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Sacrifices for Development or Thirst for Capital Accumulation?
Case Study on the “El Diquís Hydroelectric Dam” in Costa Rica.

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A Master’s Paper

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ABSTRACT

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Costa Rica’s state-led model of energy generation based on large-scale investments in hydropower has given the country autonomy in generating its own energy as well as sovereignty over its natural resources. Successive governments have used nationalist and ecological discourses to support the continued expansion of hydropower as the path to economic development. In more recent decades however, a number of factors have been eroding the dominance of the state-led hydropower development model. Some of those elements are the national and international pressures to liberalize and privatize the energy sector, an increasing body of scientific evidence indicating that large-scale hydropower in the tropics may in fact be detrimental to the environment, and an increasing pressure for the energy sector to shift away from large-scale hydropower, in favor of small-scale hydropower and other renewable energy sources.

This research uses El Diquís Hydroelectric Project (EDHP) as case study. This hydroelectric dam is a critical project linked to future energy generation for export and reflects the evolving and highly contested dynamics of hydropower politics in Costa Rica today. It may well serve as a turning point in national energy policy, the future of large-scale infrastructure and hydropower projects, and indigenous rights. This paper shows how EDHP did not serve the national interest based on a complex web of forces and interests at play.

Key words: political economy, political ecology, hydropower, dams, renewable energy, indigenous communities.

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DEDICATION

A mi familia que desde Costa Rica, me ha dado todo el amor y apoyo del mundo para culminar esta maestría. A mi madre, Bryan, Yancy, Auril, padre, tías y tíos, mis amigas y amigos.

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LIST OF ABBREVIATIONS

Chamber of Industry of Costa Rica ICRC
Critical Discourse Analysis CDA
Dominican Republic-Central America Free Trade Agreement DR-CAFTA
El Diquís Hydroelectric Project EDHP
Costa Rican Electricity Institute/Instituto Costarricense de Electricidad ICE
Gigawatt hours GWh
Indigenous Consultation Mechanism ICM
Inter-American Development Bank IADB
International Labor Organization ILO
International Monetary Fund IMF
Meters above sea level MASL
Regulatory Authority for Public Services ARESEP
Secretaría Técnica Nacional SETENA
World Commission on Environment and Development WCED

Figure 1 Location of Costa Rica in Latin America

Source: author creation based on data from Sistema Nacional de Información Territorial. Costa Rica and Esri, GEBCO, NOAA, National Geographic, Garmin, HERE, Geonames.org, and other contributors
Sacrifices for Development or Thirst for Capital Accumulation?
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Section I: Introduction
Throughout Latin America, communities and ecosystems have been battered by relentless capitalist forces and the exploitation of abundant natural resources. Costa Rica is often seen as an anomaly in the region, however, due to its progressive environmental standards and social support systems. Post-World War II, internal socio-political processes led Costa Rica to create the Second Republic, which sought to create a social welfare state based on democracy, transparency, national sovereignty, and the abolition of military forces. An expansive series of reforms led to the nationalization of industries and services and the creation of autonomous public corporations. One such public corporation is the Costa Rican Electricity Institute (commonly referred to as ICE) founded to develop and provide electricity and telecommunications services.

Under ICE, Costa Rica initiated a state-controlled program of hydroelectric energy production based on large-scale investment in projects. The state-led model allowed the country to have autonomy over its electricity generation and sovereignty over its water resources. Over time, the adoption of environmental policies led to hydroelectric dams becoming a central part of the country’s green economic model. With this shift, successive governments adopted nationalist and environmentally-friendly discourses arguing that hydropower and state-led energy production were critical for the country’s economic development and future.

As the political and economic landscape in Costa Rica change, a combination of factors are contributing to the erosion of public confidence in this hydroelectric model. First, national and international pressures to liberalize and privatize the energy sector to produce hydroelectricity for export are causing concern that Costa Rica is ceding the control of and benefits from its energy production. Second, an increasing body of scientific evidence suggests that large-scale hydropower...
in the tropics may in fact be detrimental to the environment because of its significant landscape transformations, impacts on the natural carbon sinks of the tropical rainforest, and potential contribution to greenhouse gas emissions (Fearnside, 2015; 2012; Deemer, et. al., 2016; Demarty & Bastien, 2011; Hertwich, 2013). And third, in light of the growing body of unfavorable scientific research, there is increasing pressure for the energy sector to shift away from large-scale hydropower, in favor of small-scale hydropower and other renewable energy sources controlled by regional energy cooperatives (Burke & Stephens, 2018; Pisaniello, et.al. 2015).

The erosion of public confidence in large-scale hydropower has come to a head over the last few years, as public backlash from large-scale hydropower projects has prevented the government from pursuing its proposed expansion. Critics of mega-dams have deployed human rights-based arguments to force the government to adhere to environmental and social protections. To showcase this conflict, I use El Diquís Hydroelectric Project (EDHP) as an example of a mega-dam that reflects the evolving and highly contested dynamics of Costa Rica’s hydropower politics. Advocates of EDHP originally linked the dam to energy generation for export, national energy security, and national economic development; however, public backlash led by the Térraba indigenous group, supported by sympathetic civil society actors, ultimately caused the project to be halted. This example may serve as a turning point in energy policy for Costa Rica and the world, as well as for the future of large-scale infrastructure projects and indigenous rights (Gerlak, et al, 2019; Saguier, 2018; Da Silva Soita).

My research seeks to answer one central question: What are the narratives promoted by the Costa Rican government and political and economic elites in support of mega-large infrastructure in the country? It then pursues four secondary questions:

1. What were the main discourses used by the Costa Rican government, specifically ICE, to support hydropower as the main provider of electricity?
2. What were the discourses deployed by the private sector in favor of liberalizing the energy sector in Costa Rica?
3. What were the main counter-arguments created by the social movement of Térraba indigenous communities to resist EDHP?
4. Lastly, how are government discourses and counter-discourses shaping the future of hydropower in Costa Rica?

El Diquís is an emblematic case in which state ambitions around energy development collide with strong social mobilization by indigenous and environmentalist groups leading to the suspension of the project. With EDHP, the discourse of economic development and progress might be used by proponents to mask the advancement of private interests and corruption, while opponents claimed indigenous rights violations, environmental damage, and the loss of national sovereignty. EDHP represents one of many high profile socio-environmental conflicts in Latin America in which escalating tensions around new dam projects have mobilized public opinion against dam-building. Notable examples include the Odebrecht scandal involving multiple hydroelectric projects in the Brazilian Amazon (Fearnside 2006, 2015, 2019; Rothman, 2002; Switkes; 2001) as well as the HydroAysén project in Chile (Prieto & Bauer, 2012; Romero and Sasso, 2014; Ulloa & Romero, 2018; Phan, 2018) and the Agua Zarca Dam in Honduras (Broad, 2016; Maher, 2019). These conflicts over hydropower projects contribute to a larger debate over how a country’s natural resources are to be used, who benefits, and who bears the socio-environmental costs (Arias, 2018; Bebbington, 2013, Martínez A, 2008; Jurgen &Warren, 2008).

This paper contributes to debates about hydropower as a pathway to sustainable development and to a more nuanced understanding of how developing countries simultaneously claim to be ecologically friendly, democratic, and protectors of human rights, despite pursuing large-scale infrastructure development. It considers the future social and political viability of infrastructure projects in a context of rising concern about the significant ecological transformation and damage to vulnerable communities, particularly indigenous and traditional communities, and
the powerful economic and political interests that are served by these projects. (Toledo, 2014). Finally, the paper also seeks to highlight the claims of indigenous groups who have seen their rights as human beings infringed upon by so-called progressive and development initiatives.

This work analyzes how nationalist discourses of economic development and national demand for electricity can be used to hide economic interests of elites and governments to satisfy the exploitation of natural resources, accumulation of capital and economic expansion (Escobar, 1996; Leff, 1994, 2000: Bebbington 2009; 2012). The deceptive nature of these discourses has the potential to cause serious power abuse and disrespect for human rights, undercutting the autonomy of indigenous people and violating agreements for environment protection. As calls for expanded economic development in the face of global climate change persist, it is essential for government and the private sector to deepen their commitment to sustainable development that truly support all people in a society without inflicting environmental damage. This paper seeks to contribute to this understanding and commitment.

This paper begins with a brief summary of the history of the Costa Rican energy sector and moves to a discussion of the main drivers of hydropower energy, historically and today. The EDHP example is then used to showcase how diverging discourses are being used by individuals, organizations, and government operatives to influence public opinion and shape the future of Costa Rican energy production. In presenting the EDHP case study, I use Critical Discourse Analysis (CDA) to: 1) analyze the central discourses used by the Costa Rican government to promote and maintain the hydroelectric model of energy production; 2) consider the counter-arguments formulated against the mega project; and, 3) show how government discourses and civil society counter-discourses can shape the political landscape for future mega investments in Costa Rica.
This paper is based on secondary sources of information, specifically an extensive review of academic and grey literature, government documents, non-government organizations publications, journalist and documentation about EDHP. I use CDA as an analytical tool to identify and interrogate the discourses of government and elites, together with Political Ecology and Political Economy frameworks, to show how actors make use of political and economic power to position ideas and models of development in certain ways, displacing with it, human rights and environmental protections.

