Conflicts around the thirst for more

Analyzing activist-rooted knowledge to identify corporate impacts on well-being in South American water conflicts

Bachelor's Thesis
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Political Science and Law
Bachelor of Arts
05. September 2023

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A. Introduction

Prophecies for widespread "water wars" are omnipresent but often they ignore the critical importance of political decision-making and the role of unsustainable consumption.[1] The effects of the anthropogenic climate crisis exacerbate water scarcity and introduce it as a possible conflictual factor to new regions.[2] To enable a just transition that prevents the escalation of violent conflicts around water, we need to understand the dynamics of water conflicts.[3] The scale and the importance of the crisis is illustrated by the Food and Agriculture Organization of the United Nations (FAO) who titled their 2021 report on the world's land and water resources for food and agriculture "systems at breaking point". Corporate activity has historically and contemporarily been exploiting natural resources and interacting with ecosystems of which local populations form part.[4] Focusing on water management conflicts in South America, this thesis looks into how corporate activity impacts the well-being of local populations by assessing activist-rooted knowledge contained in the Environmental Justice Atlas (EJA or EJ Atlas).

Only twenty years ago, Benfield et al. noted that "the impact of a company on conflict […] has been under-researched and largely ignored".[5] The EJA now provides a large database of environmental justice conflicts around the world, which can easily be filtered to investigate specific subcategories such as water management. The knowledge it contains is co-produced between scholars, activists, and affected populations and promises to deliver perceptions to conflict analysis that previously often remained unheard. Water management conflicts are particularly relevant to conflict analysis, not only because the way a society manages water shows how they organize life and their values,[6] but also because the EJA documents that they statistically show the highest conflict intensity. The climate crisis is expected to increase water scarcity and might make new forms of management necessary wherever the current ones fail. However, if we are to judge the failures of management, it is necessary to assess the impacts different forms of management bring about. The activisted-rooted knowledge in the EJA registers such data on impacts through co-produced knowledge, encompassing unique perceptions of the affected population.

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[1] Such as „Water Wars: a new reality for business and governments" by Balch 2014 in The Guardian. However, Bernauer and Böhmelt point out that for predicting armed conflict, traditional factors such as income and population are still more helpful than variables such as water stress; cf. Bernauer and Böhmelt 2020.

[2] Intergovernmental Panel on Climate Change 2023, p. 63; Bernauer and Böhmelt 2020.

[3] Banfield et al. 2003, pp. 33; Salzman 2006, pp. 120; Schneider 2020, pp. 47.

[4] UNESCO World Water Assessment Programme 2023, pp. 12.

[5] Banfield et al. 2003, p. 17.

[6] Moore 2023, pp. 4.

I propose that through an analysis of activist-rooted knowledge from a human security perspective, a more comprehensive picture of the various conflicts is possible than through the analysis of purely economic measures, such as the Human Development Index. For this analysis, I first identify impacts of corporate activity in a diverse set of water management conflicts and then determine which conflicts record similar impacts. A discussion will then put the findings from the EJA in relation to a broader review of corporate impacts generally and to impacts on water management conflicts. This research does not aim to provide statistical probabilities or definitive generalizations on water conflicts and is inherently limited by the number and selection of conflicts in the original dataset, preselection biases, and by the activist-rooted knowledge approach it takes. Yet, analyzing a large sample of conflicts in the way I present might prove instructive for future research endeavors, and I conclude with a set of impacts commonly experienced by populations in South America under the influence of corporate activity in water management conflicts. Using the term "commonly" in this context implies the assumption that the case data is representative at least for part of the water conflicts on the continent, caused by political decisions of the actors under the current institutional configuration on a local, national, and international level.

B. Diversifying perceptions of conflict through activist-rooted knowledge

I. Central concepts of environmental justice conflicts

1. Widening perceptions through activist-rooted knowledge

To assess corporate activities and their impacts, I analyze a dataset from the EJA, which provides categorized and geotagged descriptions of 3,895 conflicts worldwide. It is the largest catalogue of environmental struggles and relies on activist-rooted knowledge. 493 of all conflicts are tagged "Water Management", 87 of them in South America.[7] All conflict information is surveyed, written and co-produced by activist groups, individuals and researchers.[8] The data is collected in an online database and subsequently subjected to review and revision before being published.[9] The database contains more than 30 distinct data categories, including quantitative and qualitative information and cross-referenced scientific, political and legal documents. The authors see the EJA in the historic tradition of the environmental justice movement of the 1990s, which called attention to the disproportionate damage done to Black and Indigenous People and People of Color, including Latinx communities in the US.[10] The EJA is designed by the authors together with global environmental justice organizations located in the Global North and in the Global South, which in part incorporated their own database.[11] The EJA aims to be "a tool for activism, advocacy, research and public education".[12]

By employing so-called activist-rooted knowledge, the EJA builds onto a concept most prominently put forward by Donna Haraway as "situated knowledges" that tries to deconstruct the illusion of objectivity and the power relation it entails through "the joining of partial views and halting voices into a collective subject position that promises a vision of the means of ongoing finite embodiment, of living within limits and contradiction".[13] The approach aims at advancing political and scientific discourse through the inclusion of oppressed voices that are regularly excluded, thereby questioning power relations in scientific knowledge production.[14] The activist-rooted

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[7] Environmental Justice Atlas 2023.

[8] Temper et al. 2015.

[9] Temper et al. 2018, p. 576.

[10] The authors of the EJA reference Bullard and Wright 1990; cf. Temper et al. 2018, p. 577.

[11] Temper et al. 2018, p. 577.

[12] Ibid. 2018, p. 577.

[13] Haraway 1988, pp. 588–590. Edward Said proposes a similar notion by suggesting that „the general liberal consensus that ‚true' knowledge is fundamentally nonpolitical (and conversely, that overtly political knowledge is not ‚true' knowledge) obscures the highly if obscurely organized political circumstances obtaining when knowledge is produced", Said 1979, p. 10.

