The landmark Escazú Agreement: An opportunity to integrate democracy, human rights, and transboundary conservation

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Abstract

Latin America and the Caribbean (LAC) is one of the world's most biodiverse regions, but this diversity is threatened by the overexploitation of natural resources and internal social conflicts. In 2018, 33 LAC countries were invited to sign and ratify the landmark Escazú Agreement, which is the first legally binding environmental agreement to explicitly integrate human rights. The agreement outlines an approach to enhance the protection of environmental defenders, increase public participation in environmental decision-making, and foster cooperation among countries for biodiversity conservation. However, clear mechanisms to implement the ideals of the Agreement are currently lacking. We identify the key provisions of the Agreement and link these to tangible mechanisms which aim to integrate human rights and nature conservation. These mechanisms include technological (e.g. free online data), human-based (e.g. legal advice from multidisciplinary teams), and nature-based solutions (e.g. transboundary species management). As environmental assets – and threats to them – span national boundaries, the collaborative and participatory provisions of the agreement could catalyse coordinated transboundary environmental management. We call for the remaining 12 countries to ratify the Escazú Agreement to ensure the ideals of collaborative, just, and transparent environmental management are established across the entire LAC region.

Keywords: Access to information, big data, capacity building, conservation, cooperation, environmental defenders, environmental legislation, NGOs, stakeholders.

1. Introduction

Latin America and the Caribbean's (LAC) globally important biodiversity is under threat from multiple anthropogenic activities (such as nature's pollution and overexploitation) (Rodríguez Garavito and Baquero Díaz 2020), and human rights violations are hindering the capacity of social movements to protect the environment (Butt et al. 2019). These threats are rarely restricted to single countries, as many ecosystems, species, watersheds, and natural resources are shared across political borders (e.g. Rodríguez-Jorquera (2017), Anderson et al. (2018)). Weak governance and lack of collaboration among jurisdictions has allowed these threats to escalate (Coumans 2019). The LAC region thus faces major challenges for the coordination of management of natural resources and biodiversity, including the capacity of social actors to effect change. A recently developed international environmental agreement, the Escazú Agreement, represents a critical juncture as it has the potential to change the course of environmental management in the region.

In 2012, ten LAC countries gathered in Rio+20 to endorse a declaration –the Escazú Agreement— that applies the three main pillars of Principle 10 of the Rio Declaration (Stec and Jendrośka 2019): 1. Information, 2. Participation, and 3. Justice. This is the first legally binding international agreement that aims to guarantee the full and effective implementation of environmental democracy by fostering information generation and access to it. In addition, it advocates for social and environmental justice by encouraging the participation of all stakeholders, especially local and indigenous communities, in environmental decision-making. Further, the Agreement looks to strengthen cooperation among LAC countries, and mandate the protection of environmental defenders (CEPAL 2018). Consequently, 33 LAC countries were invited to sign the Escazú Agreement before September 2020 (CEPAL 2018). Once signed, it needed to be ratified by at least 11 signatory countries to enter into force (CEPAL 2018). To date, 12 countries have ratified the Agreement and 12 have signed but not yet ratified (Fig. 2). Having met the required conditions, the treaty will take effect on 22 April 2021, International Earth Day.

The Escazú Agreement does not set conservation targets, but instead provides guidance on environmental democracy, cooperation and human rights, which is intended to be adaptable to each country's context (Article 4.3, Stec and Jendrośka (2019)). It is therefore crucial that there is clarity around the mechanisms that could facilitate the integration of the Agreement's articles for advancing biodiversity conservation and the protection of the environmental defenders. Here, we introduce three broad mechanisms to achieve this goal (i.e., technological, human-

based, and nature-based) and identify key initiatives that exemplify opportunities to implement the Agreement provisions (i.e. legal statements within the Agreement, Fig. 1). We also detail how these provisions have enormous potential to facilitate transboundary conservation across the region.

