same time, traditional governance models, often characterized by centralized top-down regulatory and infrastructure strategies, have proven inflexible and unable to effectively address local needs, resulting in conflicts over water use, ecological degradation, and failures to meet diverse stakeholder needs (Cosens & Williams, 2012; Garrick et al., 2017).

Faced with these challenges, the concept of Rights of Nature emerges, which proposes a shift from anthropocentric approaches to a legal and ethical approach that assigns inherent rights to natural entities, including bodies of water. This concept is not only a legal response, but also a reflection of ecological and indigenous worldviews that promote the interconnectedness of all forms of life and the intrinsic value of the natural world (Stone, 1972; Cullinan, 2011).

An extensive alliance, including civil organizations, governments, indigenous peoples, scientists, and representatives of future generations, forms the "Rights of Nature" movement. This movement aims to integrate the Rights of Aquatic Ecosystems and Nature into legal systems globally, promoting the harmonization of human laws with those of nature. The goal is to restore the health, balance and biodiversity of aquatic ecosystems. The Rights of Nature serve as a holistic and effective legal tool to protect water resources, combat biodiversity loss and climate change impacts, and support global goals such as clean water, sustainability, climate action, and ecological restoration (United Nations, 2023).

The philosophical and ethical underpinnings of the Rights of Nature are deeply rooted in ecological and indigenous worldviews, which stand in stark contrast to the anthropocentric paradigm that sees nature primarily as a resource for human use. These worldviews promote a more integrated approach to environmental governance, emphasizing the interconnectedness of all forms of life and the intrinsic value of the natural world (Stone, 2010; Jones et al, 2015).

The legal recognition of these rights has begun strongly in jurisdictions such as Ecuador, where in 2008 and Bolivia in 2010 had their constitutions amended to incorporate the rights of nature, and New Zealand, which in 2017 recognized the Whanganui River as a legal entity,



integrating Māori cultural values into national law (O'Donnell et al., 2018; Schlosberg and Carruthers, 2010; Calzadilla & Kotze, 2018). These changes represent a move away from traditional anthropocentric approaches towards a more ecocentric perspective, recognizing nature's rights to exist, thrive, and evolve.

The "Rights of Nature" initiatives not only benefit the environment, but also connect human rights, such as access to water, indigenous and environmental rights, forming an integrated approach that leverages the Sustainable Development Goals (SDGs). This concept recognizes nature as a rights holder, strengthening people's ability to demand government action against environmental degradation. It promotes the inclusion of indigenous communities and their knowledge, as well as the consideration of non-human entities in decision-making processes. Positioning people and nature as parts of a united system, the "Rights of Nature" focus on sustainable water management and drive the achievement of sustainable development goals at international, national, and local levels (United Nations, 2023).

In this context, this chapter explores the implications of integrating the Rights of Nature into water governance frameworks. The analysis is crucial to overcome the shortcomings of traditional governance models and to foster a more sustainable, equitable and environmentally friendly management of water resources. By combining the theoretical and ethical foundations of the Rights of Nature with integrated water resources management practices, it seeks to promote a new era of water governance that respects both human needs and the intrinsic rights of the natural environment.

THEORETICAL FRAMEWORK

In the quest to integrate the Rights of Nature into water governance, it is critical to anchor our strategies in robust theoretical foundations that combine the frameworks of ecological governance, environmental justice, legal theory, and integrated water resources management practices. These fundamentals not only provide a comprehensive picture, but also highlight the need for a holistic approach that considers ecological, social, and legal complexities.

ECOLOGICAL AND ADAPTIVE GOVERNANCE

Modern water governance must be adaptive and able to respond to complex ecological dynamics, integrating ecological principles into decision-making processes to create inclusive and ecologically informed governance systems (Chaffin, Gosnell, & Cosens, 2014). This need for adaptability is further emphasized by adaptive governance that addresses the complexity and uncertainty inherent in water management, especially under the impact of climate change (Pahl-Wostl et al., 2012). These approaches reinforce the idea that recognition of the rights of water bodies can promote more sustainable and adaptable water management practices.