[14] Temper 2014, p. 15.

knowledge approach attempts this "joining of partial views and halting voices" in the EJA by making space for discourse between activists and academia to develop pieces of knowledge which constitute a collective subject position.[15] These pieces of knowledge form part of a continuous co-production of scientific knowledge,[16] which creates and is created by identities, institutions, discourses and representations shaped by the unique configurations of nature-society relations.[17] By including activists' perceptions and accounts in the EJA, it lowers the barriers of entry into the scientific discourse on environmental conflicts, commonly exclusive to academic elites, introducing formerly excluded collective subject positions. In practice, this co-production of knowledge was achieved for example through a joint drafting process between academics and activists, where drafts for conflict descriptions were mailed back and forth between the two groups.[18] Consequently, corporate activity is not measured from an imaginary objective standpoint but from the activists' perceptions who feel the impacts, to enable inclusion of all types of impacts and not only of those which can be measured numerically, or which fit the often euro-centric metrics for well-being. Jasanoff draws attention to how the concept and institutionalization of objectivity shapes the production of knowledge. She also details how state-sponsored science is used to legitimate policies and guide political discourses.[19] It are these constructions of objectivity that Haraway criticizes when she uses the concept of situated knowledges to open analyses not only for female perceptions but also for non-human and inanimate elements to reveal the active role of established knowledge for power relations.[20] Applying an activist-rooted knowledge approach to the analysis of the EJA helps underscore the personal and collective significance of water beyond its purely life-sustaining properties and beyond its conceptualization as a commodity by viewing it as an object of emotional relations embedded it in a vast social and environmental network.[21] By employing this approach, I hope to make visible how the politics of gender, "[r]ace, colonial relations and social class" have been incorporated "into scientific practice, naturalized, and made invisible in everyday routines of research", to prevent a reproduction and strengthening of these power

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[15] Ibid. 2014, p. 15.

[16] Jasanoff builds onto theoretical foundations by Bruno Latour; Jasanoff 2004a, pp. 22 Jasanoff also denies co-production being a theory of itself and calls it „an idiom – a way of interpreting and accounting for complex phenomena so as to avoid the strategic deletions and omissions of most other approaches in the social sciences", Ibid. 2004b, p. 3.

[17] Jasanoff 2004a, p. 38, 2004b, pp. 2; Latour 1993, pp. 52–54.

[18] Temper et al. 2015, p. 263.

[19] Jasanoff 2004a, p. 34.

[20] Haraway 1988, pp. 593; Jasanoff 2004a, p. 36

[21] Escobar, explicitly referenced by the authors of the EJA, describes the construction of nature in meaning-giving and discursive processes, which depend on surrounding power structures. For his theoretical approach he takes from Chantal Mouffe and Ernesto Laclau, Richard Delgado, and Donna Haraway, cf. Escobar 1999, p. 2. To express the manifold of meanings of water, Madelaine Moore uses the term „waterscape", Moore 2023, p. 12.

structures.[22] A coherent application of this approach also entails a critical reflection of our categories of analysis and whether established definitions and concepts such as human security can adequately grasp the multiplicity of lived realities in the case sample. Thus, this work examines the effects described by activists in the EJ Atlas and assigns them an analytical value based on the assumptions underlying the theory of situated knowledges.

When I subsequently refer to power, I refer to the influence one actor has on a network of other actors, in a process of construction that "cannot be reduced to the social dimension because this dimension is populated by objects mobilized to construct it.".[23] I base this definition on Bruno Latour's actor-network theory, which is explicitly referenced by Donna Haraway who provides the theoretical foundation for the EJA.[24] Martínez-Alier and Naron, the former being one of the main authors of the EJA then recognize two levels of power in environmental conflicts:[25] They differentiate between the "capacity to impose a decision on others", naming destruction of forests, displacements, and pollution as examples, and the "'power of procedure', […] the power to impose a method for resolving a conflict, imposing a language that triumphs over other languages of evaluation".[26] Thus, neocolonial and patriarchal structure are an expression of hegemonic truth construction and their deconstruction must confront the networks of actors that continuously instate them.[27] These truth constructions become manifest in the concept of coloniality, which Lugones describes as "not just a classification of people in terms of the coloniality of power and gender, but also the process of active reduction of people, the dehumanization that fits them for the classification, the process of subjectification, the attempt to turn the colonized into less than human beings".[28] With the terminology Global North and Global South I try to reflect this historic and contemporary power imbalance, highlighting the actors who frequently are the hegemonic actors in the construction of truth.[29]

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[22] Jasanoff 2004a, pp. 35.

[23] Latour 1993, p. 6.

[24] Haraway 1988, fn. 1.

[25] They use the terms environmental conflict and ecological distribution conflicts synonymously.

[26] Martínez-Alier and Naron 2004, p. 28.

[27] Robbins 2012, pp. 70.

[28] Lugones 2010, p. 745.

[29] For a discussion of the shortcomings of the Global North-Global South dichotomy, cf. Horner and Hulme 2019 Basing my argument on the theoretical framework explained here and the critique of Horner and Hulme by Ziai 2019, pp. 463–465, particularly with regard to neocolonial power relations and global economic dependencies while still acknowledging national class struggles, I will however continue to use this terminology.

2. Water management conflicts in the EJA

This thesis approaches conflict as a social fact, in which two or more actors are characterized by a perceived unequal social standing and/or differences in their interests.[30] As such, conflicts are not inherently negative or violent but a necessary consequence of the unequal distribution of resources and differing interests among actors. Rodríguez-Labajos and Martínez-Alier speak in this context of "ecological distribution conflicts, which are social disputes on the use of natural resources or the burden of pollution", a definition also used in the EJA.[31] However, Escobar deems this materialist perspective on conflicts too narrow, and suggests an ontological turn.[32] His political ontology acknowledges the historical and social production of nature and "the social production of nature by capital under globalizing conditions". He centers his analysis on the deep factors that shape our perception of reality and alludes to Latour and Haraway when he considers these factors as "networks, assemblages, "naturecultures" or "socionatures", or compositions or 'more-than-human' worlds always in the process of being created by all kinds of actors and processes".[33] As a result, for Escobar, environmental justice conflicts are a manifestation of either "the power-laden practices involved in bringing into being a particular […] ontology" or of different ontologies struggling to sustain their own existence within the pluriverse of ontologies.[34] He describes these ontological struggles also as a form of resistance against the universalizing ontology of the categories of modernity, again echoing Latour's popular dictum "We have never been modern" and likely agreeing with María Lugones when she finds that the imposition of modernity denies the "existence of other worlds with different ontological presuppositions"[35] With Escobar's explicit reference to Haraway's situated knowledges approach, his theory of conflicting ontologies answers very comprehensively to what makes knowledge in fact "situated". Approaching environmental conflicts from a situated knowledges point of view, the actors' perceptions are of constitutive importance for categorizing social relations as conflictual. Therefore, the mere categorization of a situation as a conflict by adding it to the EJA is an act of co-producing the conflict. Nonetheless, the environmental conflicts described in the EJA are not conflicts only through their addition to the atlas, but through the colliding interests of actors; more specifically, mostly because the interests (and maybe even ontologies) of the affected populations collide with the interests of governments or corporations. If one is not to subsume Escobar's pluriverse of ontologies under Bonacker's "unequal social standing"

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[30] Translated from Bonacker and Imbusch 1999, p. 75.