This paper is organized into four sections. Section I provides a brief introduction about the history of hydropower development in the country and ideas about energy sovereignty and economic development, as well as outlining key themes and terms used in this paper. In Section II, I undertake a discussion of the key literature I will use to develop this paper as well as the analytical frameworks for thinking about discourses and ideas about energy and mega development projects. I also provide a brief discussion of the methodology used in this research. Section III presents the case study of El Diquís Hydro-electric Project and the main discourses deployed by ICE and the Costa Rican state, and counter-discourses from indigenous communities and their allies. The final section offers a discussion, reflections, and conclusions about EDHP and its implications for other large hydroelectric projects in Costa Rica, Latin America and beyond.

**History and Context of Energy Development in Costa Rica**

For over a century, Costa Rica has pursued an energy matrix\(^1\) based on the exploitation of its abundant water resources—water has been seen as a robust source of socio-economic development as well as a source of sustainable energy (Altinbilek, 2002; Chávez & Cortés, 2013).

\(^1\) Defined in Costa Rica policy as the percentage of the sum all the natural resources from where someone extracted energy to be transform into electricity (Grupo ICE, 2015).
Since the recognition of water as a national energy source in 1910, the government established state control over its hydraulic resources (Feoli, 2018). In the 1920s, legislation nationalized the electricity sector and established state stewardship of electricity generation and distribution. This political move created a legal path for state control of energy provision, and in the process created a national monopoly, but it also established a dominant idea in public thinking about who should control the electricity sector (Feoli, 2018). This development model gave rise in 1949 to the creation of a national energy company, the Instituto Costarricense de Electricidad (Costa Rican Electricity Institute, informally known as Grupo ICE), which developed a strong technical capacity in dam building, hydropower and was given significant autonomy to develop and oversee energy projects as part of the country’s economic development (Grupo ICE, 2018a: 6-7). The national strategies promoted by ICE in their ‘Expansion Plan of Electric Generation’² over the years has been oriented to the construction of mega-hydroelectric projects as a main energy provider³.

Thus, ICE’s large-scale hydroelectric schemes became part of the country’s identity and “national pride.” The ICE model came to be known as the “Tico model” of development, emphasizing environmental protection and social welfare for the entire country (Feoli 2018: 2; Chavez & Cortés, 2013). As consequence, and given the need to improve the electrification of rural areas in 1964, electrification cooperatives were formed, under concession by ICE, to make use of other renewable energy sources such as wind, solar, and micro-hydroelectric plants (Feoli, 2018: 2). Between 1965-1972, four rural electrification cooperatives were created: Coopelesca R.L, Coopesantos R.L, Coopeguanacaste R.L, and Coopealfaroruz R.L (Conelectricas, 2016).

² The Plan lays out ICE’s investments to develop all energy sources in the country. This Plan considered EDHP as one of its main projects to be built.
³ The International Commission on Large Dams defined Mega/Large/Major dams as those with at least 15 million cubic meters, reservoir storage capacity of at least 25 cubic kilometers, or generation capacity of a least one Gigawatt, that is an unit of power of 1,000 Megawatts (ICOLD, 2011:03).
The economic crisis of the 1980s brought the introduction of neoliberal reforms proposed by the International Monetary Fund (IMF) that included the privatization and reforms of many public institutions. However, only a partial liberalization of the financial sector and the reduction of some social benefits were achieved (Cortés R, 2009). ICE was one of the public entities included in the proposed set of privatization strategies. As a result of the reform process, Law 7200 was passed in 1990, and then with its modification in 1995, Law 7508, ICE was forced to buy 15% of electricity from private providers (Feoli, 2018: 12). These changes created national social discontent in Costa Rica against what many considered to be tangible threats to the sovereign, national, and social welfare model of the country.

These reforms culminated in 1995 with the Pacto Figuerres-Calderón (Figuerres-Calderón Pact), which indirectly proposed the privatization of ICE through a series of internal reforms, including the granting of concessions for the telecommunications and energy production in the country (Chávez & Cortés, 2013). The pact gave origin to one of the most remarkable and successful social movements in Costa Rica, Anti-Combo ICE, in defense of national sovereignty and public institutions. This movement succeeded in keeping ICE from privatization and has served as a model of social organization in the face of repeated attempts associated with a capitalist vision of exploitation of national resources for “unclear” national development (Chávez & Cortés, 2013; Cortés, 2006; Fumero, 2006).

Although this paper focuses on energy and economic development in Costa Rica, large-scale hydropower projects are prevalent throughout Central and South America, and across the world. High profile socio-environmental conflicts over hydropower projects, funded by the World Bank, have impacted communities in Guatemala (Chixoy in 1970), Honduras and El Salvador (El Tigre in 2007), Panamá (Alto Bayano in 1972) and have resulted in massive displacement of local

Brazil has some of the most notorious examples of large-scale hydroelectric schemes and human rights violations. Governments have pursued aggressive development of hydro dams in the Amazon Basin to provide energy to support national economic development. The Belo Monte Dam, on the Xingu River in the Amazon Basin, was planned to be built during Brazil’s military dictatorship in 1975; however, the mobilization of indigenous communities, supported by a high profile international campaign, sparked outrage and caused the project to be suspended (Oliveira, 2018: 86-87). As with many such projects, success in derailing them is often fleeting, and in 2010, a new proposal to build the hydro-electric complex, proposed by the Lula government, relocated the dam using national interest arguments to promote economic investment, development and construction began in 2011, (Moran, 2016: 212-213). Indeed, Belo Monte is seen as critical to the development of a major industrial gold mine (Belo Sun) located downstream (Fearnside, 2006: 09; Humphreys Bebbington, et al, 2018: 51; Atkins, 2109).

In the case of El Diquís, the opposition led by indigenous communities has proven effective against those who seek to deprive them of livelihoods and territory, forcing the state to indefinitely suspend the mega-dam construction in 2018 and to create an Indigenous Consultation Mechanism (ICM). This is a mechanism for indigenous groups to review and discuss investments that impact them directly. Indigenous demands for consultation have been central to the case of El Diquís, but the introduction of ICM may well permanently change the landscape for future projects that affect indigenous territories. After the suspension of EDHP, a new Expansion Plan of Electric Generation
2018-2034 was presented by ICE, promoting a more integrated and environmentally sustainable energy matrix favoring the diversification of renewable energy sources (ICE Group: 2018b)\textsuperscript{4}.

Today, the government advocates an energy matrix that is based almost exclusively on renewable and clean sources. Hydroelectric makes up the lion’s share at 78 percent, but wind (12 percent), geothermic (10 percent) and low percentages of biomass and solar energy are also segments of the energy matrix. Dams are still considered to be the most important source of electricity and the main renewable and sustainable energy source that aligns with the Paris Agreement (Grupo ICE, 2018a: 6-7).

**Section II: Literature Review and Theoretical Framework**

Governments and private companies rely on elaborate messaging and marketing strategies to convince public audiences to support large-scale energy infrastructure development as a pathway to development and economic wealth (Nüsser, 2003; Hilmarsson, 2010:29-30, Baghel and Nüsser, 2010). I draw upon three main literatures to explore the dynamics of hydro-power projects and social resistance to those investments in Costa Rica. The first two literatures, Political Economy and Political Ecology are closely related. The first one focuses on the analysis of economic distributive conflicts to understand relationships of power and inequality, determinants of who has or does not have access to natural resources, and who can define the use of those resources (Bebbington, 2007: 28). Political Ecology focuses more closely on the analysis of ecological distributive conflicts to “…offer an account of how political power influences socio-environmental conflicts (Martínez, 2015:57;1998:113). The third literature is Critical Discourse

\textsuperscript{4} This Plan does not detail the proposal and specific strategies, while ICE argued to present a complete version of it in December 2018, which has not yet been submitted.
Analysis, which I use as an analytical framework to trace how Costa Rican governments have molded public ideas about energy development, environmental stewardship and social wellbeing.

The literature review focuses on the discussion of how the interests of political and economic elites are furthered and mutually reinforced by the construction of large-scale infrastructure development that does not consider negative socio-environmental impacts (Moran, 2016: 216; Rosenberg et al. 1997; Richter et al. 2010; Tortejada et al. 2012). In recent decades, State-private partnerships provide lucrative contracts and concessions for private firms. The Odebrecht scandal is an especially relevant example—a corruption investigation conducted by the US Department of Justice exposed irregular “donations” from Odebrecht S.A. to countries around the world linked to large-scale projects awarded to the company. These donations sought to circumvent or re-write laws and environmental protections so that the firm might exploit natural resources and construct lucrative infrastructure (Alencastro, 2019; Campello, 2018; Barca, 2017).

In the process of large-scale infrastructure development, multilateral banks and financial agencies also stand to profit from megaprojects. In developing countries, mega-dams, as well as many natural resource extraction projects, are highly dependent on international financing from private banks, multilateral banks, state resources, and increasingly private pension funds to support their construction (Hancock & Sovacool, 2018: 620). In the case of EDHP, available information points to investments from the Inter-American Development Bank (IADB) of approximately one million US dollars in order to develop the Environmental Impact Study (Pérez, 2011: 18-19). The rest of the money to finance the construction of the dam was to be provided by ICE, which would also be responsible for building and overseeing the project.