ENVIRONMENTAL JUSTICE

This theory addresses the distribution of environmental benefits and burdens among different social groups, with a focus on equity and environmental policy. It highlights the importance of including marginalized voices in governance processes and ensuring that all communities have access to clean and safe water (Schlosberg, 2013). Applying the Rights of Nature in this context can reshape the way water resources are managed, ensuring that they serve human and ecological communities equitably.

LEGAL THEORY AND THE LAW OF NATURE

Legal theorists have explored the implications of extending rights to non-human entities, arguing that such a change could fundamentally alter legal systems to better account for environmental protection. The Law of Nature (RoN) proposes a legal and ethical framework that recognizes the rights inherent in nature to exist, thrive and evolve (Burdon, 2011; Stone, 2010). This perspective is important for understanding the potential legal ramifications and benefits of implementing the Rights of Nature as part of water governance strategies.

INTEGRATED WATER RESOURCES MANAGEMENT (IWRM)

Water governance refers to the political, social, economic and administrative systems in place to develop and manage water resources and provide water services at different levels of society (OECD, 2011). It encompasses a variety of approaches, including integrated water resources management (IWRM), which emphasizes the coordinated development and management of water, land, and related resources to maximize economic and social well-being without compromising the sustainability of vital ecosystems (Global Water Partnership, 2000). This approach integrates the notions of environmental justice and adaptive governance, providing a basis for the simultaneous consideration of human rights and natural rights in water management practices.

By addressing these theories, the analysis sets out to elucidate how the Rights of Nature can transform water governance from a primarily anthropocentric model to one aligned with ecological and social justice principles. The recognition of entities such as the Whanganui River in New Zealand as a legal entity exemplifies the practical application of these concepts, marking a significant transition in the way water resources are perceived and managed (Calzadilla & Kotze, 2018). This theoretical integration provides a comprehensive framework for examining the challenges and opportunities associated with this transformative approach to water governance.



CASE STUDIES

WHANGANUI RIVER IN NEW ZEALAND

The groundbreaking 2017 legislation that recognized New Zealand's Whanganui River as an autonomous legal entity represented a remarkable milestone in the application of the law of nature in water resource governance. This case study looks at the evolution of relationships between local Māori tribes and the New Zealand government, culminating in the enactment of the Te Awa Tupua Act, which established the river as a legal entity, exploring the legal, cultural and environmental implications of this approach

Historical and Legal Context

Historically, the Whanganui River has been central to the identity and livelihood of the Whanganui iwi, who, as described by International Rivers (2020), have struggled for more than a century against the impositions of colonialism that affected the river's integrity. The Māori's relationship with the river, based on the view that "I am the river, and the river is me" (Perry, 2022), highlights a deep spiritual and physical connection that was central to the legal recognition of the river.

Before the 2017

As O'Donnell & Talbot-Jones (2018) and Kramm (2020) explain, the enactment of the Te Awa Tupua Law was the result of extensive negotiations, which began in 2002 and led to the formation of an agreement in 2012, culminating in the 2017 law. This groundbreaking legislation not only gave the river legal personality, but also created the figure of the Te Pou Tupua, representatives appointed by the government and the Whanganui iwi to act in the interest of the river, guided by traditional Māori values, the Tupua te Kawa (International Rivers, 2020).

Challenges and Limitations

The application of this law is not without its challenges. Kramm (2020) points to significant limitations, such as the exclusion of water from river property rights and the preservation of existing property rights that allow activities such as hydroelectricity and irrigation, which may contradict river interests. These conflicts highlight the complexity of integrating indigenous concepts of nature personification with the Western legal framework.

Cultural and Socioeconomic Impacts

Perry (2022) points out that the river's legal status has significant cultural repercussions, reinforcing the revival of Māori culture and offering a platform for redressing historical injustices.



The agreement included substantial financial compensations that aim not only to repair past damages, but also to ensure the future sustainability of the river. This approach has received support from broad sectors of New Zealand society, reflecting a growing recognition of the need for inclusive and sustainable governance of natural resources.