[31] Rodríguez-Labajos and Martínez-Alier 2015, p. 543; Temper et al. 2015, p. 272.

[32] Escobar 2017, pp. 240.

[33] Ibid. 2017, p. 242.

[34] Ibid. 2017, p. 243.

[35] Escobar 2017, p. 243; Lugones 2010, p. 749.

or even under the "differences in their interests", it seems necessary to expand the initial definition. The EJA itself the conflicts as a unit of analysis to be "a well-documented project-based campaign or place-based struggle related to claims against perceived negative social or environmental impacts".[36]

Water management conflicts in the EJA refer to one of 10 mutually exclusive conflict types.[37] They are distinct from conflicts that center around water as a commodity in general. Water as a commodity is involved in a wide range of conflicts described in the EJA (such as textile production, mining, or construction). Water management conflicts specifically concern instances where access to water is disputed, either in quality or in quantity.[38] While both categories promise to deliver intriguing insights into the impacts corporate activity has on local populations, focusing on water management conflicts provides a clear empirical delineation of cases and makes for a considerably smaller sample, enabling an analysis within the timeframe available to this research.

3. Defining corporate impacts

Although related research on the EJA has also focused on corporate impacts and the actions of corporations,[39] it proves difficult to find a clear definition of what a corporation is. Across legislative borders, corporations take many shapes and legal definitions often do not align with lived realities, for instance, anywhere corporations act illegally. In this context, a corporation represents any at least partially privately owned entity employing its capital to gain a surplus value for its owners.[40] Whether it is legally recognized as a corporation is deemed of lesser importance as the question of legal recognition would introduce unnecessary complexity for a likely small number of cases. Although certain sectors surely unfold a much greater impact on drinking water than others, I will not pre-limit my research to a certain sector to allow for unexpected cases. The discussion of the results will feature sectorial differences as far as they become apparent without making them an explicit subject of the analysis.

Determining what qualifies as corporate activity or actions[41] relies heavily on how one's perception and subsequent knowledge is situated: While a corporation distributing drinking water may argue that they are updating their pricing structure to account for inflation, from a user's point of view

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[36] Temper et al. 2018, p. 577.

[37] Temper et al. 2015, p. 271.

[38] Salzman 2006, p. 99 Suggests that water has historically much more often been a common property resource than a traded commodity.

[39] Venes et al. 2023; Temper 2014; Temper et al. 2020; Del Bene et al. 2018.

[40] I base this definition mainly on the Moore 2023, pp. 30–36, Schneider 2020, and on Robbins 2012, pp. 49–55.

[41] I use 'activity' and 'action' synonymously.

this action may be perceived as a cut-off from the water supply as soon as it becomes too expensive for one's personal budget. To illustrate the diverging paradigms of the relation between humans, nature, and corporations, the category "actions by corporations" will describe mainly a formal corporate perspective (such as "diversion of river" or "construction of dam" while the category "impacts on populations' well-being" will focus on the consequences of these actions from a human security perspective. Although corporate impacts can semantically describe positive as well as negative effects,[42] my research focuses on cases where corporate activity has had negative impacts on local populations. Despite corporate activity in environmental justice (EJ) conflicts often being intertwined with state power (e.g., through permissions, subsidies, police/military enforcement of decisions, or cooperation),[43] this research centers on corporate actors much more than on state actors or their relations.

4. Well-being through the lens of human security

Assessing impacts on well-being fundamentally rests on its definition and defining well-being in policy or research for a large group of people harbors the risk of paternalism and reproduction of neocolonial power relations. Under the leadership of Special Advisor Mahbub ul-Haq, a 1994 report by the UN Development Programme (UNDP)[44] proposed to reform traditional understandings of security as a means to protect the well-being of individuals and communities under the framework of human security. This new understanding of security is based on the two pillars "freedom from fear and freedom from want", and uses them to move away from nation-centered thinking towards a human-centered approach through "protecting what we care most about in our lives: our basic needs, our physical integrity, our human dignity".[45] It acknowledges threats to the security of humans posed by additional factors besides war between nations, such as poverty, illnesses, and environmental degradation and formulates a holistic responsibility of the state for providing security while also acknowledging the importance of other actors.[46] This holistic responsibility is also an expression of a continuum of security that connects the deterioration of human and environmental conditions with armed conflict, categories which are mostly studied separately.[47] Thinking

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[42] Henriques 2010, p. 11.

[43] A relation between State and water resources maybe most provocatively and controversially (cf. fn. 95) conceptualized by Wittfogel 1967 who discussed a "hydraulic state", deriving its power and legitimacy from its water management, but later substantially differently discussed e.g. in Rodríguez-Labajos and Martínez-Alier 2015, p. 543; Salzman 2006. More in line with the latter argument, Moore describes "a tendency [under global capitalism] for the state to be both the facilitator of, and the location for, new round of private investment", Moore 2023, p. 52 Cf. Schneider 2020, p. 31.

[44] This report will be referred to as "the UNDP Report".

[45] United Nations Development Programme 1994, p. 24, 2022, p. 3.

[46] United Nations Development Programme 1994, p. 22; Bajpai 2000, p. 13; Bellamy and McDonald 2002.

[47] Ide et al. 2023, p. 6.

of well-being as part of human security as put forth by the United Nations Development Programme, it is divided into the seven categories economic, food, health, environmental, personal, community, and political security, which are neither mutually exclusive nor collectively exhaustive but rather overlapping arches of security.[48]

- As precondition for economic security the UNDP Report names an assured basic income stemming from remunerative work or "in the last resort from some publicly financed safety net" and notes the risks of employment not protected by trade unions, gendered effects of real wage declines, as well as the lack of social security in many countries.[49]

- The definition of food security requires "that all people at all times have both physical and economic access to basic food"[50]

- The concept of health security is tied to the prevalence of infectious and parasitic diseases and subsequent deaths, pointing out that most deaths "are linked with poor nutrition and an unsafe environment – particularly polluted water". The effects are also unevenly distributed, disadvantaging rural areas, poorer social groups, and women. Childbirth is an additional factor of risk particularly dividing the Global North from the South.[51]

- Environmental security is attributed to the circumstance of a "healthy physical environment", with threats stemming from intensive industrialization combined with population growth. Effects of environmental degradation can be measured both for local ecosystems and for global systems. Water is named as one of the most threatened environmental components, caused by water scarcity due to pollution and political tensions. Anthropogenic deforestation, air pollution, salinization, and natural disasters are also subsumed under threats to environmental security and affecting especially marginalized communities.[52]

- Personal security in the UNDP Report largely depends on the freedom from physical violence, which may be caused by a state, groups of people, people from one's own social circle, and threats to oneself through, for example, suicide or drug use. These categories include, among others, industrial and traffic accidents, violence in the workplace, and crime, and the Report underscores the prevalence of gendered effects of violence and violence directed towards children.