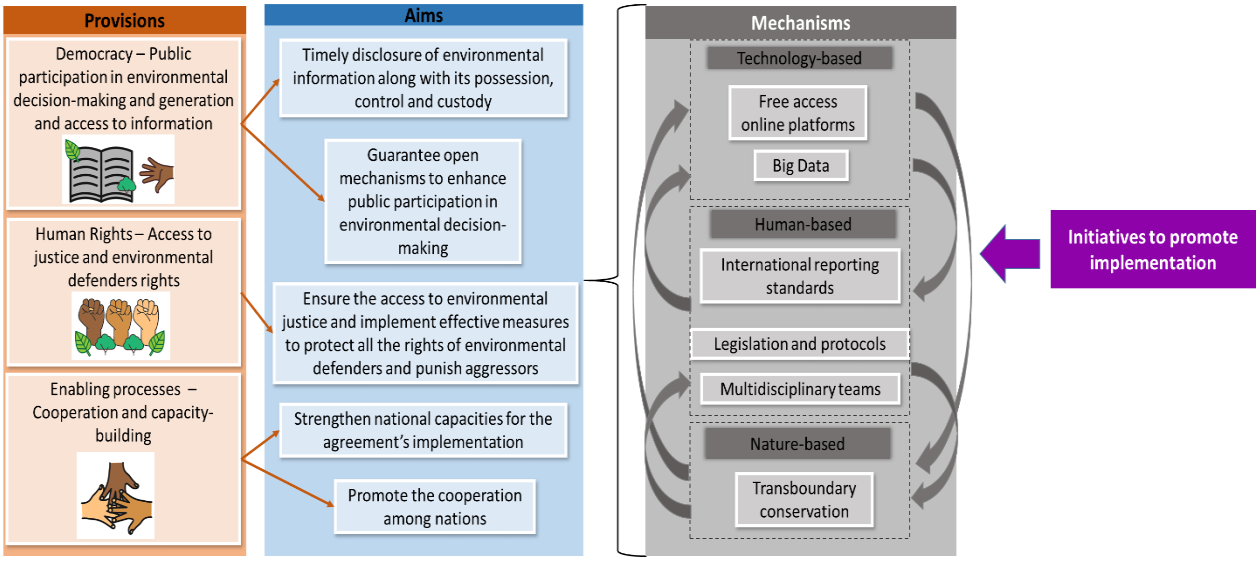

Figure 1. Diagram showing the connection between key provisions, their aims and the mechanisms to promote the Agreement implementation.

2. Opportunities based on the Agreement provisions

We identified the provisions, and associated articles, that contribute most tangibly to nature conservation and human rights, then grouped them into three main themes: 1. Democracy, 2. Human rights, and 3. Enabling processes. For each theme, we identified key mechanisms and associated initiatives that have been implemented at national or sub-national scales. These initiatives have the potential to be scaled-up into larger projects and/or replicated in other LAC countries. Some mechanisms can bolster the implementation of more than one provision; for instance, the use of technology can increase the generation of environmental information—and access to it (theme 1, Table 1), while also enhancing capacity building (theme 3, Table 1). Together, these mechanisms and initiatives provide guidance for how the Agreement aims can be achieved.

Table 1. Opportunities for enhancing democracy, human rights and cooperation for environmental conservation based on the articles of the Escazú Agreement. The articles are grouped by theme, and linked with specific mechanisms and examples of initiatives to implement the Agreement.

Theme 1 | Democracy: Public participation in environmental decision-making and generation and access to information			
Key Escazú's articles	**Aims**	**Mechanisms**	**Example of initiatives**
Access to environmental information (Article 5.2 (a)) 	The right of access to environmental information includes requesting and receiving information from competent authorities without mentioning any special interest or explaining the reasons for the request.	**Technology based** Big data – Satellite images Multimedia – Radio and television + **Human based** Multidisciplinary teams	- Use of satellite images by NGOs to monitor deforestation in Brazil and campaign to create Protected Areas (Rajão and Jarke 2018). - Transmission of environmental information in accessible manners to remote populations, such as radio, television, and Youtube (de la Fuente and Guzmán 2016). - Standarized reporting by corporations, such as the "eXtensible Business Reporting Language" (Seele 2017).
Generation and dissemination of environmental information (Article 6.2) 	Authorities shall endeavour to ensure that environmental information is reusable, and available in formats that are accessible, and that no restrictions are placed on its reproduction or use, in accordance with domestic legislation.		