Conclusion of this case

The case of the Whanganui River exemplifies how legal recognition of the rights of nature can serve as a mechanism for resolving long-standing conflicts over natural resources and for incorporating indigenous values into environmental governance. However, as the challenges identified by Kramm (2020) show, the practical implementation of these rights requires an ongoing reconciliation of diverse interests within a legal framework that has traditionally not recognized such perspectives. This case serves not only as a model for other similar initiatives globally, but also as a field of study for the ongoing examination of the interactions between law, culture, and environmental sustainability.

ATRATO RIVER IN COLOMBIA

This case study explores the implementation of the right of nature in the context of the Atrato River in Colombia, a paradigmatic case that reflects both the advances and challenges of this innovative approach to environmental governance. This paper examines the legal recognition of the river as a subject of rights and the implications of this decision for environmental protection and local communities.

Background

The Atrato River, located in a region rich in biodiversity but also marked by conflict and illegal activities such as mining, faces a long-standing environmental crisis. Cano Pecharroman (2018) describes how environmental contamination and degradation threatened the fundamental rights of local communities, leading to a movement that sought legal intervention to protect the river and its tributaries.

2016 Court Decision

The Constitutional Court of Colombia in 2016 made a landmark decision in recognizing the Atrato River as a subject of rights, a move supported by evidence of the grave violation of the rights to life, health, and a healthy environment of local ethnic communities (Haniff, 2021; International Rivers, 2020). This decision was motivated by the need for an ecocentric approach that recognizes the rights of nature as fundamental to sustainability and human well-being.



Implementation and Challenges

Despite the legal innovation, Wesche (2021) argues that the significant advances in environmental policy did not translate into tangible improvements to the Atrato River environment in the years following the decision. The complexity of the local context, marked by a "historical absence of the state" and deep socio-economic problems, complicates the effective implementation of the rights granted to the river.

Legal Representation and Continued Protection

Following the ruling, representatives have been appointed for the river, one from the community and one from the government, to ensure that the river's rights are upheld. Cano Pecharroman (2018) points out, however, that the effectiveness of this representation still faces significant challenges, given the lack of clarity on how and when the river can be defended in specific cases of environmental damage.

Cultural and Biocultural Impact

The recognition of the rights of the Atrato River not only reinforces environmental protection, but also values cultural practices and the deep relationship between local communities and the environment. International Rivers (2020) mentions the concept of "biocultural rights", emphasizing that the protection of nature's rights is also a matter of preserving and promoting local culture, which is intrinsically linked to the health of local ecosystems.

Conclusion of this case

The case of the Atrato River is an instructive example of the application of the law of nature, demonstrating both the potentialities and obstacles of this approach in challenging governance contexts. While the 2016 court ruling sets an important precedent, the actual implementation of river rights requires effective coordination between local communities, the government, and social justice organizations. Furthermore, this case serves as a call for deeper reflection on how legal rights can be effectively translated into practical and sustainable environmental protection, especially in regions affected by conflict and prolonged state neglect.

THE LAJE RIVER IN BRAZIL

In the contemporary scenario of environmental legislation, the recognition of the inherent rights of nature has emerged as a transformative paradigm in the protection and management of natural resources. The present case study focuses on the Laje River, located in the city of Guajará-



Mirim, Rondônia, Brazil, which became the first river in the country to be legally recognized as a living entity with rights, as documented in Law No. 2,579/2023 (CMGM, 2023).

Background

The Laje River, known to local indigenous people as Komi-Memen, plays a crucial role in the region's ecosystem, emptying into the Madeira River and influencing the Amazon River system (One Planet, 2023). The area faces significant threats due to the advance of soybean plantations, hydroelectric projects, and invasions by land grabbers (Oliveira, 2023), making the need for effective and sustainable river management urgent.

Legal basis

Law No. 2,579/2023 establishes that the Laje River is a subject of rights, recognizing the interdependence and interconnection between the river and all beings that inhabit it or interact with it (CMGM, 2023; Gabriel, 2023). These rights include the maintenance of their natural flow, the ability to nourish and be nourished, and the existence in physicochemical conditions that sustain their ecological balance (NGO Mapas, 2023).