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[48] United Nations Development Programme 1994, pp. 24–30; Hoogensen Gjørv 2018, p. 224.

[49] United Nations Development Programme 1994, p. 25.

[50] Ibid. 1994, p. 27.

[51] Ibid. 1994, pp. 27.

[52] Ibid. 1994, p. 29.

- Community security refers to the protection of the extended family system, traditional communities which include ethnic groups, and Indigenous communities. The UNDP Report recounts that these groups often act as a source of social protection, cultural identity and for value systems, but are increasingly under threat by "modernization", violent conflicts between groups, environmental degradation, state-enforced oppression, as well as depression, despair, and suicide.[53]

- Political security rests on the condition that people are "able to live in a society that honours their basic human rights", which includes democratization, protection against state repression, and particularly against systematic torture, political detention, imprisonment, ill treatment, and disappearances. Freedom of ideas, information, and of the press are also named as substantial components of political security.[54]

Already in 2003, the Commission on Human Security updated the initial definition of human security stating its purpose as follows:

> "to protect the vital core of all human lives in ways that enhance human freedoms and human fulfilment. Human security means protecting fundamental freedoms – freedoms that are the essence of life. It means protecting people from critical (severe) and pervasive (widespread) threats and situations. It means using processes that build on people's strengths and spirations. It means creating political, social, environmental, economic, military and cultural systems that together give people the building blocks of survival, livelihood and dignity"[55]

The term vital core of human lives refers to "a set of elementary rights and freedoms people enjoy".[56] The Commission on Human Security also added dimensions in which human security differs from traditional state security, namely that it is people-centered, includes a wide-range of menaces that were not classified as threats to security before, a variety of actors on different levels, and a strong empowerment component.[57] Almost thirty years later, the UNDP underscores the interconnectedness of challenges to well-being in the Anthropocene and highlights the necessity for solidarity on a local up to a global level to respond to the various challenges.[58] Bellamy and McDonald underline the potential of human security to tie the activities of a variety of actors in a common

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[53] Ibid. 1994, pp. 31.

[54] Ibid. 1994, pp. 32.

[55] Commission on Human Security 2003, p. 4.

[56] Ibid. 2003, p. 4.

[57] Ibid. 2003, p. 6.

[58] United Nations Development Programme 2022, pp. 5.

framework, moving beyond the state as a sole provider of security but acknowledging its critical role through concepts such as 'sovereignty as responsibility'.[59]

This concept of human security has been not only lauded as a tool of empowerment, broadening the scope of traditional security debates and shifting its reference point, but also criticized by scholars for being a Western concept that narrows the paths for development and idealizes the European model resting on colonial exploitation, expropriation and neocolonial power relations.[60] Human security is criticized for failing to give more attention to the question of how and by whom[61] security should be provided. Lacking these dimensions, it does not include a clear demand of giving populations agency over their well-being and runs the danger of legitimatizing the use of extreme force in Western-led interventions by still including notions of the traditional security paradigm.[62] As such, some authors perceive it as a tool for the Global North to intervene in the Global South through imperialist measures under the guise of providing security and to ensure that unrest in the Global South does not extend to the Global North, e.g., through migration or terrorism.[63] Critics state that human security does not promote a just and equal participation of marginalized people in the global economy.[64] Critics also argue that it misses a clear framework for addressing gendered violence.[65] The same criticism is expressed by scholars of critical security studies for whom the approach holds no tools to deconstruct existing power relations and the institutions through which they are represented.[66] Newman finds that critics see human security as (1) adding little analytical value not already covered by critical security studies, (2) for being ambiguous in its application by governments, potentially contradicting itself by legitimizing aggression, and (3) for having received little critical scholarship.[67] He argues for mutual enrichment between critical security studies and human security, where critical security studies could prove a stronger theoretical foundation and human security helps critical security studies to an increased policy relevance.[68] Human security is

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[59] Bellamy and McDonald 2002, p. 376.

[60] Frene Noshir Ginwala, a central figure in South African Democratization, notes how the concept of human security enables resistance against colonial and neocolonial oppression by including threats to individuals and groups from within a state; Commission on Human Security 2003, p. 3. Criticism of human security is expressed, among others, in Bellamy and McDonald 2002, p. 376; Ziai 2019, p. 460; United Nations Development Programme 2022, p. 37.

[61] For a discussion of the role states might assume cf. Bellamy and McDonald 2002, pp. 375.

[62] Such interventions were also discussed in the context of the Responsibility to Protect, Churruca Muguruza 2017, pp. 28.

[63] Hoogensen Gjørv 2018, pp. 231.

[64] Churruca Muguruza 2017, p. 27.

[65] Ibid. 2017, p. 30.

[66] Newman 2010, pp. 90; Shani 2017.

[67] Newman 2010, pp. 87–89.

[68] Ibid. 2010, pp. 91–94.

also criticized for failing to recognize the growth paradigm underlying the economic security dimension, which ultimately requires the very same inequality it pretends to fight.[69]

Using theoretical concepts put forward by UNDP, one must necessarily reflect on the paternalistic nature of traditional development studies, which all too often rely on an antagonism imagined from a colonial viewpoint between the White, cis male "civilized self and the barbaric other".[70] Thus, some scholars propose that concepts measuring well-being should be class-, race-, and gender-sensitive and consider power relations.[71] For human security, this could imply that the theoretical underpinnings must be thought of in conjunction with Critical Theory in order to complement the description of security with an ontological theory for possible causal mechanisms and for a reflection on the values therein enshrined.[72] Perceiving of human security and its dimensions in the UNDP Report from Donna Haraway's standpoint in situated knowledges, it is possible to contribute to a continuous development of the concept of human security by valuing and including activists' perspectives on corporate activity in the context of drinking water conflicts. Approaching environmental justice in turn from a human security perspective, can provide an analytical and policy framework of what makes a transition not only sustainable but also just.