Some authors also argue that hydropower projects are planned to prove and demonstrate the control of natural resources by the elite, which exacerbates the concentration of wealth and
discriminate against minorities, particularly indigenous communities (Rothfelder, 2003; Smith, 2003). Other authors contend that tropical countries suffer from the most severe socio-environmental impacts by the construction of dams. Some of those impacts include the destruction of unique biodiverse ecosystem and sacred sites, displacement of marginalized communities, violation of human rights of indigenous communities, degradation of water quality, widening inequality, nontransparent processes, and production of greenhouse gases (McCully, 2007:140; Fearnside, 2018, 2915:426; 2014 19-33; CMR, 2000; Toledo, 2011; Hancock & Sovacool, 2018; Tundisi, Santos & Menezes, 2003; Wolf, 2007; Terminski, 2013: 16). Even when such negative externalities are included in the discussion, countries find ways, as in the case of Brazil, to use a “security suspension” in order to justify and fast track infrastructure projects over socio-environmental regulations and protections (Fearnside, 2015: 427-428). In Costa Rica, this scenario occurs when a project is determined to be of “National Interest”, which will trigger the annulment of any national law that protects human rights and the environment.

One of the most interesting pieces of work using a political ecology lens is presented by Patrick McCully who defined, among many things, nine categories to study and understand hydro-projects around the world (2007: XXVI). Those categories are: 1) rate of dam building; 2) the scale of the industry; 3) cost overruns; 4) power generation; 5) economic returns; 6) social impacts 7) displacement; 8) impact on women; and 9) ecosystem impacts. I have used McCully’s categories in this paper to analyze the causes, consequences, and context around hydroelectric projects.

**Political Economy**

As Bebbington (2007) argues, it is not enough to consider just local and economic variables to analyze environmental processes. Economic distributive conflicts are a key element to
understand relationships of power, inequality, and access (or not) to natural resources while considering the capacities and ideologies that states create to hide non-transparency and unfair natural resource exploitation (Dagdeviren & Robertson, 2014:157). With it, private interest makes use of public resources, like water, to position strategies that work as vehicles for the exploitation and transformation of nature for their own benefit (Romero and Sasso, 2014, Nilsen, 2008: 322).

It is common for Latin American countries to adopt neoliberal reforms that promote and bring new rules that make national laws and regulations more flexible in order to encourage private companies to pursue the extraction of natural resources and infrastructure development (Bebbington, Bornschlegl & Johnson, 2013: 01). These projects are generally approved without considering international regulations that seek to create an equal distribution of wealth while creating socially and environmentally sustainable development processes (Balakrishnan & Vesvikar, 2016: 34). With those economic practices the respect of indigenous communities’ culture and rights are not part of the public and policy discussions. Thus hydroelectric projects can be conceived as representative of State (and elite) control, manipulation, exploitation, and management of natural resources with an unequal distribution of profit for everyone.

A socio-economic development discourse is generally advanced by government to local communities, particularly indigenous, to get their approval for infrastructure construction, even when the process, benefits, and impacts of the projects are not clear (Baruah, 2016: 56, Bingham, 2010). Those arguments of development (equitable capital accumulation) have also been studied as a tool to create and reproduce dynamics of economic and political power used by states for the control of land and resources, and generally lacks in the consultation process and the distribution of dividends (Balakrishnan & Vesvikar, 2016: 24, Thomas, 2017:228).
In relation to Political Economy and extractive industries, there are two important points of view. First, extractive industries shape the way in which countries pursue socio-economic development—political actors choose to promote specific natural resources extraction that give them more profit. And second, extractive industries are characterized by conflicts as a result of the inequality of the distribution of profits between stakeholders (Bebbington, 2012: 28-29).

As a final point of discussion, the use of water to produce electricity has been both considered a natural resource that can boost poor countries development but also a resource that can be manipulated by elites in the power to create their own profit. Water supplies that are suitable for hydropower can be categorized as a blessing or as a curse for a nation (Hancock & Sovacool, 2018: 616 and 624). Hancock and Sovacool (2018) also argue about how a fair, moderate and transparent use of resources (water) can produce fair development and economic growth.

**Political Ecology**

To Martínez Alier, political ecology is an approach to study society (and their institutions) and environmental conflicts. Specifically, ecological distribution conflicts where "... different actors who have different interests, values, cultures, knowledge, and also different degrees of power, use or can use different languages and meanings to assign value " and where the unjust burden of environmental externalities is borne by those with less power (Martinez, 2008: 27).

As consequence, Martinez Alier (following the same ideas developed by Frank Beckenbach and Martin O'Connor) introduced the term *Ecological Distribution Conflicts* to describe social relations created by the unfair access and distribution of natural resources that cause conflicts (Martinez Alier, 1998: 114). In these conflicts, unjust burdens of environmental degradation, pollution, and ecological debt are assigned to marginalized communities that
generally see little benefit from promised development. Political Ecology is a useful framework to consider conflicts of “who wins and who loses” in the context of natural resource exploitation and development. In some cases, such conflicts can have more constructive results, such as the emergence of sustainable productive alternatives, the formation of new alliances, the strengthening of legal systems and protections, among others (Martinez Alier, 2015: 55).

In response to such conflicts, the concept of Environmental Justice has been picked up by Latin American social movements. The “justice” framework emphasizes the win-lose relationships implicit in many development projects and proposes the reconfiguration of socio-economic development models (Martinez Alier, 2008: 14). Political Ecology, with its focus on power in conflicts over nature, brings an interdisciplinary lens to understanding the dynamics and complexities of the meanings, uses, management of natural resources, asymmetric power relations, and the persistent inequalities between those in power and the communities whose resources are being exploited (Nepal, Saarinen, McLean, 2016). However, we keep in mind that those “struggles go beyond battles over natural resources as they involve struggles over meaning, norms, knowledge, identity, authority, and discourses”, where local communities oppose ideas that propose changes in their livelihood (Boelens, et al, 2016: 08).

Political Ecology as an analytical framework examines "political power” and the role that such power plays in the positioning of discourses and ideas in a society (Alimonda, 2011: 44). Elites use their superior positions and access to information over other actors to appropriate public and natural resources—such as water—to produce profit (Romero, 2014). This position of power, the arbitrary and non-sovereign decisions and the violation of the human rights, predominantly indigenous communities, create a new productive and industrial vision of nature (Howit, 2001; Kaika, 2006).

As a consequence, the resistance and opposition to dams is an important matter for those looking for sustainable and environmental friendly development models, particularly for indigenous communities that have experienced the destruction of natural resources and dispossession of their territories and traditions. Not surprisingly, resistance is generally criminalized and repressed by agents of the state and private security forces (Alimonda, 2011: 22). Many authors now consider that out of all examples of natural resource use, dams have the highest socio-environmental impacts, but with low socio-economic benefits for impacted communities (Fearnside, 2018; Turpin, 2008; Alimonda, 2011).

The World Commission on Environment and Development (WCED) claimed in 1987 that mega hydro-power projects should meet the necessities of the present without compromising the availability of resources for future generations in order to be considered sustainable development projects (McCully, 2007). Still, mega-dams continue to have significant impacts on landscapes and fail to consider the long-term changes unleashed on natural resources and peoples, including the destruction of forests, loss of flora and fauna through flooding, disruption of the hydrological cycle, and downstream consequences (McCully, 2007: 140). Indeed, the concept of “sustainable development” as applied to hydro-projects focuses on the clean renewable energy discourse to
stress the reduction of greenhouse gases and diminish the socio-environmental implications in the name of development (Fearnside, 2018; Escobar, 1999; Castree, 2005, Braun & Castree, 1998, Toledo, 2014).

**Critical Discourse Analysis**

The third body of literature, CDA engages with how ideas are developed and disseminated in the public sphere to influence peoples’ understanding and thinking about particular issues. CDA also helps us to define knowledge or truth about a particular subject and how that knowledge or truth is created (Adger, 2001, Pardo, 2007). It considers how discourses are shared by small, medium or large groups of people at national or international level (Svarstad, 2004:243). From a CDA perspective, Slembrouck (2001, 2005), Stubbs (1998), Fariclough (1996), and Van Dijk (2015) discourses are created with particular interests that can be used to perpetuate, establish and legitimate power/domination over others through the use of written texts and voice/verbal messaging involving socio-economic, cultural and political structures in a determined context.

The ideas of CDA as proposed by Van Dijk (2015) are used to analyze the EDHP in this paper. For Van Dijk, to understand the context in which a discourse is studied, we must have a clear understanding of the interaction between discourse and ideology (1997,1981). By understanding that interaction, we can analyze how discourses create new realities and “illusions” that favor domination, inequality and power abuse through the position of personal ideologies (Van Dijk, 1999). Determined discourses can build, change and define social structures through which individuals and groups interact in a society, as well as, the historic socio-economic relationships constructed in the past (Van Dijk, 2002). Based on this notion of societies as an outcome of determined discourses, Van Dijk argues that discourses are a powerful tool to create and position
elites’ interests in order to convince people about certain ways of thinking, sway public opinion on certain positions, projects and reaffirming stigmas about new realities (2002: 19).