Practical Implementation

To ensure the protection of these rights, the legislation proposes the creation of a committee of guardians, composed of members of the local community, including indigenous people, fishermen, and academic representatives of the Federal University of Rondônia (One Planet, 2023). This committee will function as an advisory and watchdog body, essential for decision-making on any activities that may impact the river.

Challenges and Perspectives

The implementation of the Laje River rights faces significant challenges. Development projects and economic pressures continue to threaten the ecological integrity of the river, requiring constant and effective vigilance by the guardians' committee (Oliveira, 2023). In addition, the repeal of similar legislation in other regions highlights the vulnerability of these initiatives to political and economic changes (Gama, 2023).

In sum, the case of the Laje River represents a significant milestone in the evolution of the rights of nature in Brazil, reflecting a growing global awareness of the need for a new environmental ethic that recognizes the intrinsic rights of nature (Gama, 2023; Oliveira, 2023). The effective implementation of these rights will be crucial for the sustainability of the river and can serve as a model for other similar initiatives both in Brazil and globally.



This case study demonstrates the feasibility and challenges of enforcing the rights of nature in water governance, using the Laje River as an illustrative example of the intersection between environmental law and ecosystem conservation.

RESULTS ANALYSIS

THEORETICAL BACKGROUND

The chapter is based on a theoretical framework that covers ecological governance, environmental justice, legal theory, and Integrated Water Resources Management (IWRM) practices. This multidisciplinary approach is essential to understand the complexity of water systems and the interactions between ecological, social and legal aspects. By highlighting the need for adaptive governance and the importance of environmental justice, the chapter provides a clear framework on how the Rights of Nature can promote more inclusive and sustainable water management.

PARADIGM SHIFT TO AN ECOCENTRIC PERSPECTIVE

The chapter argues that the Rights of Nature offer an alternative to the traditional anthropocentric paradigm, which often leads to the exploitation of natural resources. By recognizing water bodies as subjects of rights, this new paradigm emphasizes the intrinsic value of nature and its critical function in global ecosystems. This change is exemplified through certain national constitutions, local legislations, and legal decisions that have recognized nature, or natural entities, as having legal rights or personality demonstrating a growing international recognition of this approach (Gilbert et al, 2023).

There are several important examples of this international movement where aquatic ecosystems are being governed or have been protected through legal models based on the Rights of Nature, for example, Galapagos Marine Reserve (Ecuador), Cayapas Mataje Mangrove Ecological Reserve (Ecuador), Whanganui River (New Zealand), Atrato River (Colombia), Magpie River (Canada), Mar Menor (Spain), among others (United Nations, 2023)

PRACTICAL CASE STUDIES

The inclusion of case studies, such as the Whanganui River in New Zealand, the Atrato River in Colombia, and the Laje River in Brazil, offers a practical view of the implications of applying the Rights of Nature to water governance. These case studies illustrate not only the benefits but also the challenges and limitations of implementing such rights in varied legal and cultural contexts. The analysis of these concrete cases helps to contextualize the theory in real governance practices, showing both advances and obstacles.



IMPLICATIONS FOR FUTURE POLICIES AND PRACTICES

The chapter concludes with a discussion of the future implications for policy and practice, emphasizing the need for governance strategies that integrate legal and ecological considerations in a balanced way. It is suggested that the adoption of the Rights of Nature can lead to more resilient and adaptable management of water resources, particularly in the face of climate change and the growing demand for water.

PRELIMINARY FINDINGS

The chapter is a significant contribution to the literature on environmental rights and water governance, proposing a new way of thinking and acting in relation to water resources. It highlights the importance of approaches that not only respond to immediate human needs but also respect and protect the fundamental rights of nature. The integration of the Rights of Nature into water governance is presented not as a utopian solution, but as a practical necessity to achieve long-term sustainability and ecological justice. However, the practical implementation of these rights requires a continued commitment from all stakeholders, including legislators, local communities, and international institutions, to overcome legal, cultural, and political challenges.