Generation and dissemination of environmental information (Article 6.3e,f) 	Each Party shall have up-to-date environmental information systems, which may include: - Information on the use and conservation of natural resources and ecosystem services. - Scientific or technological reports, studies and information on environmental matters produced by academic and research institutions, whether public or private, national or foreign.	**Technology based** Platforms and big data + **Human based** Multidisciplinary teams + **Nature based** Knowledge of environmental and biodiversity processes	Build on existing platforms (listed below) to provide detailed local information: ○ Biophysical data: Group on Earth Observations (www.earthobservations.org), Global Biodiversity Information Facility (https://www.gbif.org/), Biodiversity Observation Network (https://geobon.org/), Global Fishing Watch Vessel Tracking Map (https://globalfishingwatch.org/map/), and WePlan – Forests (http://weplan-forests.org/) ○ Economic and environmental data: System of Environmental Economic Accounting (https://seea.un.org/) and Global Database on Legal Documents on Ecosystem Services (https://tinyurl.com/GlobalDES).

Theme 2 | Human rights: Access to justice and environmental defenders rights			
Key Escazú's articles	**Aims**	**Mechanisms**	**Example of initiatives**
Human rights defenders in environmental matters	Guarantee a safe environment for persons, groups and		

(Article 9.1 and 9.3) 	organizations that promote and defend human rights in environmental matters. Take effective and timely measures to prevent, investigate and punish attacks, threats or intimidation suffered by human rights defenders in environmental matters .	**Human based** (Legal and institutional) Governments + Local and international NGOs	Compliance of national protocols that guarantee the protection of environmental defenders: Peru's Ministerial Resolution and Colombia's manual for the protection of environmental defenders (https://somosdefensores.org/)
Access to justice in environmental matters (Article 8.3g, 8.5) 	Mechanisms for redress, such as restitution to the condition prior to the damage, restoration, compensation or payment of a financial penalty, guarantees of non-repetition, assistance for affected persons. Meet the needs of persons or groups in vulnerable situations by establishing support mechanisms, including, as appropriate, free technical and legal assistance.	**Human based** (Legal and institutional) Governments + Local and international NGOs + Corporations	- Legal advice from national and international NGOs: Consortium of NGOs or organizations that promote human rights and the protection of environmental defenders such as the Conservation Initiative on Human Rights and the Zero Tolerance Initiative and the The United Countries Human Rights Council. - Make mandatory the implementation of Human Rights Impact Assessments in business (https://www.ohchr.org/).

Theme 3 | Enabling processes: Cooperation and capacity-building			
Key Escazú's articles	**Aims**	**Mechanisms**	**Example of initiatives**
Capacity building (Article 10.2g) 	"strengthen capabilities to collect, retain and evaluate environmental information."	**Technological based** Big Data and open access platforms + **Human based** Local communities, universities, NGOs, private sector and governments	- Artificial Intelligence for Earth grants provided by Microsoft (https://www.microsoft.com/en-us/ai/ai-for-earth-grants) that aids storing biological data or understanding water capacity for irrigation to optimize water use. - Funding provided by governments to maintain big databases, such as the Global Biodiversity Information Facility. - Government, NGOs and universities can be host institutions that develop and maintain the databases
Cooperation (Article 11.3b)	"developing, sharing and implementing educational,	**Technological based** Websites to share environmental information	Role of universities Universities promote projects that strengthen communities' capacities to enhance multiple environmental problems, such as solid waste management and create sustainable tourism (Shiel et al. 2016).

	training and awareness-raising materials and programmes”	+ **Human based** Universities, NGOs, intergovernmental organizations, and private sector	<u>Role of NGOs</u> WWF *Adapt* is a set of online learning tools (e.g. interactive courses) that promotes the understanding of climate change adaptation and hazard risk (https://wwfadapt.org/) WCS has a set of modules for Colombian agricultural business that want to increase their capacity building in environmental regulation (https://www.mercadosambientalescolombia.com/) <u>Role of the private sector</u> Google Earth Education is a website that shows geospatial products for students and educators (https://www.google.com/earth/education/latam/)

2.1. Theme 1: Democracy – Public participation in environmental decision-making and generation and access to information

Increasing public participation in environmental management requires the generation of environmental information as well as making existing information easily available (Oksanen and Kumpula, 2013). Thus, information sharing, including the reduction of information asymmetries, is a key binding provisions in the Agreement (Articles 5-7, CEPAL (2018)). Public participation is essential for improved environmental outcomes by increasing the quality of knowledge provided by local experts, enhancing public awareness, and enabling implementation of environmental plans (Newig and Fritsch 2009). The increased transparency that follows is not only relevant for public policy decision-making - there is also a growing demand for corporations to report their own sustainability data using standardised and comparable metrics (Seele 2017). Unfortunately, many environmental decisions in the LAC region lack transparency and the accessibility of information is not guaranteed, which makes timely public participation in environmental matters very difficult.