The term local population will in this context be used as an aggregate term encompassing the communities and individuals who form part of the conflict at hand. The identification of the local population depends on the case description and the immanent perspectives of the respective authors. I acknowledge that populations are not homogenous groups and that impacts may differ between affected groups in a certain population, which will be highlighted in the discussion of research results. Countries in South America are selected according to their assignation in the M49 Standard prepared by Statistics Division of the UN Secretariat.[73]

II. State of the Art: Corporate impacts and water management conflicts
1. General impacts of corporate activity

Corporate activity does not affect all people in the same way. As early as 1970 Nathan Hare criticized the inherent racism of neo-Malthusian[74] notions that attribute environmental degradation solely to a "population explosion".[75] He emphasized the unequal distribution of resources among

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[69] Thomas 2001, p. 161; Hickel and Kallis 2020.

[70] Mgbeoji 2006, p. 857.

[71] Mgbeoji 2006; Ziai 2019, p. 459.

[72] Newman 2010, pp. 79–81.

[73] United Nations Statistics Division 2023.

[74] Malthusianism refers to the thought of the English economist Thomas Malthus, who saw famine and starvation as natural essentials to control poor populations. Robbins 2012, p. 17.

[75] Hare 1970. A notion which is still very much alive to date, as shown by Dyett and Thomas 2019.

classes and races in the US. As a pioneer in researching environmental racism, Robert D. Bullard highlighted the racialized dimensions of environmental justice by analyzing the consequences of environmental degradation for Black communities in the South of the USA.[76] A broader framework, first conceptualized by William E. B. Du Bois, shows how the exploitation of Black workers and colonized commodities shaped the environment into a productive agricultural industry. He also describes that the racist ideology of White Supremacy divided the working class along races in struggles over access to soils and its fruits. Du Bois names the corporations who advance what he calls Plantation Capitalism as perpetrators of racialized labor and further expansion into the surrounding environment, not only in North America but also in the South.[77] The Observatorio Latinoamericano de Conflictos Ambientales (OLCA) documents the history of Indigenous resistance against genocide, exploitation and marginalization in Latin America. They underline the importance of the Indigenous and Tribal Peoples Convention no. 169 of 1989 by the International Labour Organization that recognizes the diversity of peoples with their own systems of life, development, identities, and languages.[78] In addition, they delineate the political and legal tensions surrounding the concept of *plurinacionalidad*, which acknowledges that different nations and people with distinct territories live within the same state, as well as its potential for Indigenous sovereignty.[79] In their work, Indigenous and feminist struggles are placed in the context of a class-conscious resistance against capitalism, colonialism and racism.[80]

Donna Haraway has famously pioneered the deconstruction of gender and sex and describes that the patriarchal binaries for both were employed as tools of "'White Capitalist Patriarchy' (how may we name this scandalous thing?)" in order to assign the oppressive roles of (male) agents and (female*) objects.[81] Kimberle Crenshaw then conceptualized the intersectional approach, showing how neither the category of race nor the category of gender comprehensively captures the discrimination experienced by Black women.[82] She illustrated the mechanisms of intersectional discrimination by demonstrating the lack of legal remedies available for corporate actions that affect exclusively Black women as discrimination lawsuits failed because neither all women nor all Black employees were affected.[83] María Lugones then details the gendered dichotomy of colonialism as it is

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[76] Bullard and Wright 1990, pp. 305–310.

[77] Bhardwaj 2023, pp. 111–115.

[78] Ardiles and Observatorio Latinoamericano de Conflictos Ambientales 2021, pp. 19.

[79] Ibid. 2021, pp. 19–21.

[80] Ibid. 2021, pp. 13.

[81] Haraway 1988, pp. 591–593.

[82] Crenshaw 1989.

[83] Ibid. 1989, pp. 150–152.

foundation for and sustained in historic and contemporary capitalism. She argues for an intersectional decolonial feminism which defies the binaries which are employed by White cis men as tools of oppression.[84] In a historic survey of tools of oppression, she describes how dichotomies in gender and race along with colonialization, capitalist exploitation, and heterosexualism were used as oppressive categories to differentiate between the colonizer and the colonized and enable the dehumanization of the latter.[85] Moore, in reference to Nancy Fraser and Cinzia Arruzza, summarizes that the gendered and racialized "separation of home from work and public from private", e.g. in domestic work, are necessary preconditions for the accumulation of capital.[86] In a review of the EJA, Venes et al. describe gendered violence in anti-mining struggles and underscore the need for additional research and increased awareness within the EJA and beyond.[87]

In a 2003 report by International Alert, Banfield et al. categorize the impact of transnational corporations on violent or potentially violent conflicts[88] as affecting local relationships and as influencing "the host country's political, economic and natural environments" through foreign investments.[89] They describe the impact on local relationships as generated by (1) the presence of statal or private security forces, (2) by unequitable or discriminatory employee relations, and (3) by exploiting or harming relations with local communities. On a macro-level, they find that foreign investments can result in (1) "uneven development and inequitable wealth", (2) "bribery and corruption", (3) commerce undertaken by combatants undermining efforts for peace, (4) a decline of "human rights and democracy", and (5) environmental degradation.[90]

Barkin and Lemus delineate the interplay of capitalist commodification and Indigenous concepts for property in the context of the organized Indigenous movements in Latin Ameria. They point to the complex interplay of traditional lifestyles and the surrounding environment, and how the simplification of this relation through the lens of a market logic endangers the permanent ancestral possession of Indigenous grounds, the productive capabilities of the population, including the reproduction of flora and fauna, the areas necessary for the cultural reproduction and the perdurance of the collective, as well as the foundations for the self-governing mechanisms and authorities of

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[84] Lugones 2010, pp. 743.

[85] Ibid. 2010, p. 747.

[86] Moore 2023, pp. 24; Arruzza 2016, pp. 21; Fraser and Jaeggi 2018, p. 49.

[87] Venes et al. 2023, pp. 107.

[88] Although not explicitly stated in the report, their writing suggests that they refer to what is commonly denoted armed conflict.

[89] Banfield et al. 2003, p. 18.

[90] Ibid. 2003, pp. 18–22.