DISCUSSION

INTEGRATING RIGHTS OF NATURE INTO WATER RESOURCES GOVERNANCE

The emergence of the Rights of Nature (RoN) concept as a legal and ethical framework represents a significant break with traditional water governance paradigms, which often prioritize human and economic development over ecological sustainability. This chapter investigated the complexities and transformative potential of integrating RoN into water governance, exploring both the theoretical and practical challenges of this integration. Through the case studies of the Whanganui River, the Atrato River, and the Laje River, we look at how theory translates into practice, each reflecting specific cultural, legal, and environmental nuances.

CHALLENGES IN THE IMPLEMENTATION OF THE RIGHTS OF NATURE

One of the main challenges identified is the need to reconcile human interests with the intrinsic rights of nature. While legislation may formally recognize the rights of water bodies, economic pressures and existing infrastructure, such as demands for hydroelectricity and irrigation, often conflict with these rights. Furthermore, the effective implementation of these rights requires a fundamental shift in how societies value and interact with the natural environment. This ecocentric paradigm challenges not only existing practices, but also legal and administrative frameworks that are predominantly anthropocentric.



CULTURAL AND SOCIOECONOMIC IMPLICATIONS

The adoption of RoN also has profound cultural implications, as evidenced by the case of the Whanganui River. The recognition of the river as a legal entity resonates with the Māori vision that "I am the river, and the river is me", integrating indigenous cultural values into national legislation. This approach can strengthen sovereignty and cultural identity while promoting more holistic and sustainable environmental stewardship. However, this cultural integration requires a sensitive and adaptive approach to ensure that governance practices respect and reflect local traditions and knowledge.

FUTURE DIRECTION FOR POLICIES AND PRACTICES

The chapter suggests that for the Rights of Nature to be more than a symbolic declaration, it is crucial to develop policies that can effectively integrate these rights into existing legal and governance systems. This includes creating mechanisms for monitoring, enforcement, and ongoing review of water management practices to align with RoN. Additionally, education and public awareness of ecocentric values and the rights of nature are key to cultivating an environmental ethic that supports long-term sustainable practices.

In short, while the Rights of Nature offer a promising prospect for more sustainable and just governance of water resources, its practical implementation is complex and fraught with challenges. It requires a continued commitment to the reassessment of legal norms, the adaptation of administrative practices, and the strengthening of community capacities to defend these rights. The effective integration of RoN into water resource governance is not just a matter of changing laws, but of transforming society's relations with nature.

CHALLENGES AND OPPORTUNITIES

The integration of the Rights of Nature into water governance presents a complex landscape of significant challenges and promising opportunities, shaping the way we manage our water resources in the face of human, ecological and climate needs.

CHALLENGES

- a. *Balancing Human and Ecological Needs:* One of the key challenges in integrating the right of nature into water governance is balancing human needs with ecological sustainability. As Schlosberg (2013) notes, achieving environmental justice requires addressing not only the distribution of environmental benefits and burdens, but also the recognition and participation of all affected parties, including nature. This requires a



reassessment of water governance policies and practices to ensure they are equitable and sustainable, taking into account human and natural entity rights.

- b. *Policy and Legal Implications:* The adoption of the right of nature in water governance has significant policy implications. This requires a shift from traditional anthropocentric approaches to more holistic, ecocentric frameworks that recognize the intrinsic value of water bodies. This shift has the potential to transform water management practices, promoting the conservation and sustainable use of water resources (Boyd, 2017). However, it also presents challenges in terms of legal implementation, as existing laws and regulations may need to be revised or new ones enacted to accommodate the rights of nature. This often requires substantial revisions of statutes and regulations, which may encounter resistance from legal systems traditionally structured around human-centered property rights and resources (Stone, 2010).
- c. *Legal and Administrative Barriers:* The implementation of the Rights of Nature involves profound revisions to legal frameworks and may encounter resistance in traditionally human-centered legal systems. In addition, logistical and financial challenges may arise when creating or adapting mechanisms to monitor and protect these rights, especially in contexts of underfunding or weak environmental governance (Cosens & Williams, 2012).
- d. *Cultural Resistance:* Cultural perceptions of nature and its usefulness can also serve as barriers. In societies where economic development is prioritized over environmental conservation, the shift to a paradigm that recognizes the intrinsic value of nature can be particularly challenging (Schlosberg and Carruthers, 2010).
- e. *Climate Change:* Water resources management is suffering the effects of climate change that exacerbate challenges such as water scarcity, pollution, and extreme weather events, pushing the need for a governance model that protects and preserves natural systems and promotes resilience and adaptation (Gilbert et al, 2023)