Despite the challenges, participatory democracy can be fostered by the use of technological and human-based mechanisms (Table 1). Recent progress in collecting, processing, and summarising large volumes of data ('big data') surrounding many environmental issues is not just generating information, but is also improving the accessibility of this information (Runting et al. 2020). For instance, spatial data on deforestation in the Brazilian Amazon was previously restricted to government agencies (in the 1970s), but methodological advancements mean NGOs can now track deforestation over time using open source data (Rajão and Jarke 2018). The initial shift to public data was only possible after pressure from social movements (i.e. grassroots and NGOs), and this combination of big data, transparency, and public participation has led to the creation of new protected areas in the region (Rajão and Jarke 2018). However, many stakeholders, like rural communities, might not be able to access to big data. Therefore, additional tools are required to ensure multiple stakeholders have access to environmental information to help achieve the transparency needed for public participation.

Radio and television can enhance access to environmental information by communicating to wider audiences. For instance, the impacts of a mega-tourism project in the National Park Cabo Pulmo (Mexico) were reported on one of the main television channels (de la Fuente and Guzmán 2016). Critically, substantial funds will be needed to support both big data and the use of multimedia (e.g. TV and radio) to disseminate environmental information. At the same time, it is also paramount that the potential of big data to increase transparency is pursued alongside

meaningful stakeholder engagement, based on a bottom-up approach to set questions, in order to achieve the ultimate aim of public participation in environmental management. This transparency in environmental decision-making is also essential to ensure protection for environmental defenders.

2.2. Theme 2: Human rights -- Access to justice and environmental defender rights

Individuals and groups of environmental activists, also known as 'environmental defenders', are essential for the governance and protection of the environment (Butt et al. 2019)[1]. Sustained levels of harassment, intimidation and murder arise when defender actions against extractive activities become entangled in the associated political and economic alliances of powerful state actors, paramilitary entities, and corporations (see Box 1 as an example, Temper et al., (2015)). Alarmingly, Central and South America had almost half of the global total deaths of environmental defenders in 2019 (Global Witness 2020), and Indigenous people, particularly those from Colombia, have suffered the most globally between 2015-2017 (Butt et al. 2019). The loss of environmental defenders lives reverberates throughout communities, and can lead to declines in social capital due to the loss of key leaders and ongoing intimidation. A call has already been raised for a binding policy instrument that regulates and monitors both national and international owners of mining industries in Brazil, following the collapse of a mining dam that killed 20 people and degraded several thousands of square kilometres of indigenous lands (Garcia et al. 2017). The Escazú Agreement is an answer to such a call, as it is the first legally binding instrument targeting the protection of environmental defenders and the human rights (Stec and Jendrośka 2019). However, Article 9 of the Agreement (see table 1) will be difficult to achieve, and will require sustained cooperation and transparency from governments, business, and NGOs (Bille Larsen et al. 2020).

Different LAC countries have established some mechanisms that aim to protect environmental defenders (Table 1) and these need to be scaled-up and applied more broadly across the region. For instance, Peru designed a protocol within a Ministerial Resolution to investigate social threats and provide defenders with legal assistance in 2019 (see

[1] Global Witness (2014) uses the term 'environmental and land defender' to mean "people who take peaceful action to protect environmental or land rights, whether in their own personal capacity or professionally" (23). The UN uses the broader term 'environmental human rights defenders' (EHRD) to refer to "individuals and groups who, in their personal or professional capacity and in a peaceful manner, strive to protect and promote human rights relating to the environment, including water, air, land, flora and fauna" UNE. (2018a,b) .

www.gob.pe). National and international legal support plays a key role in the protection of environmental defenders, with NGOs being important actors. In March 2021, for example, Amazon indigenous communities from Brazil and Colombia with the support of an international environmental NGO, sued a French supermarket chain, arguing that this institution sold beef products that promoted deforestation and threatened indigenous lives (www.france24.com). Further, reporting on the environmental impacts of supply chains could be extended to include human rights impacts, particular as such assessments are gaining importance in the business sector (Götzmann 2017). Specifically, the adoption of the International Human Right Standard would standardize data and allow consumers and companies to more easily monitor their impacts on human rights (Götzmann 2017).