Indigenous nations.[91] Their findings substantiate why financial compensations, no matter their extent, remain insufficient to account for the damages done by displacements and land dispossessions.[92] Paul Robbins points out the transnational interconnectedness of environmental conflicts, which do not occur isolated from each other but depend on each other as necessities of global trade.[93]

2. Corporations in water management conflicts

Looking more specifically at corporate actions in water management conflicts, Peter H. Gleick puts water management conflicts in relation to the climate crisis when he predicts a growing demand and a decreasing supply would lead to an increased number of intrastate conflicts "over equitable access to water, strategies for sharing during shortages, and water contamination".[94] Yet already in 1999, Homer-Dixon's "Environment, Scarcity, and Violence" hypothesized "degradation and depletion of renewable resources, the increased demand for these resources, and/or their unequal distribution" as central causes of what he calls environmental scarcity.[95] This in turn could contribute, according to Homer-Dixon, "to civil violence, including insurgencies and ethnic clashes" by driving elites to seize resources and marginalize competing groups, a process he terms resource capture.[96] However, he highlights that those conditions occur in complex ecological-political systems, and environmental scarcity must be considered particularly with regard to politics and political economy, the strengths of institutions, a society's pre-existing cleavages, conceptions of justice, and capabilities of conflict parties.[97] He thus already highlights the political nature of what the term scarcity might mean and how conflicts are centered around its conceptualization in surrounding power relations and the way they affect the quality of institutions, policies, and technologies.[98] Ecological marginalization is then a product of circumstances where groups migrate to ecologically fragile regions because of a lack of access to natural resources caused by resource capture. These migratory movements in turn can cause environmental degradation when combined with a lack of

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[91] Barkin and Lemus 2015, pp. 10–12.

[92] Ibid. 2015, p. 13.

[93] Robbins 2012, p. 13.

[94] Gleick 2014, p. 159.

[95] Many accounts of the history of water management begin with Wittfogel 1967. Although widely disseminated, I will not repeat his argument in this piece as it has been thoroughly and entirely dismantled on methodological and empirical grounds; cf. Robbins 2012, pp. 56. Environmental scarcity is meant to describe supply-induced, demand-induced, and structural scarcities, Homer-Dixon 2010 [1999], p. 48.

[96] Homer-Dixon 2010 [1999], p. 177.

[97] Ibid. 2010 [1999], p. 179.

[98] Ibid. 2010 [1999], p. 32.

knowledge and capital to safeguard ecosystems, and a high population density.[99] For both interactions, ecological marginalization and resource capture, corporations can act as legal tenders of powerful groups and Homer-Dixon describes how these dynamics are exacerbated by racism and neo-colonial economies.[100] In order to explain the causes of conflicts, Homer-Dixon acknowledges the multitude of variables but highlights five social effects of environmental scarcity that can cause violent conflict: Reduced or constrained agricultural productivity, constrained economic development (particularly an increase in the wealth gap), increased migration, aggravated social segmentation among ethnic, religious, and linguistic groups, and disrupted governing institutions.[101] An analysis of the role of corporations in drinking water conflicts and their effects on water scarcity must therefore always be only an incomplete explanation of conflict causes as it is not taking into account the role of contextual factors.

Balderson's research on the impacts of the construction of water reservoirs in Mataquita, Peru underscores the democratic significance of large-scale infrastructure projects: She documents a clash between the lived realities of the local population and the "totalising nature" of the constructions' technicalities and impact assessments, written by the corporation in charge of construction.[102] She finds that the concept of citizenship can be successfully employed to mediate the clash and communicate community demands for drinking water to state institutions.[103] This is in line with the concept of infrastructural citizenship, where the degree of access to and the design and maintenance of infrastructure visibly and materially expresses the citizen-state relationship. The conflicts surrounding infrastructural projects thus encompass such conflicting identities and ideas of citizenship: Corporations enter the state-citizen relationship where the state acts an externalized provider of infrastructure to these corporations.[104] Based on the data of the EJA, Temper et al. find that water management conflicts along with mining conflicts showcase the highest intensity (based on the historical maximum of intensity for each conflict), whereas tourism and recreation conflicts are statistically less probable to be highly intense.[105]

The Ceres Global Assessment of Private Sector Impacts on Water provides a detailed catalogue of criteria to categorize the type, intensity and related industries of various impacts. Additionally, they

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[99] Ibid. 2010 [1999], p. 178.

[100] Ibid. 2010 [1999], pp. 76.

[101] Ibid. 2010 [1999], pp. 81–94.

[102] Balderson 2022, p. 95.

[103] Ibid. 2022, pp. 84.

[104] Lemanski 2020, pp. 118.

[105] Temper et al. 2015, p. 272.

divide the impacts by industry, assess the impact on quantity and quality of water, and identify hotspots for heavy impacts on water. Their research discerns five critical systemic threats to water quality and quantity, and the provision of environmental services through water: "(1) eutrophication, (2) groundwater depletion, (3) diversion and transfer of water, (4) metals contamination, and (5) plastic pollution".[106] The only hotspots they identify in South America are for metals contamination.[107]

Del Bene et al. use the EJA to investigate the social and environmental consequences of the construction of dams. After a three-year survey of the EJA and of 24 testimonies by local movement leaders, they find that resistance to the construction of dams is largely non-violent. Yet these movements are frequently repressed and criminalized, activists are violently targeted and even assassinated. They also note that marginalized groups and especially Indigenous communities are disproportionally targeted by violent repression.[108] They highlight the significant role in the planning, construction, and financing of large dams played by foreign or international institutions such as the World Bank, USAID, and corporations from North America, Europe, and China; the same dynamic is described by Sanjeev Khagraam in 2004.[109] The amount of constructed large dams is, according to them, a function of a boom fueled by international organizations and US and European capital and opposition by social and environmental movements: As a result, the number of constructions of large-dams peaked in the mid-1960s, with a sharp decline owed to an economic recession and social and environmental concerns thereafter until the turn of the century.[110] However, the construction of large dams saw a revival starting in the early 2000s,[111] mirrored by the World Bank's vice-president's exclamation regarding large hydroelectricity projects: "This is now. We are back.".[112]

Madelaine Moore uses the framework of social reproduction theory to answer the questions of how water grabs are carried out and how they are contested in two case studies (Ireland and Australia).[113] Her theoretical perspective takes as a starting point Nancy Fraser's thought to analyze gender oppression within capitalism and maintains a dialogue with eco-Marxist, eco-feminist, and

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[106] Ceres and Global Institute for Water Security USASK 2022, p. 49.