OPPORTUNITIES

- a. *Promoting Biodiversity:* Recognizing the rights of natural entities can lead to stronger protection measures that contribute to the conservation of biodiversity. Legal rights can enforce habitat preservation and restoration efforts that are crucial to maintaining ecological balances and the services that ecosystems provide (Kauffman & Martin, 2018).
- b. *Sustainability and Resilience:* Rights-of-Nature-based frameworks encourage more sustainable resource management practices, which can mitigate issues such as over-



extraction and pollution, aligning with the Sustainable Development Goals and increasing resilience against climate impacts.

- c. *Social Equity*: Legally recognizing the rights of natural entities can strengthen the voice of traditionally marginalized communities, such as indigenous peoples, aligning with principles of environmental justice and ensuring more equitable access to resources (Schlosberg, 2013).

By exploring these challenges and opportunities, it is evident that the integration of the Rights of Nature into water governance is not only possible but necessary to promote a more equitable, sustainable and adaptive management of water resources in the contemporary global context.

CONCLUSION

This chapter explored the evolution and implementation of Rights of Nature (RoN) as an emerging paradigm in water resource governance. Addressing the transition from anthropocentric models to an ecocentric perspective, we investigate how the adoption of RoN can address contemporary environmental challenges and contribute to more sustainable and equitable water management. Through an in-depth theoretical analysis and the presentation of case studies on the Whanganui River in New Zealand, the Atrato River in Colombia and the Laje River in Brazil, we highlight the potential benefits and complexities inherent in the application of these rights in different legal and cultural contexts.

The Rights of Nature proposes a fundamental reassessment of our interactions with the natural world, suggesting that water bodies and other ecological entities should be viewed not only as resources to be managed, but as legal subjects with rights of their own. This shift has significant implications for water policies, from legislation to the day-to-day practice of water resources management. Recognizing rivers and ecosystems as legal entities can help protect their vital ecological functions, ensuring their health and availability for future generations.

However, the integration of RoN into water governance also presents challenges. Issues of practical implementation, conflicts with existing economic uses, and the need for a broader cultural shift in relation to public perception of nature are significant barriers. Moreover, the effectiveness of these rights depends on a robust legal framework, accompanied by political will and community engagement to ensure their continued enforcement and respect.

Looking ahead, it is crucial that water management policies and practices adapt to incorporate RoN in ways that align human interests with the ecological integrity of water systems. This requires an ongoing dialogue between policymakers, local communities, scientists, and natural resource managers. Education and public awareness will play a key role in supporting this transition, as will the development of international partnerships to share knowledge and experience.



In conclusion, while the Rights of Nature offer a promising new approach to water governance, its successful adoption will depend on our ability to address these challenges in a collaborative and innovative way. The implementation of RoN as part of water governance strategies is not only a legal and ethical possibility, but an urgent necessity to ensure the sustainability and fairness of our aquatic ecosystems in the rapidly changing global context.