The depth of injustice perpetrated against environmental defenders means overcoming such violence will be a difficult, but necessary, path. It should be a governmental priority to protect environmental defenders from further violence, but current national and international protocols and frameworks have failed to achieve this. The ratification of the Escazú Agreement will not on its own ensure the protection of environmental defenders if there is no political will or enforcement. However, it offers support for LAC countries undergoing political changes in favour of supporting environmental defenders.

Box 1. Environmental defenders threatened as they fight for biodiversity conservation in Colombia

A. The protection of nature by Colombian environmental defenders

Social movements and environmental defenders have played an important role in safeguarding biodiversity in Colombia, particularly in regions with weak state presence. For instance, the Yellow-eared Parrot (*Ognorhynchus icterotis*) improved from Critically Endangered to Vulnerable, thanks to habitat restoration efforts led by environmental leaders, such as Gonzalo Cardona and many others (Salaman et al. 2019). Gonzalo Cardona was recently murdered, and while the motives of this crime are still under investigation, the Yellow-eared Parrot has lost a champion. Additionally, Francia Márquez organized afro-women from the Pacific region to fight against illegal gold mining (that was a significant driver of deforestation) for which she received the Goldman Prize (goldmanprize.org/recipient/francia-marquez/).

Yellow-eared Parrot (*Ognorhynchus icterotis*) (Author: Francesco Veronesi)

B. Threats and impunity

Environmental defenders in Colombia face serious danger due to illegal exploitation of natural resources, guerrillas' armed conflict, and corruption in infrastructure contracts. Francia Márquez survived an attack in 2019 and Francisco Vera, an 11 year old environmental campaigner, received death threats. Since 2016, 302 attacks on environmental defenders were registered but only about 15% are under investigation and 1% have resulted in sentencing, demonstrating the lack of legal prosecution and high impunity (U.N. 2020).

C. Escazú potential for the protection of environmental defenders

Ratification of the Agreement would increase the participation of environmental defenders in designing policies and regulations that address the threats they face. This Agreement could also strengthen the capacities of judicial and investigative authorities to fight against impunity.

2.3. Theme 3: Enabling processes – Cooperation and capacity-building

Solving pressing issues, such as matters related to democracy and environmental justice, requires cooperation among multiple stakeholders. Cooperation in the LAC region could help addressing issues of uneven technical and financial capacity across countries and allow for the diffusion of mechanisms for implementation. For instance, initiatives developed in one country can provide blueprints to strengthen institutions or legal frameworks in others. Similarly, cooperation could allow the scaling up of initiatives by reducing costs and aggregating data through centralization. Since Rio+20, LAC countries have promoted regional and international initiatives that incorporate the value of solidarity and mutual support as the best way to achieve sustainable development and environmental protection. To achieve effective cooperation in the Escazú Agreement (Articles 1 and 11), key social actors, such as academics, NGOs, private sector and local governments, should be involved in the design and implementation of cooperative actions (i.e. human based mechanisms, Table 1). For instance, the coastal management capacity in Belize's marine protected areas (MPAs) was enhanced by intensive two hour meetings for 10 days (Crabbe et al. 2009). During these meetings, a variety of stakeholders (local NGOs, community workers and government fisheries officers) created an action plan to improve management, education, support, and policy development for MPAs (Crabbe et al. 2009). In addition, technological solutions could increase countries' capacity to collect, retain and evaluate environmental information (as stated in Article 10.2g). In particular, participatory mapping using geographic information system (GIS) can advance social goals through the collection and communication of spatial information from a broad range of stakeholders, such as indigenous and rural communities (Brown and Kyttä 2018).

While cooperation is essential to increase implementation within and among countries, numerous challenges remain. Asymmetrical power relations can halt cooperation, as some stakeholders or types of expertise can be seen as more legitimate than others (Fidelman et al. 2014). It is therefore essential to address power imbalances and recognise the value of different knowledge systems. Additionally, technical and financial difficulties can hinder capacity building in many countries from the global south (Runting et al. 2020). Here, international donors can play an important role in facilitating large-scale conservation initiatives, such as the international funding provided to the Amazon Fund governance program in Brazil (Marcovitch and Pinsky 2014). International or pooled funds could also be used to centralize large databases through online open-access facilities shared among different countries (Costello et al. 2014).