[107] Ibid. 2022, p. 70.

[108] Del Bene et al. 2018, p. 619.

[109] Del Bene et al. 2018, p. 618; Khagram 2004, p. 3.

[110] Khagram 2004, pp. 8.

[111] Del Bene et al. 2018, p. 617.

[112] Schneider 2013.

[113] Moore 2023, pp. 17.

state theories.[114] She finds that while the dominant strategy for the accumulation of capital shaped the manifestation of water grabs and differed in each country, both cases were united by the interests of transnational extractive and financial capital.[115]

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[114] Ibid. 2023, p. 19.

[115] Ibid. 2023, p. 174.

C. Research Design: From a qualitative dataset to an overarching impact assessment

Analyzing descriptive data from the Environmental Justice Atlas, I follow a comparative multi-case approach to extend the scope beyond individual case analysis and inform future single case studies. I am limiting my research to countries in South America with a total case count of 87 to establish a clear regional focus and to benefit from a neither too large sample that would exceed the time available to this thesis nor a too small case sample that would inhibit any meaningful conclusions.[116]

The timeframe of this analysis is only limited by the conflicts entered into the EJA, meaning that I do not narrow the scope artificially. This is partly since it is often difficult to separate conflicts from historic continuities and to determine an accurate starting date. Nonetheless, 72 out of 83 conflicts (four do not report a date for the beginning of the conflict) note a starting date between 1990 and 2019. The remaining eleven are distributed over the intervals 1960-1989 (n=8), 1940-1959 (n=1), and 1920-1939 (n=2).[117] The cases are spread across eight out of 16 countries in South America.

Map of the conflict dataset. Environmental Justice Atlas 2023.
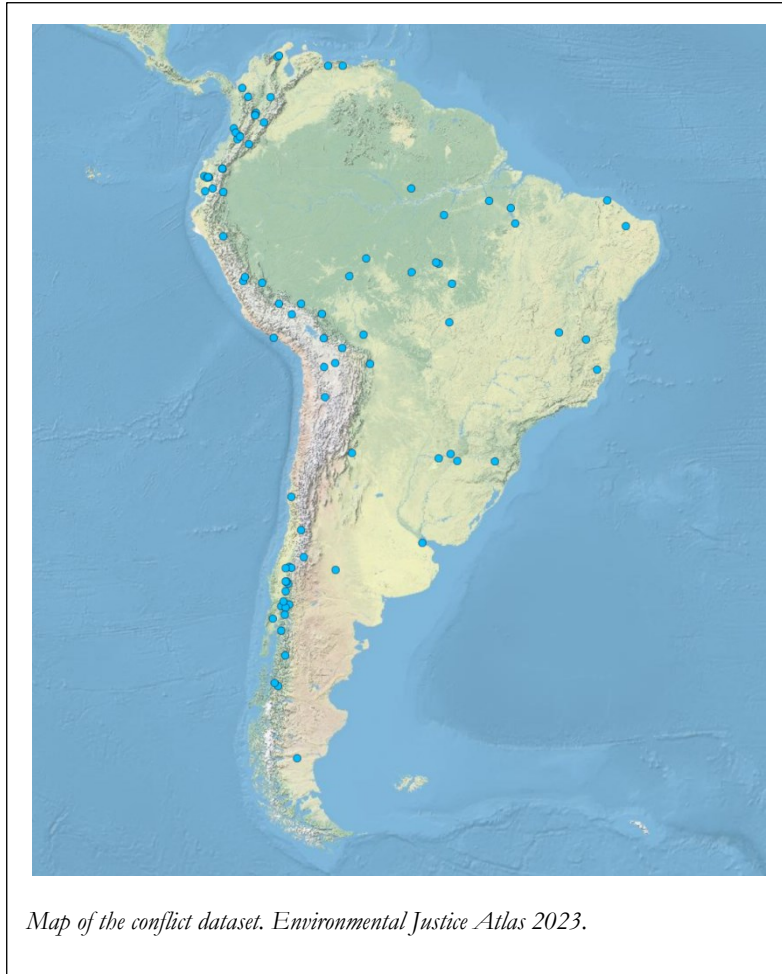
The central parts of my analysis are the case descriptions and the catalogue of impacts listed by the EJA for each conflict. These impacts are categorized by the EJA as either "Visible" or "Potential" and divided into the mutually exclusive categories "Health Impacts", "Environmental Impacts", and "Socio-Economical [sic] Impacts". By building onto related research designs also working with

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[116] The next larger case sample is North America with n=96 and the next smaller sample Europe with n=64; Africa n=43; Asia n=202; Oceania n=1.

[117] Cf. Annex: Fig. 1.

the EJA, [118] I develop a data collection sheet that allows me to analyze those categories of different impacts caused by corporate activity across a large array of cases and compare them with possibly affected dimensions of human security. [119] The datasheet is built around the aforementioned definition of well-being to identify, categorize, and (where adequate) quantify impacts.

In an analysis of the case descriptions of all water management conflicts in South America, I assess for each case whether any corporate activity is described at all. If corporate activities are mentioned in the description, I then note down each impact it caused and all case numbers for which the impact is recorded. The basis for the record of impacts are the categories of impact that are established in the EJA, which I complement wherever the case description gives clear indications for missing impacts. Based on the UNDP definitions for the dimensions of human security, I evaluate for each type of impact if and which dimensions might be affected by corporate actions. As the EJA lacks a publicly available codebook, this evaluation depends entirely on my judgement of the case descriptions and the UNDP definitions. In addition, I determine for each case based on its description, if and which groups of the population are only or disproportionally affected.

While environmental justice has always been a domain pioneered by activism, Temper et al. 2015 point out the epistemological need that communities are "recognized as producers of knowledge in their own right", referencing the epistemological value of activist-rooted knowledge. [120] When Donna Haraway calls for "partiality and not universality [as] the condition of being heard to make rational knowledge claims", the EJA can be seen as a collaborative answer that incorporates the perspectives of those affected by conflict, breaking barriers by enabling broad participation. It can contribute to deconstructing "a homogeneous Other referring only to our own place in the seat of the Same or the Self" by contrasting it with thousands of voices from around the world, sometimes even in their native language. [121] Nonetheless, it suffers from the same **limitations** as many other participatory projects and can never engage those whose voice has not been allowed to form, those who Spivak calls the "subaltern", particularly the subaltern women, and who, by definition, are excluded from discourse. [122] Adding to this is the fact that the EJA has no standardized coverage of

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[118] Most important were the research investigating impacts on women in anti-mining struggles conducted by Venes et al. 2023, the writings on environmental health impacts by Navas et al. 2022 and the research on the impacts of dams by Del Bene et al. 2018. An important introduction to research with the EJA were Rodríguez-Labajos and Martínez-Alier 2015.