REFERENCES

1. Boyd, D. R. (2017). *The rights of nature: A legal revolution that could save the world*. ECW press.
2. Burdon, P. D. (2011). Eco-centric paradigm. In P. Burton (Ed.), *Exploring wild law: The philosophy of earth jurisprudence* (pp. 85-96). Wakefield Press.
3. Calzadilla, P. V., & Kotzé, L. J. (2018). Living in harmony with nature? A critical appraisal of the rights of Mother Earth in Bolivia. *Transnational Environmental Law*, 7(3), 397-424.
4. Câmara Municipal de Guajará-Mirim-CMGM (2023). Lei nº 2.579/2023 que dispõe sobre o reconhecimento dos direitos do Rio Laje - Komi Memen. *Diário Oficial dos Municípios do Estado de Rondônia, ANO XIV, Nº 3505*. Recuperado de <https://faolex.fao.org/docs/pdf/bra219193.pdf>
5. Cano Pecharroman, L. (2018). Rights of nature: Rivers that can stand in court. *Resources*, 7(1), 13. <https://doi.org/10.3390/resources7010013>
6. Chaffin, B. C., Gosnell, H., & Cosens, B. A. (2014). A decade of adaptive governance scholarship: synthesis and future directions. *Ecology and Society*, 19(3). <https://doi.org/10.5751/ES-06824-190356>
7. Cosens, B., & Williams, M. K. (2012). Resilience and water governance: Adaptive governance in the Columbia River Basin. *Ecology and Society*, 17(4). DOI:10.2139/ssrn.1942587
8. Cullinan, C. (2011). *Wild law: A manifesto for Earth justice*. Green Books.
9. Gabriel, J. (2023). Cidade em Rondônia aprova primeira lei que garante direitos a um rio. *Folha de São Paulo*. Recuperado de <https://www1.folha.uol.com.br/ambiente/2023/06/cidade-em-rondonia-aprova-primeira-lei-que-garante-direitos-a-um-rio.shtml>
10. Gama, M. (2023). Direitos da Natureza chegam ao 1º rio do país e terão fórum. *Poder360*. Recuperado de <https://www.poder360.com.br/opiniao/direitos-da-natureza-chegam-ao-1o-rio-do-pais-e-terao-forum/>
11. Garrick, D., De Stefano, L., Fung, F., Pittock, J., Schlager, E., New, M., & Connell, D. (2017). Valuing water for sustainable development. *Science*, 358(6366), 1003-1005. <https://doi.org/10.1126/science.aao4942>
12. Gilbert, J., Macpherson, E., Jones, E., & Dehm, J. (2023). The Rights of Nature as a Legal Response to the Global Environmental Crisis? A critical review of international law's 'greening' agenda. *Netherlands Yearbook of International Law 2021: A Greener International Law—International Legal Responses to the Global Environmental Crisis*, 47-74.
13. Global Water Partnership. (2000). *Integrated Water Resources Management*. TAC Background Papers No. 4. Stockholm: Global Water Partnership. Recuperado de <https://www.gwp.org/globalassets/global/toolbox/publications/background-papers/04-integrated-water-resources-management-2000-english.pdf>
14. Haniff, J. (2021). *The Rights of Nature Movement: Latin America is at the forefront*. Latin America Bureau. Recuperado de <https://lab.org.uk/the-rights-of-nature-movement/>