Ultimately, the financial resources required to facilitate cooperation for the implementation of the Agreement should not be overlooked.

3. Potential of Escazú Agreement to enhance transboundary conservation

Conserving transboundary species and ecosystems will not only require effective cooperation but it will also depend on transparency, participation, and strong legal frameworks. Identifying common objectives among countries – such as the conservation of species that span national borders – is a key element for successful cooperation. In terms of biological diversity, the LAC region has at least 241,050 terrestrial and 9,310 marine species that have transboundary ranges (Fig. 2A, supplementary materials). For terrestrial species, a large concentration of species is found in South America particularly among Peru, Brazil, Colombia, Ecuador, and Venezuela (Fig. 2A, red gradient). For marine species, Central America and the Caribbean harbour the most transboundary marine species in the region, with Mexico, Panama, Nicaragua, Costa Rica and Colombia sharing most of the species (Fig. 2A, blue gradient). However, this pattern of diversity is not yet closely aligned with countries' involvement in the Agreement. Several island countries that are not signatories (e.g. Cuba and Bahamas) share over three thousand transboundary marine species across their Exclusive Economic Zones. Furthermore, the LAC region contains numerous major river basins spanning two or more countries (Fig. 2B, supplementary material). Notably, the Amazon basin is shared by nine countries, with Brazil containing the largest extent of the basin (Fig. 2B). In contrast, the Orinoco basin is almost equally shared by Colombia and Venezuela (Fig. 2B).

In addition to species and ecosystems, the LAC region has a rich cultural and linguistic diversity from indigenous peoples that is at risk of extinction (Amano et al. 2014). Unfortunately, cultural and linguistic diversity has often been overlooked as an important part of biodiversity conservation (Frainer et al. 2020). Yet, lands under indigenous tenure or managed by indigenous communities overlap with 40% of protected areas and ecologically intact landscapes worldwide (Garnett et al. 2018), which highlights the importance of the protection of these cultures for both human rights and biodiversity conservation. Such complex and diverse environments of the LAC region will inevitably require cooperative management between national governments and indigenous peoples. A promising example can be seen in Chile's 'Marine and Coastal Areas for Indigenous Peoples' policy, which allows customary coastal and marine uses by indigenous peoples that includes no-take marine areas, aquaculture, restoration of key areas, among other uses (Hiriart-Bertrand et al. 2020). It is essential that

biocultural conservation that addresses the loss of both biological and cultural diversity of the LAC region is incorporated in transboundary management.