The concept of ideology is complex and can be interpreted in many ways. For the purposes of this inquiry, ideology is understood under Garduño’s view, emphasizing that the understanding and conceptualizing of ideology must include consideration of local: the legitimization of authority, distortion of reality, and social integration (2004: 71). Here, legitimization responds to both political and domination strategies, while the other two components set the landscape for the new realities that elites try to create.

Finally, CDA provides a useful lens to study how text and voice determine power structures that work in specific social, cultural, economic and political contexts. It reveals how discourses perpetuate power and position ideas that can sustain economic, social, cultural and political inequalities, as well the mental structures used by individuals with power (Van Dijk, 2003: 25).

**Methodology**

This paper is the result of personal interest in socio-environmental conflicts around the expansion of hydropower in Costa Rica. I conducted my study using secondary materials drawn from a wide range of English and Spanish language materials that include scholarly publications, government documents, newspaper accounts and gray literature (NGO publications, social media, and blogs) during the period of 2000-2018. Over the course of my research, the EDHP project was openly contested by a range of local and national actors resulting in the suspension of the project. This was both unexpected and rather sudden.

The process for collecting information related to the two main stakeholders was mostly done digitally. In 2000, the Government of Costa Rica initiated a process called *Gobierno Digital,*
which seeks to make public all the information of the government entities in digital formats. Some of the websites required creating a username to login and access free information. Creating login credentials was easy and did not require paying fees for the services. Generally, the newspaper review and forums provided free access. In the case of two newspapers, payment of an annual fee was required to access to new and full versions of documents. Some legislative files, reports from ICE, and documents from the non-governmental indigenous organizations were not available on the web, so email and direct phone calls were used to establish the corresponding communication. In cases where I reached out to get a document, the information was provided by email.

After securing over 110 documents, I classified the documents first according to the stakeholders involved and then based on main themes. On numerous occasions I found that articles, programs, reports, papers, and blogs not were re-produced (some of them just copied) from the newspaper La Nación, from ICE, or from some indigenous NGO. In terms of accessing the academic articles used to build the literature review and theoretical framework, I used the services provided by the Robert Hutchings Goddard Library of Clark University (both physical and electronic), Google Scholar, Research Gate, and Science Direct.

Section III The El Diquís Hydro-Electric Project (EDHP)

3.1 Context

In this section, I will present basic information about the EDHP project and then introduce and discuss two of the key stakeholders in the conflict: ICE, the promoter and would be builder of the EDHP, and the Térrabas, the main indigenous community that opposed and would have been affected by the dam construction.
El Diquís Hydroelectric Project

This project was first proposed to be built on the Superior General River, 10.5 kilometers from Buenos Aires, between the communities of Térraba and Paraíso⁵. Figure 2 shows the location of the proposed project.

Figure 2 Location of the Proposed El Diquís Hydroelectric Project in Costa Rica

Source: Author’s creation.

ICE’s engineers calculated the dam to be 130 meters high by half a kilometer wide, with an approximate reservoir area of 6,815 hectares (impacting 700 hectares of indigenous territories). With an installed capacity of 631 megawatts (MW) for a total production of 3,050-gigawatt hours (GWh) per year (Friedrich Ebert Stiftung, n.d: 04). The reservoir was expected to operate at an approximate level of 300-260 meters above sea level (MASL), with a containment area for possible "floods" in the rainy season that would allow it to reach 310 MASL. The water would be directed through an eleven-kilometer tunnel and high-pressure pipeline to a powerhouse. Once the water was used to produce the electricity, it would be directed from the machine house through a discharge tunnel to return the water to the Grande de Térraba river.

⁵ In Puntarenas, one of the seven providence of Costa Rica.
The original investment was estimated to be $1,779 (1.78 billion) USD, and by November 2018, the cost to get the project going over the years was equivalent to 146 million USD (Fern, 2018, Lara, 2018b). However, after more than 30 years trying to build this dam, ICE “indefinitely suspended” the project in November 2018. In the seventies, EDHP was proposed by ICE as the Boruca Project, but opposition by local residents led to its suspension. Years later, it was relocated and given another name. Figure 3 shows the main characteristics and attributes of EDHP. This information comes from the ICE EDHP proposals from the last decades.

Until now there has been no document or explanation that indicates what the procedure will be in terms of the payment of the US $146 million invested in the planning of the dam, as well as the steps to be followed in relation to the more than 900 hectares that ICE had already acquired in the South Zone by ladinos.
In 1884, Costa Rica lit San José city with 25 lamps using a small private hydroelectric dam with an install capacity of 50 Kilowatts (KW). By 1920, the demand for electricity by local business and households increased up to 10 000 KW, and the only provider of electricity was the US company, Electric Bond and Share Company (Rodríguez Argüello, 2000). In light of growing national discontent and demand for electricity, between 1928-1929, Congress nationalized the production of electricity from resources in the public domain such as water, giving rise to the creation of the National Electricity Service (SNE). Although the demand for electric service continued to grow, private operators did not seek to satisfy it (Chaves and Cortés, 2013: 73).

In 1940, the demand for electricity was already at a critical point; however, it was not until 1949 that the National Institute of Electricity (ICE) was created to provide the energy required to boost the expansion and modernization of the agricultural and industrial sector, as well as the provision of the electric service to Costa Ricans (Grupo ICE, n.d; 2018; Jiménez Gómez, 2009; Fallas and Álvarez, 1997). In 1953, Law 1657 led to ICE signing the commitment of used renewable resources and the protection of several water resources for future electric generation, promoting with it an institutional environmental component. However, the only resource under discussion by ICE was water.

The National Plan of Electrification (1955-1965)6 introduced hydropower development as one of the main goals of the agency through the exploitation of Costa Rica’s abundant water resources to provide total coverage of electricity to San Jose city (Jiménez Gómez 2009). That plan led to the construction of hydroelectric dams like La Garita (1958), Río Macho (1963), Cachí (1966), and Tapantí (1972); but the stellar project was the “Central Arenal” dam in the North of

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6 The National Plans of Electricity contain the main challenges and solutions to attend electric national demand.
Costa Rica, which provided electricity to peripheral areas by 1979 (ICE, 2015: 06-07, Chaves and Cortés, 2013: 74). As a result of the expansion and nationalization of the electric service, ICE acquired technical, operational and construction capabilities in hydroelectric dams that forced private electricity suppliers to leave the Costa Rican market. With this, ICE acquired a monopoly in the national market for the production and provision of electric service. Since then, ICE has been the entity responsible for providing the energy required to execute the development and industrialization plans that the State promoted since the 1950s, which is why ICE is considered an emblematic institution of the Costa Rican development model (Hoffmann 2007: 11).

In recent years, two more renewable energy projects were built by ICE, the Miravalles Geothermal Project in 1994, and the Tejona Eolic Plant-30 turbines- in 2002 (ICE, 2015: 06-07). In reference to solar energy, ICE did not seem to have plans to develop this source, and there is no specific policy or plan from the government to produce and regulate solar energy power. Until late 2018, the EDHP project was an important piece of Costa Rica’s National Energy Plan (2016-2035), which looked to hydro-power projects as key to address the increasing demand for electricity by industries and consumers in the country. However, with the suspension of EDHP, a new plan was presented for 2018-2036 that excluded El Diquís from the list of priority projects and gave more importance to the efficient use of existing energy sources, as well as to energy conservation more broadly.

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7 In February 2015 ICE ended the only project that tried to bring and facilities the used of that resource (Fornaguera, 2015). In fact, for ICE solar energy is not an efficient and low-cost source of energy production. However, geothermal production was identified as the only one that provides secure energy the entire year, meanwhile, hydroelectric has been affected by climate change, mainly with El Niño (Grupo ICE, 2018b).

8 This Plan is basically a tool to establish parameters, actions, actors, resources and strategies; to be used during a specific period for the production, use and distribution of energy, and is based on the social and energy objectives of the 2015-2018 National Development Plan of Costa Rica (MIDEPLAN, 2014).

9 This National Energy Plan does not specify the way in how are the achieving that goal, arguing that a more complete Plan and it operational instrument will be presented soon.
Indigenous Communities: Térrabas

In 1973, Costa Rica created the National Commission for Indigenous Affairs (*Comisión Nacional de Asuntos Indígenas*) with the goal of giving protection, guaranteeing rights, and advising indigenous communities (CONAI, n.d.). However, it wasn’t until 1997 that Costa Rica created an Indigenous Law\(^\text{10}\) which defined indigenous people as those “…who constitute ethnic groups directly descended from pre-Columbian civilizations” (Law N° 6172, 1978). Based on the 2011 National Census results of the National Institute of Statistics and Census of Costa Rica (INEC), the indigenous population is about 104,143 persons (MIDEPLAN, 2015: 04).

This population resides in 24 different, legally recognized, “*Territorios Indígenas*” (indigenous territories) with their own traditions and customs. As elsewhere in Latin America, these are collectively-held and managed lands that cannot be sold, transferred, mortgaged, reduced or renounced under any circumstances (Law 6177, 2001). Non-indigenous people do not have rights to own property and reside within these territories, and they were forced to give up any lands and be economically compensated for them (Schliemann, 2012).