15. International Rivers. (2020). Right-of-Rivers-Report-Exec-Summary. Recuperado de <https://www.internationalrivers.org/wp-content/uploads/sites/86/2020/10/DIGITAL-Right-of-Rivers-Report-Exec-Summary-Portuguese-optimized-1.pdf>
16. Jones, B. R., Sovacool, B. K., & Sidortsov, R. V. (2015). Making the ethical and philosophical case for “energy justice”. *Environmental Ethics*, 37(2), 145-168. <https://doi.org/10.5840/enviroethics201537215>
17. Kauffman, C. M., & Martin, P. L. (2017). Can rights of nature make development more sustainable? Why some Ecuadorian lawsuits succeed and others fail. *World Development*, 92, 130-142.
18. Kauffman, C. M., & Martin, P. L. (2018). Constructing rights of nature norms in the US, Ecuador, and New Zealand. *Global Environmental Politics*, 18(4), 43-62. https://doi.org/10.1162/glep_a_00481
19. Kramm, M. (2020). When a River Becomes a Person. *Journal of Human Development and Capabilities*, 21(4), 307–319. <https://doi.org/10.1080/19452829.2020.1801610>
20. Molle, F. (2009). River-basin planning and management: The social life of a concept. *Geoforum*, 40(3), 484-494.
21. O'Donnell, E. L., & Talbot-Jones, J. (2018). Creating legal rights for rivers: lessons from Australia, New Zealand, and India. *Ecology and Society*, 23(1), 7. <https://doi.org/10.5751/ES-09854-230107>
22. OECD. (2011). *Water Governance in OECD Countries: A Multi-Level Approach*. OECD Studies on Water. <https://doi.org/10.1787/9789264119284-en>
23. Oliveira, V. (2023). Direitos da Natureza: movimento ganha força no Brasil e no mundo diante da crise ambiental global. Um só planeta. Recuperado de <https://umsoplaneta.globo.com/biodiversidade/noticia/2023/06/28/direitos-da-natureza-movimento-ganha-forca-no-brasil-e-no-mundo-diante-da-crise-ambiental-global.ghtml>
24. ONG Mapas. (2023). Rio Laje é o primeiro rio brasileiro a ter direitos reconhecidos por lei. Recuperado de <https://mapas.org.br/rio-laje-e-o-primeiro-rio-brasileiro-a-ter-direitos-reconhecidos-por-lei/>
25. Pahl-Wostl, C., Lebel, L., Knieper, C., & Nikitina, E. (2012). From applying panaceas to mastering complexity: Toward adaptive water governance in river basins. *Environmental Science & Policy*, 23, 24-34. <https://doi.org/10.1016/j.envsci.2012.07.014>
26. Perry, N. (2022). New Zealand river’s personhood status offers hope to Māori. Associated Press News. Recuperado de <https://apnews.com/article/religion-sacred-rivers-new-zealand-86d34a78f5fc662ccd554dd7f578d217>
27. Schlosberg, D. (2013). Theorising environmental justice: The expanding sphere of a discourse. *Environmental Politics*, 22(1), 37-55. <https://doi.org/10.1080/09644016.2013.755387>
28. Schlosberg, D., & Carruthers, D. (2010). Indigenous struggles, environmental justice, and community capabilities. *Global Environmental Politics*, 10(4), 12-35. https://doi.org/10.1162/GLEP_a_00029



29. Stone, C. D. (1972). Should trees have standing? Toward legal rights for natural objects. *Southern California Law Review*, 45, 450-501.
30. Stone, C. D. (2010). *Should trees have standing? Law, morality, and the environment* (3rd ed.). Oxford University Press.
31. Um Só Planeta. (2023). Primeira lei no Brasil que dá direitos a um rio é aprovada em município de Rondônia, na Amazônia. Recuperado de <https://umsoplaneta.globo.com/biodiversidade/noticia/2023/06/22/primeira-lei-no-brasil-que-da-direitos-a-um-rio-e-aprovada-em-municipio-de-roraima-na-amazonia.ghtml>
32. United Nations General Assembly – UNGA. (2010). Resolution adopted by the General Assembly on 28 July 2010. The human right to water and sanitation [Internet]. Resolution A/RES/64/292. New York, USA: UN; 2010.
33. United Nations. (2023). *Rights of Nature: A Catalyst for the implementation of the Sustainable Development Agenda on Water*. Department of Economic and Social Affairs: Sustainable Development. Recuperado de <https://sdgs.un.org/partnerships/rights-nature-catalyst-implementation-sustainable-development-agenda-water>
34. United Nations. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development*. Recuperado de <https://sustainabledevelopment.un.org/post2015/transformingourworld/publication>
35. UN-Water. (2021). *Summary Progress Update 2021: SDG 6 — water and sanitation for all*. United Nations. Recuperado de <https://www.unwater.org/publications/summary-progress-update-2021-sdg-6-water-and-sanitation-all>
36. Wesche, P. (2021). Rights of nature in practice: a case study on the impacts of the Colombian Atrato River Decision. *Journal of Environmental Law*, 33(3), 531-555. <https://doi.org/10.1093/jel/eqab021>