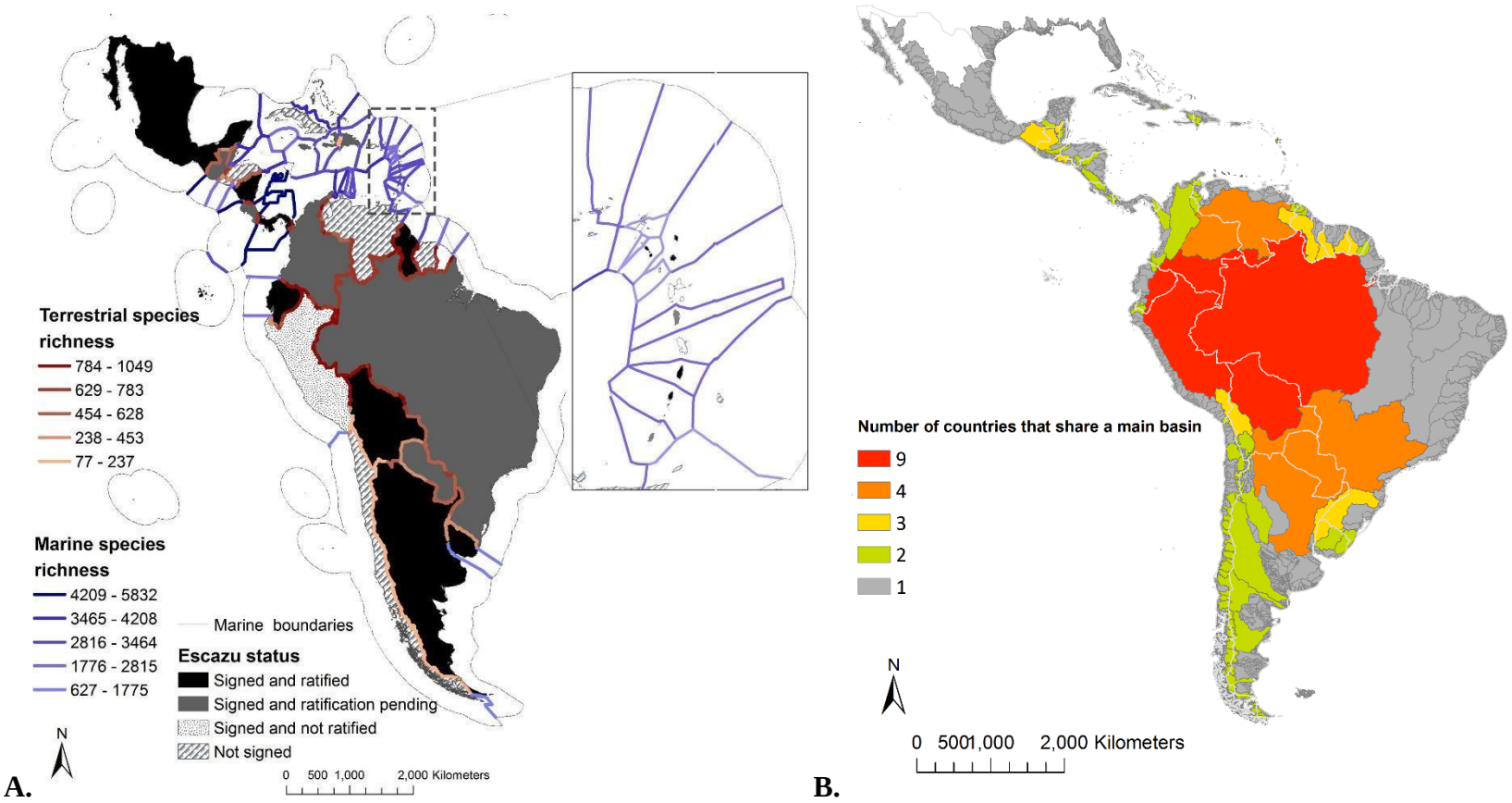

Fig. 2 A. Terrestrial (mammals, birds and amphibians, red gradient) and marine (marine and semi-marine animals, except amphibians, blue gradient) species richness with transboundary ranges across each borders and Escazú status. B. River basins according to the number of countries they span .

The shared species and river basins in the LAC region highlight the urgent need (and opportunities) to create transboundary commitments to protect biodiversity and natural resources. While coordinated transboundary conservation among countries has been promoted in international conventions (e.g. Bonn Convention and Leticia Pact), mechanisms to facilitate implementation are still required (Mason et al. 2020; Prist et al. 2019). The Escazú Agreement's provisions in relation to information sharing, environmental justice, and capacity building could provide a solid platform to support current and future institutional arrangements for transboundary conservation efforts (Fig. 3). For instance, creating and sharing a transboundary terrestrial and marine GIS database among countries can enhance the dissemination and use of environmental information (Articles 6.2 and 11.1, see appendix for articles' description). Balwin et al. (2014) created a participatory mapping approach for the Grenadine Islands and St. Vincent and the Grenadines, which allowed the production of maps to accommodate the needs of the marine resource managers (e.g. enhanced resolution of marine habitats). In this case, human and technological mechanisms were integrated, with universities, local government authorities, and NGOs collaborating for the co-production of the GIS framework. Legislation also plays an important role for the protection of natural resources and biodiversity. Bolivia has a bill named 'Mother Earth' which provides a legal framework for institutions to penalize the destruction of nature and facilitates citizens to take legal action (Cano Pecharroman 2018). Likewise, the Atrato River in Colombia gained legal recognition, which means the State and local communities must protect and preserve it from illegal mining (Cano Pecharroman 2018). Similar actions could be implemented at a transboundary scale, for instance, by giving legal entity recognition to transboundary basins and to the forest patches that are identified important for wide-ranging species, such the jaguar (*Panthera onca*). Without implementing such enforceable provisions, transboundary conservation agreements risk becoming large-scale 'paper parks' that have little or no formal management on the ground, or adversely affecting local communities.