In 1989, Costa Rica signed the International Labor Organization (ILO) Convention 169 on Indigenous and Tribal Peoples. This agreement clarified legal gaps regarding indigenous peoples respect to their territories, culture, institutions, and traditions. In 1998, the Law of the Autonomous Development for Indigenous Peoples (*Ley de Desarrollo Autónomo de Los Pueblos Indígenas*) established further legal, political, organizational and economic autonomy, as well as equal access to socio-economic opportunities (Schlisemann, 2012). Since then the only important advance in indigenous matters was the constitutional recognition of their languages in 1999.

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\(^{10}\) Establishes the bases for indigenous sovereignty, rights, customs and territories (Law 6172, 1997).
**The Teribes or Térrabas**

The Térrabas are a group of four communities (Térraba, Bijagual, Ceibón, San Antonio and San Cristóbal) descended from the warrior ethnic group, Chiriqui, which has existed in the southern zone of Costa Rica and Panama since pre-Columbian times (Asociación Cultural Indígena Teribe, 2013, Habtom, 2010, Quesada, 2001). The Térrabas are located in the Térraba-Boruca Reserve in the canton of Buenos Aires. They were identified as the only indigenous population to be directly affected by the construction of EDHP and include a population of 1,267 indigenous people distributed across an area of 9,000 hectares. A large part of this territory has been usurped by "non-indigenous" third party residents, including the State, in direct contradiction to existing national and international laws. This illegal occupation dates to 1970s with the first plan to build the mentioned Boruca Project which is now known as EDHP (Mideplan, 2015: 05).

The first documented indigenous settlements in the Térraba region date to the year 1600, and the Térraba were characterized by their firm resistance to the arrival of the Spanish conquerors in the region. Over the entire history of conquest and colonization, the indigenous peoples in this region resisted both State and civilian incursions into their lands. The Térraba lands are widely recognized for their abundant variety of natural resources. An important Térraba social mobilization dates to 1970, when the government entered their territory and began cutting trees to initiate the Boruca dam building project (Asociación Cultura Indígena Teribe Térraba, 2013; Quesada, 2001). The State eventually abandoned its hydroelectric plan in light of indigenous protests; however, they revisited the project decades later under the pretense of EDHP.

The first formal social mobilization of the Térrabas in response to EDHP was in 2002. Two years later the State moved to reduce and divide Térrabas territory again (Asociación Cultura Indígena Teribe Térraba. n.d). The situation deteriorated in 2008, when workers from ICE
established work camps and new settlements under a contract signed with a non-indigenous person living within indigenous territories (La Nación, 2011). These episodes led the Térrabas to file a lawsuit with the Inter-American Court of Human Rights in 2015 against the government. The court resolved the case in favor of the Térrabas and called on the government to create an Indigenous Consultation Mechanism. The consultation process was completed in 2018, shortly after the government announced its indefinite suspension of the project in November 2018.

The social movement against EDHP was locally formed by the Asociación de Mujeres Mano de Tigre (Hand of the Tiger Women’s Association), Frente de Defensa de los Derechos Indígenas de Térraba FDIT (Térraba Indigenous Rights Defense Front), and the Asociación Cultural Indígena Teribe (Teribe Cultural Indigenous Association); with the support of national and international agencies like Mesa Nacional Indígena de Costa Rica (Costa Rican National Indigenous Table), the Neotrópica Foundation, among others (Cordero Ulate 2015)11.

3.2 Critical Discourse Analysis around El Diquís Hydroelectric Project

Costa Rica is less extreme in its construction of mega-hydroelectric projects financed by large investors of foreign capital, especially when compared to countries such as Chile, Honduras, Brazil, and Panama. However, its virtual national monopoly over energy production and distribution make it a compelling country to analyze. Additionally, the vibrant social movements and potentially large socio-environmental impacts of EDHP make this particular case worthwhile to analyze, especially in the context of other conflicts throughout Latin America, characterized by non-democratic processes, corruption, and unequal accumulation of profits.

11 The Asociación de Desarrollo Integral de Térraba ADIT (Térraba Development Association) was the only local indigenous organization that approved and support ICE’s operation during 2009 (Cordero Ulate, 2015: 16).
My use of Critical Discourse Analysis here is based on the documents and information collected, which represent the primary discourses of the two main stakeholders in the case of EDHP. ICE's arguments were grouped into three main discourses: political and development, market, and environmentalist. The arguments of the Térraba social movement were also organized into three discourses: democratic, socio-environmental, opening and expansion.

Costa Rican Institute of Electricity

**Political and Development Discourse**

When EDHP was planned by ICE under the name of Proyecto Boruca in 1960, the argument in support of dam building was linked to the socio-economic development of the south region of Costa Rica. After 1980, but particularly in 2000, ICE argued that the construction of EDHP was the most efficient and sustainable solution to meet the projected 8 percent\(^\text{12}\) national electricity demand by households and the private sector (Lara, 2018c; Sancho, 2018; Chacón, 2018a; Chacón, 2018b; Rojas, 2013; Juan, 2017; La Nación, 2017a). The consideration of other renewable energy sources like solar or wind were not under discussion by ICE. Such energy sources were considered to be expensive, inefficient, and insufficient to meet the needs of household and industry in the country.

On February 6, 2008, the government introduced a new argument centered on EDHP as a project of strategic national interest for the economic and social development of Costa Rica. While bringing back the argument that the dam would solve the historical economic and electric dependency of the southern region on the North hydroelectric dam (ICE, 2017, Grupo ICE, n.d.;

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\(^{12}\) ICE argued before that this increase was of 8 percent each year. However, Duran (2018) conducted a study that brought two main conclusion, one ICE does not satisfy the national demand for only 99 MW fact why a mega project is not need it; two, the argument of expanding the licenses for hydroelectric production at the private level to satisfy the national demand in invalid, while ICE has the capacity to do it.
Arroyo, 2012: 20). With EDHP, new infrastructure, jobs, schools, medical services, and tourism would be brought into the area (La Nación, 2017; Ledezm, 2015; Leandro, 2014; Perez, 2011). The mega-dam construction would create more than three thousand temporary jobs for local communities. After the completion of the dam, the local communities would hypothetically create their own development strategies despite their main sources of production (land, river, forest) being flooded. ICE argued that the nation should ‘learn’ from previous experiences of large-scale infrastructure development, in reference to the Embalse Arenal and its supposed importance for national economic growth after the eighties (Lara, 2017a, ICE, 2015:6-7).

EDHP was planned as a government strategy for development through the declaration in Executive Decree No. 34312-MP-MINAE by the former President Oscar Arias as a project of national interest13 (Poder Ejecutivo, 2008, Poder Judicial, 2016, Poder Judicial, 2018)14. With the declaration, EDHP was positioned as a priority initiative at the national and political level. The mega-dam would come to promote the welfare and green economy model that Costa Rica has maintained during previous decades.

This declaration paved the way for the project to be immediately approved by Congress without considering any socio-environmental impacts or law violations—the only requirement of the declaration was for ICE to provide evidence of how the project served the national interest. And yet, the declaration contradicted both national law, particularly the Forest Law 7575 (Article 34) that prohibits deforestation and the cutting down of trees in protected areas; and international agreements, mainly ILO Convention 169, in terms of disrespect of the rights of indigenous peoples

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13 This declaration could let ICE to made legally the solicitation to the government for the un-subscription of Costa Rica to the Ramsar Convention.
14 In 2008, Oscar Arias also declared “Crucitas” open-pit mine” in Costa Rica as an urgent and national interest project. However, many social movements made that the Congress voted against the project. Currently, many people, including the former president Sanchez, are under investigation for illicit business, illicit enrichment and corruption. The other controversial project that used the same “national convenience declaration” was the “El Torito Hydroelectric Project” on the Reventazón River, which ended up being approved for construction by Spanish investors.
to be consulted (ILO, 1989). However, the declaration of EDHP as a “national interest” initiative did not have any effect on gaining public support for the dam’s construction. Social movements against the project were strengthened and social discomfort with ICE’s illegal settlements in the Térraba increased (Sancho, 2018, Feoli, 2008, La Nación, 2011; Lara, 2018e).

Along with this, indigenous communities immediately presented legal action to have the government’s action declared unconstitutional,\(^{15}\) arguing the legal conflict between EDHP and the green economy model, social welfare, indigenous human rights and environmental protections within Costa Rica. In response to the indigenous legal action, the Constitutional Court\(^ {16}\) overturned the decree. The Court based its decision on considerable gaps of information about how EDHP represented a national interest, as well as, the possible impacts on and violation of indigenous human rights and environmental laws (Poder Judicial, 2018; Sancho, 2018). After this episode, in 2014, the development discourse of the government was supported by the declaration of EDHP as a “stellar project” by the former President Luis Guillermo Solis Rivera (Leandro, 2014). This declaration did not have the same legal and political connotation of the 2008 declaration of Arias because it no longer made reference to national interest.

In November 2018, when EDHP was indefinitely suspended, ICE changed its entire narrative to focus more on the mega-dam for market purposes and energy commercialization. The narratives about the growing national demand for electricity were buried, and ICE instead pointed to decreases in national demand for electricity as a consequence of institutional improvement, better electricity technologies, changes in consumption patterns, creation of policies for the efficient use of electricity, and economic contraction (Grupo ICE, 2018b: 7; Lara, 2018a). The

\(^{15}\) To declare that something is against the current Constitution

\(^{16}\) Many civil society groups at the national level, academic centers, and even a department of the University of Oklahoma in the United States gave support to this unconstitutional action.
other side of the argument talked about how building EDHP was no longer a necessity, especially while three private hydro plants were to start operations by 2021 (San Rafael, Río Bonilla I, and Río Bonilla) and by 2026 the Borinquen 1 geothermal project would come on line (Group ICE: 2018b: 01 and 16). However, it should be noted that despite its being indefinitely suspended, ICE has positioned itself to re-examine the possibility of renewing building a dam in the region of EDHP in the future. In fact, the entire discourse about mega-dam building to supply national energy demand leaves open the possibility of a reopening of the project in the future in a different location or, under different negotiations (or not) with indigenous communities.

In relation to the respect of indigenous territories affected with EDHP, ICE argued that they made a great effort to include those communities in the discussion. Furthermore, ICE blamed the affected communities for not contributing to the process (La Nación, 2018; Ávalos, 2018: Callejas, 2011). In 2011, ICE presented the first intent of an instrument to develop a process of consultation with the Térrabas. However, it was rejected from the indigenous communities because doubts about the application of the consultation instruments and a general discontent from the Council of Mayors of the Térraba Indigenous Territory as consequence of the non-inclusion of some agreements generated in previous meetings (La Nación, 2014; Chinchilla, 2017).

Based on Bolaños & Segura (2011), the meetings between Government and indigenous people had a strong authoritarian dynamic where demands presented by indigenous were not well received by the State. ICE only recognized the Associations of Indigenous Integral Development as the legal institution representing the Térrabas, but those associations were seen by such communities as illegitimate because they were imposed by the State and do not represent indigenous customs and beliefs. The absence of legal entities by the government to facilitates information, respect, and participation of indigenous was another component that obstructed the
consultation process (La Nación, 2012). These elements were essential because, despite having already an advance of 39% of the preliminary works completed (roads, camps and the first phase of the environmental impact study) on construction of the dam by 2011 (La Nación, 2012), the Indigenous Consultation was one of the most important steps to finish the Environmental Impact Study\textsuperscript{17} that ICE needed to present to SETENA to obtain approval to start those preliminary operation on the construction of the mega-dam (La Nación, 2014).

The General Mechanism of Indigenous Consultation\textsuperscript{18} was approved on February 10, 2018 (Executive Directive 042-MP) following the mandatory recommendations made by the Special Rapporteurship on Indigenous Peoples of the United Nations Organization (Presidencia de Costa Rica, 2018). The process took two years of negotiations between the Government and 22 indigenous territories. Two other structures were created with the Mechanism, the Technical Unit of Indigenous Consultation (UTCI), responsible for running future Consultations when any project that seeks to be developed has direct effects on indigenous territories, culture or rights, and the "Territorial Instance" within each indigenous territory to coordinate future consultation processes (Cerdas, 2018).

**Energy integration Discourse**

Between April 2018 and the suspension of the project in November of the same year, the discourse shifted into one that saw EDHP as the “Great Battery of Central America”, a mega-dam to make Costa Rica a high-profile competitor in the regional electric market to produce and sell electricity to Central America and Colombia (Lara, 2018a; Leandro, 2014; ICE, n.d.a,b; Rojas,

\textsuperscript{17} This is a scientific-technical administrative procedure that allows to identify and predict the main effects that a project / work / activity will have on the environment; as well as the quantification and weighting of these for decision making (Executive Power, 2013). The regulation indicates that the three phases of the EIA are: the Initial Environmental Assessment, the preparation of the Environmental Impact Study or other environmental assessment instruments that correspond, and the Environmental Control and Monitoring of the project / work / activity.

\textsuperscript{18} Consists of eight steps: query request; admissibility of the request for consultation; preparatory agreements; information exchange; internal evaluation of the indigenous people; dialogue, negotiation and agreements; completion of the process; compliance and monitoring of agreements (Presidencia de Costa Rica: 2018).
However, there are two main components not considered in this argument. First, ICE did not present any market study (national or local) of how or where electricity will be sold, or about possible incomes/economic revenue that Costa Rica can perceive. (Sancho, 2018; Chacón, 2018b). Second, ICE did not consider newly developed regional energy infrastructure such as natural gas plants installed in El Salvador or Panama, which would impact Costa Rica’s incursion into international energy markets (Sancho, 2018).

The participation of Costa Rica in the regional electric market also was proposed as the solution for ICE’s financial problems and the way to pay for excessive financial losses that the institution faced with its non-materialized projects such EDHP (Muñoz, 2018; Ramírez, 2018; Rodríguez, 2016, 2010). In the case of El Diquís, ICE experienced high losses because the Colombian contracting firm Ingetec19 made incorrect cost estimations using outdated information in 2005; then in 2013, new estimates were made directly by ICE using updated information (Lara, 2017a, 2017b). For the General Comptroller of the Republic of Costa Rica20 the inaccuracy in the costs was related to the fact that ICE used outdated demographic indicators (La Nación, 2017b). This was not the first time that ICE was questioned by regulatory authorities, particularly the Commission of Control on Income and the Congress of Costa Rica as result of errors in the calculation of the final costs in the construction of electrical infrastructure (Ramírez, 2018, Díaz, 2018, Egloff, 2018). The Balsa Plant in San Ramon, a prior case to EDHP, had a total cost four times higher than that projected by ICE (Rodriguez, 2016). In the same way, ICE was questioned several times by the Regulatory Authority for Public Services (ARESEP)21 for unjustified requests

19 Colombian company focused on the development, design, consulting, supervision, and others, of large infrastructure projects such as dams, roads, environmental impact studies, development of industries, and more. For more details see: https://www.ingetec.com.co/Pagina/firma/
20 One interesting fact noted by the Comptroller is that 77 percent of the energy plants created by the ICE do not have the storage capacity for excess energy, which could be used in dry seasons.
21 Entity that stablish, regulate and control prices over public services in Costa Rica.
to increase electricity bills (Fern, 2017; Recio, 2015; Lara, 2017b; Egloff, 2018a). The key point here is that ICE argued that the electricity bills would not be increased by EDHP losses (Summa, 2019; Fern, 2018b; Lara, 2018e, Lara, 2018f, Lara, 20178; Fern, 2017; Avedaño, 2015).

The way in which the government sought to position the ideas of building EDHP for market purposes was through an argument focused on the necessity of modifying national laws that allow ICE to create a new goal in the Energy Policy of Costa Rica to justify the use of public funds to invest in national infrastructure, while taking advantage of naturally abundant sources of water. ICE brought into discussion two topics used before to address public opinion in favor of this argument, but this time, re-addressing them to a market discourse. First, the use of public resources, meaning the money from Costa Rica to pay for the construction of a mega dam that would produce energy for regional markets, where the distribution of profits or the way in how national consumers would benefit was not a part of the discussion. Second, the comparative advantage in the use of water that Costa Rica has in comparison with other countries in the region (Lara, 2018a).

**Environmentalist Discourse**

For the Costa Rican government, EDHP was seen as one of the main strategies to mitigate climate change and help the country to accomplish the Paris Accord to achieve carbon neutrality by 2035. EDHP was seen as the only cheap and clean resource of energy that could deal with the challenges created by climate change, even when hydroelectric dams in Costa Rica have been suffering serious impact as a result of weather-related phenomenon like El Niño (Chacón, 2018b, Soto, 2014, MINAE, 2014: 83; La Nación, 2017a). The discussion around other energy sources, mainly solar and wind, is basically absent in ICE’s argument. They are considered to be less efficient and incapable of covering the basic national demand (Lara, 2018).

However, after August 2018, ICE started recognizing the need to rethink the national energy matrix, their institutionality, and the way in which changes in the demand of the electricity
will compel the need (or not) for the construction of mega dams, or if that demand can be met by small-scale projects (ICE, 2017; Madrigal, 2016; Lara, 2018). Nevertheless, ICE keeps telling Costa Ricans to think about the great vision of long-term energy production kept by the institution since 1940, which has allowed Costa Rica to have hydroelectric projects of high capacity and efficiency recognized throughout Latin America.

Indigenous Communities

*Democratizing Discourse*

The Democratizing Discourse is characterized by the argument for a democratic state like Costa Rica to protect indigenous humans rights and territories as part of their social commitment (Ávalos, 2018; Lara, 2018e; Guevara, 2013; Pérez, 2011). In the same way state instances, particularly Kioscos Ambientales (UCR), MINAE, and many NGOs kept the calling for more transparent and participatory processes as is dictated by national and international law (Aguilar, 2018: 24). Part of the argument brought into the discussion by Térrabas included that state not recognize their cultural and political institutions as indigenous people of Costa Rica, rights which are recognized in Indigenous Law and in ILO Convention 169 (La Nación, 2011; Lara, 2018f).