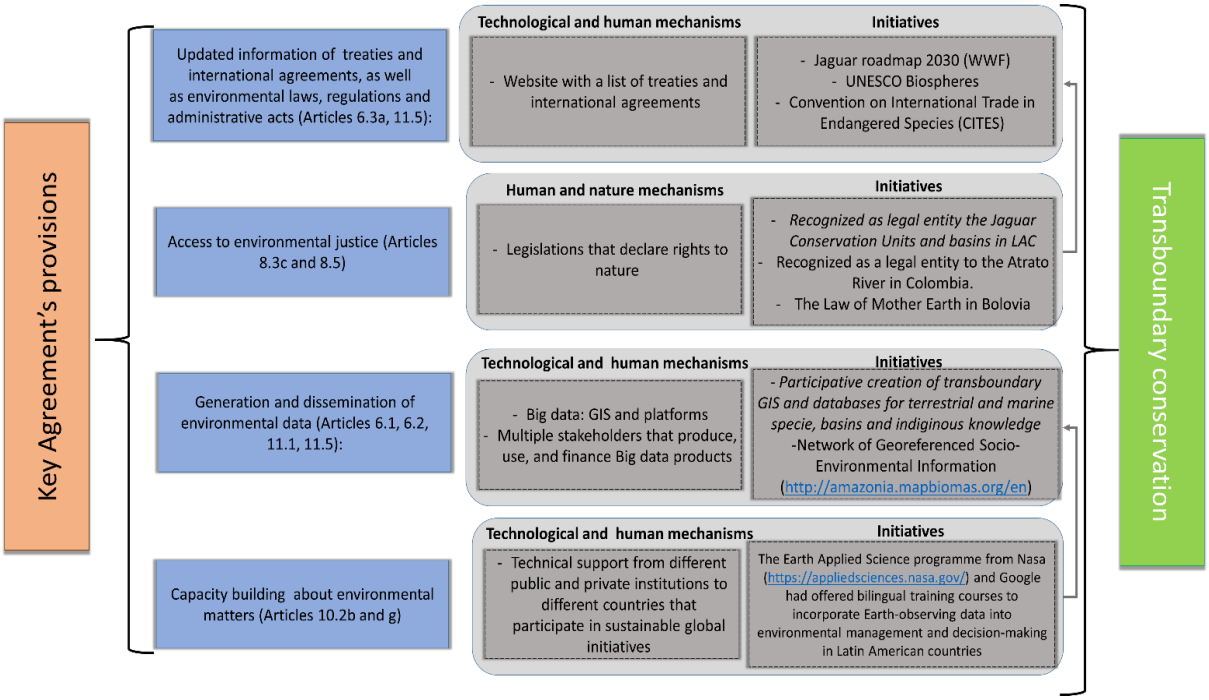

Figure 3. Key Agreement provisions to foster transboundary conservation in LAC. The mechanisms and initiatives can interact. For instance, capacity building interacts with the generation and dissemination of environmental data. We proposed new initiatives (written in *italics*) and highlight key existing initiatives.

4. Conclusions

Our globalized world requires renewed international commitments to more effectively integrate environmental and human rights protection. The Agreement offers great opportunities to foster democracy in environmental matters and enhance human rights, which are foundational pillars towards placing diversity and justice at the heart of change for biodiversity conservation. It is therefore vital that the remaining countries sign and ratify the Agreement to maximise opportunities. Establishing collaboration among countries can be time consuming and costly (Baldwin and Oxenford 2014), and communication among countries (and even between institutions in a single country) is challenging when implementing initiatives at multiple scales (Fidelman et al. 2014). However, coordinated multilateral actions can have immense benefits for biodiversity conservation, decrease management costs in the long-run, and have been most successful when there are some existing collaborations and co-governance mechanisms already in place (Mason et al. 2020). As such, the Escazú Agreement has the potential to provide this foundation for transboundary initiatives that benefit both nature and people. Local communities, universities, and NGOs can serve as a liaison for the implementation of international initiatives within the countries (Fidelman et al. 2014). The

legal binding nature of the Agreement can be used as a landmark for other international agreements in other regions for the recognition of human rights and nature conservation.

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