Before the indigenous consultation instrument was created, the Térrabas created what they called “Senior Council of the Térraba Indigenous Territory” (Consejo de Mayores del Territorio Indígena Térraba) institution formally not recognized by ICE (Ramírez, 2018). The Térrabas argued that the council was a space to create a community consensus about their ideas, needs, and opinions, as well as to present a clear position in relation to EDHP. Ultimately, this council sought to include the Térrabas in future discussion processes (Ramírez, 2015; Obando, 2010).

Arguments about non-equal protection of rights established by national and international law was also part of the discussion. ICE proposed to flood more than 700 hectares of indigenous
territories that were protected by law. The flooding of indigenous territories is especially problematic for the Térrabas because it is in violation of Costa Rican law and the historical debt from the State that benefits all indigenous peoples of Costa Rica, not only the Térrabas. Based on the law, the State must compensate individuals who own indigenous land and return that land to the indigenous community (Umaña, 2013). Another component found in this argument was that for the Térrabas, the impacts from flooding as a result of dam construction would bring different consequences for ladinos than for indigenous communities. Indigenous people share spiritual and cultural bonds with the earth that non-indigenous may not, (more a spiritual component) and indigenous communities are highly dependent on the earth for economic activities like fishing and agriculture. Relocating indigenous people from their ancestral territories could have far worse effects than relocating non-indigenous people (Lara, 2018d; McLean, 2010; Pérez, 2010).

The positions the Government of Costa Rica reveal the ignorance of its public authorities with respect to a clear understanding and applicability of their own laws, in reference to the mentioned Forest Law and Indigenous Law, which provide guidance and legal structures to face these kinds of issues when indigenous territories are involved in infrastructure projects. Alternatively, their positions may reveal a certain willful ignorance in which government officials elect to overlook existing laws to fast-track lucrative development projects.

**Socio-environmental Discourse:**

The proposed mega-dam over Térraba territories represented the destruction of traditions, customs, and above all, sacred places for indigenous communities. Four particularly valuable sites that connect the community to their culture, rituals, and nature were going to be flooded: more than 500 stone spheres recognized worldwide; the Kartsi lagoon, the Madre Tjer stone, and the Mano de Tigre stone. (Moreno, 2014; Asociación Cultura Indígena Teribe, 2013; La Nación, 2011; Servindi, 2010). For these communities, the rivers and lakes and the stone figures carved by their
ancestors represent their way of living. They have a cultural and spiritual attachment to these objects, and the Térrabas cannot visualize another way of living if these places and sacred objects are taken away from them (Chacón, 2018; UNED, 2011).

For the Térrabas, EDHP did not represent a source of renewable and clean energy. They argue that it is based on the conception of water as a natural resource to generate wealth for a small group of people in power and that construction will cause deforestation of virgin forest in the area (Ramírez, 2015; Instituto Tecnológico de Costa Rica, 2015). These scenarios do not align with the intent of Costa Rica to achieve Carbon-Neutrality for 2035 or with the green-economy model created in the last decades (Diario Extra, 2015; Conserverde, 2009; La Gente, 2008).

The Chamber of Industry of Costa Rica (ICRC) was another entity that maintained a counter-discourse focused on highlighting the negative consequences of a large dam over water and terrestrial ecosystems, particularly, over the Terraba-Sierpe National Wetlands (Morris, 2018; El Mundo, 2018). The ICRC also maintained economic arguments against the dam. It noted that increases in electricity prices were a consequence of the indirect transfer of cost in the construction of a mega projects by ICE. These increased electricity costs used to finance megaprojects discouraged the industrial sector because the cost of electricity increases production costs for companies (Rojas, 2018). It is important to note here that one of the main interests of ICRC was for the government of Costa Rica to modify its laws to allow private cooperatives to participate more in the national energy market, which would cause ICE to buy more of their electricity.

**Opening and Expansion Discourse:**

The indigenous communities also brought to the discussion ideas about creating alternative ways to develop by incorporating indigenous knowledge, customs, values, traditions, and above

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22Meanwhile, the ICE, as established in Law 7508, must buy 15% of electricity from private generators, even though the country does not need the use of private generators to meet the national demand.
all, considering the protection of their rivers and nature (Asociación Cultura Indígena Teribe Térraba, 2013, Gudynas, 2011: 442). However, within the same indigenous communities, there was a self-recognition of the absence of internal mechanisms (within indigenous communities) to raise their voices against a State that had no interest in protecting territories and indigenous rights (Chacón, 2018; UNED, 2011; Callejas, 2011). This lack of legal knowledge, political organization and structural participatory process within indigenous communities made presenting collective demands and needs clearly to the government a challenge.

In general, the counter-discourse maintained from 2008-2018 by other entities, such as public universities or ministerial offices, pointed out that EDHP should be considered as a “Country Project”, where Costa Ricans have a voice and vote in the decision-making process. These organizations also argued that government should abide by existing laws that respect the rights of all pluralities of communities and do not criminalize communities that protest. Moreover, they point out that sustainable development and the respect of human rights should be prioritized over infrastructure development (Arroyo, 2012).

After the indefinite suspension of the EDHP, the main discourse held by indigenous communities focused on celebrating the victory of more than three decades of conflict and being proud of one more successful social movement against colonialist models of development (Fern, 208c; Madrigal, 2018). Indigenous discourses also sought to create a critical point of view about the electricity production model of Costa Rica, calling it obsolete, disrespectful of indigenous traditions and knowledge, and not sustainable (Durán, 2018, Chacon, 2018a; Morris, 2018). This argument came with a discussion about how EDHP did not have studies to prove its economic and socio-environmental cost, particularly costs imposed on indigenous communities (Lara, 2018).
Some state entities, including MINAE and the Regulating Authority of Public Services (Aresep, as it is known in Spanish) kept the position about the use of water in a regulated and sustainable ways using small scale projects. They also continue to advocate using scientific information about environmental impacts, climate change, and national demand for energy production to determine if mega dams are really the best solution for energy models of small countries like Costa Rica (Lara, 2017a, b; Lara, 2018e).

Section IV: Discussion and Conclusions

Discussion

Hydroelectric projects, especially mega-projects, have come to dominate socio-economic development in Latin America. Mega-dams have the capacity to increase electrical regional connections, produce cheap energy, utilize abundant water resource, and mobilize investments from multilateral banks and direct international investment (Gerlack, et al, 2019; Feoli, 2018). Not surprisingly, successive Costa Rican governments have made mega-dams a priority in domestic policy over the last several decades.

EDHP is a prime example of how the Costa Rican government attempted to use a mega-dam to serve the national interest and promote sustainable economic development, with hopes to generate jobs in the short-term as well as to boost the production of electricity to keep up with increased national demand. To make its case for EDHP, the government crafted a series of discourses aimed at shaping public opinion about the importance of the dam’s construction, appealing to the historic, democratic, and sovereign values that allowed the country to have autonomy in its energy production. Despite this messaging, a series of events caused Costa Rican public opinion towards mega-dams to change and also caused people to start losing confidence in mega-dams as a path to development. EDHP lost public confidence because of a lack of
democratic and participatory processes, runaway costs of public projects, intents to privatize public institutions, frequent increases in the cost of electric service, and the violation of socio-environmental protections.

EDHP, and its managing agency ICE, are products of decades long trends political-economic pressures. Since the approval of the Dominican Republic-Central America Free Trade Agreement (known as TLC or DR-CAFTA), a series of measures have been promoted within Costa Rica to privatize public institutions. ICE was targeted as a public institution to privatize. Since 1986, President Arias started a process that included institutional reforms that led to the privatization of telecommunications in 2008. Then in 2011, Congress proposed the “Electricity Contingency Law” to increase the private production of electricity from 15 to 25 percent (Legislative Assembly, 2011). The complex web of political and economic pressures highlights the competing interests regarding the infrastructure projects. For example, the ICRC strongly opposed EDHP; however, it was awaiting the approval of the aforementioned law which would allow the private sector to produce surplus electricity from its privatized facilities to sell into the regional market or to large investment companies such as MECO, Intel, Keibel, Holcim, Highway, IDECO, and Cemex. The ICRC stood to profit by blocking the construction of the nationally controlled EDHP.

The previous section reveals the variety of interests that surrounded EDHP. For instance, advocates claimed that EDHP was to be the most efficient and profitable way to make Costa Rica a strong competitor in the "Mesoamerican Project". That idea carried high socio-environmental

23 Created in 1991 with the name of Plan Puebla-Panama and was promoted by the World Bank and the Inter-American Development Bank to promote the development, industrialization and exploitation of resources in some regions of Mexico, El Salvador, Colombia, Belize, Costa Rica, Guatemala, Honduras, Nicaragua, and Panama. The projects of this initiative are the Mesoamerican Biological Corridor, the Mesoamerican Hydroelectric Corridor, and the Electrical Interconnection System of the Central American Countries-SIEPAC, for its name in Spanish- (Arias, 2017: 102).
consequences and violated laws that protect the environment and indigenous communities. For those who saw the appropriation of national resources and institutions as a way for to amass wealth, such consequences were a small sacrifice for national development. The problem was not the intentions of elites’ playing a strong role within that regional energy integration, but rather in the way they planned to do it. In its arguments, ICE avoided discussing the distribution of environmental costs or profits. As Chavez and Cortés (2013) argue, more research should be done within public-national institution to determine the real participation of private elites within state institutions. What is clear is that since 1986, different circumstances and discourses by the government call into question the social duty and autonomy that originally characterized ICE.

The most significant changes in the positions of ICE around EDHP occurred in 2018, when they shifted their reasoning for how the dam would support economic development. Originally, ICE argued that the dam would satisfy national household and industry energy demand, but it later argued that it would seek to supply international market interests. This shift in the discourse revealed that the mega-dam and national electric demand were a political strategy seeking to use national resources to satisfy elite interests. ICE did not conduct a national market and energy consumption study to prove a real need for electricity. ICE’s projections, data, and models were contradictory over the years and proved to be faulty (Ramírez, 2018, Chacón, 2018b, Juan, 2017).

EDHP was a polarizing issue that brought about conflicting discourses to accentuate the positions of all agents involved. Locally, the non-democratic and transparency processes from the state with indigenous communities have been another component that characterize mega-hydroelectric projects. Since the first proposal to build EDHP, under the name Proyecto Boruca in 1960, there were no clear agreements about ICE including indigenous groups in the discussion about socio-environmental impacts caused by the flooding of their territories, nor about the
violation of national and international laws. Nationally, the idea of privatizing ICE, and with it national water resources was unacceptable. Furthermore, rising prices for electricity, the violation of national laws and regulations that clearly establish that any infrastructure project must first fulfill all the required environmental and scientific studies that prove the sustainability of the project, non-disruption of flora and fauna, the renewable component and the lack of a clear plan to accomplish those elements in order to start operations alarmed the public and shifted their support away from the project (Vote 132-99, 1174-05 and 6322-03 of the Constitutional Curt). These brought back a historical social movement found in 1990 that have been looking to protect the welfare state model of Costa Rica, its sovereignty, and the autonomy of the public institutions.

EDHP also marked a turning point in human rights as they relate to indigenous communities. The Térrabas’ lawsuit against the Costa Rican State in the Inter-American Court of Human Rights was a historical point that finished a period of illegal settlement and operations by ICE in indigenous territories in Térrabas as part of preliminary feasibility studies. During preliminary feasibility studies, trees were cut down in protected areas, rivers and streams were dredged, tunnels and infrastructure were created, and indigenous territories were acquired from Ladinos. The result of the indigenous legal claim was the mentioned mandatory creation of the Indigenous Consultation Instrument, which came to serve as a legal instrument that definitively changed the landscape of future infrastructure in indigenous territories.

Finally, ICE seems to be facing a considerable shift in terms of its value as a beneficial, autonomous, and national institution to an entity that sees national resources as a path for capital accumulation under non-sustainable and inequitable ways. EDHP was an attempt to build a dam in a context where the transparency of information and processes was basically nonexistent. It was a case where social mobilization managed to win the battle in favor of the conservation of customs,
traditions, respect of indigenous territories, as well as, to protect the rich biodiversity and the sovereignty over the abundant water resource in Costa Rica.

**Conclusion**

This paper analyzed the unequal access and use of natural resources caused by the current hydroelectric model proposed in the last several decades by ICE. Here, the state and the elites had been slowly displacing indigenous communities’ rights and ignoring environmental regulation under nationalist and environmentalist discourses. The dilemma here is to think about development and economic growth for the benefit of who? EDHP was a case that, even if it was indefinitely suspended, demonstrated how the unequal distribution of socio-environmental cost impacted the Térrabas side, while the economic revenue benefitted ICE, and probably, elites in power. Along with this, ICE has developed, in a certain way, an institutional culture that underestimated the economic and socio-environmental cost of keeping its hydroelectric energy model based on large scale dams. With the Combo first, then the partial opening of the electric sector in Costa Rica by Law 7508, and finally the conflicts proposed by EDHP; national trust in ICE’s autonomy and its hydropower energy production model has lost credibility.

The hydro projects promoted by the Costa Rican government seem to be characterized by argumentative contradictions between the need for, one, environmentally friendly projects to achieve the goal of Carbon Neutrality and to maintain their green economy; two, uncertain estimations of national energy demand; three, large scale projects that will bring serious socio-environmental impacts; and four, the non-consideration of alternative energy resources. EDHP brought into the discussion the necessity of creating new consultative instruments to serve as checks and balances for process that involve indigenous communities. These instruments will contribute to avoid conflicts of interest and discourage corruption, oftentimes foreign investors,
who propose mega-projects that cause large scale land and policy transformation within countries (Fearnside, 2014, Bebbington, 2012, De Luca, 2008). However, the presence of international companies trying to be part of the discussions or to get rights to build the large infrastructure in Costa Rica was not explicitly found, but the donations and investment on millions of dollars by countries like China should be taken into consideration for future research projects, particularly for their interest in mega infrastructure projects in Latin America (Sequeira, 2018; Cisnero, 2018; Wintgens, 2017).

One of the main recommendations in light of this work is the modification of the Executive Decree No. 26728-MP-MINAE of February 20, 1998, which establishes in its Article 1 that any project for the generation, transmission and distribution of electric power is of public interest. This law contradicts the provisions of the Forestry Law of Costa Rica and causes problems in socio-economic development. Some institutions such as the Ombudsman's Office in Costa Rica or the National Commission for Indigenous Affairs (CONAI by its Spanish name) should have more political and legal participation, to prevent future projects from starting operations without prior consultation, accomplishing with it a better respect for national and international law that protects indigenous communities in Costa Rica.

The "indefinite suspension" of the EDHP is a political act that should not be construed as the final internment of the project or the future energy expansion plans of ICE. EDHP, as same as the Belo Monte Dam in Brazil, is a project that can be reborn in the near future for Costa Rica, it is not an end in repetitive trend for the privatization ideas of ICE and water resources analyzed in this paper over the years in this country. But, it was a triumph – after more than 30 years of resistance by social movements and Indigenous communities of Térraba - that sought the protection of national sovereignty, autonomy, and the respect of environmental and indigenous
territories and rights. With this, it is clear that the model of hydroelectric production of Costa Rica needs revision, that it is necessary to open the discussion about more effective ways of creating a sustainable and less disruptive energy models. The current energy model presents severe ruptures in its discourse of clean energy and in recent decades has been suffering a transformation into an export-based model that seeks to exploit the water of Costa Ricans as a means of enrichment.

Finally, this paper does not argue that infrastructure and new economic models should not be developed in small countries. This paper argued about how a specific mega-hydropower dam, EDHP did not serve Costa Rican national interest of economic growth because of its extensive negative ecological and environmental consequences, its severe indigenous human and territorial rights violations, and its blocking of alternative small-scale energy production projects that have reduced social-environmental impacts. Discourses by government agencies have not promoted the creation of democratic and transparent development models that provide equal distribution of profits, protection of the environment and human rights for indigenous communities. As Fearnside has amply demonstrated in his work in the Brazilian Amazon, a broader and deeper public discussion on how governments should harmonize laws, human rights and projects of economic expansion is necessary in Latin American (Fearnside, 2015:436, Chavez & Cortés, 2013, Cortés, 2013, Fumero, 2006). This is a challenge that Costa Rica must also assume.
Bibliography


Córdova, L; et al. (2008). Evaluación preliminar de impactos del complejo hidroeléctrico del río Madera en el Norte Amazónico Boliviano.


Egloff, Enrique J. (2018b). Tarifas eléctricas competitivas generan empleo. La Nación, April 17, 2018, 20A, Foro


Hertwich, E. (2013). Addressing biogenic greenhouse gas emissions from hydropower in LCA. Environmental science and technology, 47, 17, 9604-9611


Lizano, Ó. B., & Rica, A.-C. (n.d.). La biología tropical como método de injerencia en la soberanía nacional de los recursos naturales, 5.


Merino, Luis. (S.F). Energías Renovables. Energías Renovables para todos. IBERDROLA.


Naciones Unidas. (S.F). Los pueblos indígenas y el sistema de derechos humanos de las Naciones Unidas. Naciones Unidas. Folleto Informativo N° 9, Rev. 2.

Departamento de Información Pública de las Naciones Unidas.

tourism – concepts and constructs. In Nepal, S.K., Saarinen, J. (Eds.) Political Ecology and

“Provincial Hydros” and Neoliberal Regional Energy Regimes. Canadian Political Science

perspective on two decades of resistance to the Narmada Dam Projects. Journal of Historical

Retrieved from http://www.nortonrosefulbright.com/knowledge/publications/134677/renewable-
energy-in-latin-america


Obando, Y. (2010, August 25). Construcción de represa Diquís no afectará comunidades

Oliveira, J. P. de. (2018). La construcción de la hidroeléctrica Belo Monte y las
intervenciones de los antropólogos. Iztapalapa. Revista de Ciencias Sociales y Humanidades,
39(85), 81–102.

Orenstein, D., A. Tal, and C. Miller eds. (2013). Between ruin and Restoration an
Environmental History of Israel. Pittsburgh: University of Pittsburgh Press.

Ortega Méndez, Maria Teresa; Diez León, Heber Didier. (2013). Energía hidráulica en

latinoamericana. Santiago de Chile: Frasis


from:http://kioscosambientales.ucr.ac.cr/docs/publicaciones/diquis/ACC%20DECRETO%20DIQUIS%202018.pdf