[119] I say possibly to underline that I judge the conflict based on the description online and cannot guarantee that my translation of impacts into human security dimensions is aligned with the lived realities of the actors within the conflict.

[120] Temper et al. 2015, pp. 258.

[121] Spivak 2015, 84.

[122] Ibid. 2015, 90–91.

conflicts, meaning that some regions are much better documented than others.[123] This also means that a pre-selection of conflicts takes place before any analysis is possible. The authors of the EJA intent to "document the most significant cases per country and per conflict type" and select cases based on their significance either according to environmental activists or organizations in the country, region, or thematic area, or according to media coverage, and "due to the size of the project, amount of investment, scale of the impact and intensity of the conflict".[124] Communities experiencing the highest degree of marginalization or repression will thus have less representation in the data of EJA than those experiencing a more average degree, making an analysis of the most severely affected communities the most difficult while also obscuring those cases deemed less significant. In addition, the EJA is bound by its own framing of conflicts centering on environmental justice, relying on whatever scholars and activists perceive environmental justice to mean.

While the descriptions of conflicts are at least in part standardized through common categories (e.g. socio-economical impacts and their respective subcategories), the methodology for researching those conflicts as well as the scope of the underlying impact analyses are not.[125] This can be counted as one of the great advantages of the EJA as it does not narrow the view through standardization and gives space for subjectivity. But as a result, the depth to which conflicts are investigated differs significantly[126] and a quantification must necessarily suffer from an incoherent categorization. One example for this is that while nearly all new dam constructions in tropical climates contribute to global warming not only through their need for cement but more significantly through the decomposition of biomass after flooding, not all of these dam construction conflicts list a contribution to global warming as an environmental impact.[127] This methodological difference in how the impacts of conflicts are judged becomes also apparent in large-scale projects that list comparatively few environmental and socio-economical impacts such as the Barra Grande Dam on River Pelotas, Brazil description when compared with the description of the Teles Pires Hydroelectric Dam, Mato Grosso in Pará, Brazil.[128]

Several categories used in the EJA to describe impacts of conflicts are broad to a point where it is almost impossible to draw meaningful conclusions from their analysis. Examples for such

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[123] Temper 2014, p. 170.

[124] Temper et al. 2018, p. 577.

[125] Temper 2014, p. 170.

[126] The character count for all Ecuadorian water management conflicts is just 1,424 characters larger (total 13,440) than the description of the Sinop hydroelectric dam in Mato Grosso, Brazil (12,016 characters). The median length of all descriptions in the dataset equals 3,764 characters.

[127] Kemenes et al. 2011; Fearnside 2016.

[128] Barra Grande Dam on River Pelotas, Brazil can be found in Environmental Justice Atlas 2014 Teles Pires Hydroelectric Dam, Mato Grosso in Pará, Brazil refers to Ibid. 2020.

categories include "violations of human rights" and "social problems (alcoholism, prostitution, etc.)". This problem is exacerbated by the lack of definitions for categories in the data collection sheet, leaving them open for interpretation.[129] At the same time, the standardization at times blocks more in-depth insights wherever the conflict descriptions list a few socio-economic impacts and then close by listing "Other socio-economic impacts" without further specification.[130]

Regarding **internal validity**, meaning the question of whether the recorded impacts are in fact caused by corporate activity, cross-checking recorded impacts with case descriptions is the most comprehensive test possible based solely on EJA data. Although many case descriptions make it abundantly clear that the described impacts would not have occurred, had the corporations not been active in the area, without an in-depth single-case analysis there is no final guarantee that there are no hidden variables. Moderating variables such as the political system or geographical differences are expected to be present, but assumed to be negligible based on the theoretical foundations that trace causalities not to national dynamics but to global systemic mechanisms.

Looking at **external validity**, I do not provide definitive generalization on water management conflicts or calculate statistical probabilities, for which the sample of 87 cases in the EJA is also too small. The question of whether statistical probabilities in political ecology are useful is closely tied to matters of objectivity and situated knowledges described above. Nonetheless, based on the substantial number of cases and the advantages of activist-rooted knowledge, yet acknowledging the uncertainties, I assume that the research results may illustrate supranational trends of impacts commonly experienced by populations across South America and portray new, local perspectives onto conflicts. As such, the results may inform future single-case studies as well as comparative studies of potentially similar trends in other regions.

The **reliability** of the research results depends partly on the subjective readings of the individual case descriptions and on the drawing of connections between human security dimensions and impacts. Precisely the discussion of these possibly diverging interpretations could prove particularly useful for advancing the insight into the perceptions of conflict dynamics and the potential of human security as an analytical framework and policy tool.

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[129] Temper 2014, Appendix B.

[130] One of many examples is Environmental Justice Atlas 2016.

D. Analysis

This analysis looks into the impacts corporate activity has on the well-being of local populations, while the discussion will trace causal mechanisms by connecting results to other research and highlight potential shortcomings of the chosen approach.[131]

Out of 87 conflicts, only three do not detail any corporate activity at all (case no. 15, 21, 47). The cases are distributed across eight countries that unite more than 97 percent of the total population of South America.[132] Six out of eight countries record a share of water management conflicts proportionate to their population within a +/- 7 percent range. Chile is underrepresented in the sample by 17.4 percentage points compared with its share of the total population in South America, while Brazil is overrepresented by 29.7 percentage points.[133] The EJA also provides a quantitative measure of the affected population for each conflict, which for this sample sum up to 24,574,455 or approximately 5.6 percent of the total population in South America.[134] I categorize the conflicts by the type of corporate activity recorded. A share of 61 percent (n=51) of the conflicts center on the construction of one or several dams. The dams in the dataset may be used for hydroelectricity or the provision of water for human consumption or agriculture. The construction of other types of hydroelectric plants and other small-scale or unspecified types of hydroelectric plants accounts for another 12 percent of cases (n=10). These include run-of the-river hydroelectric plants as well as smaller weirs and hydroelectric plants without reservoir. General pollution and the canalization and/or diversion of water amount to 10 percent of cases each (both n=8), while the privatization of drinking water makes up eight percent of cases (n=6). The infringement on workers' rights is only once recorded as the central corporate action.

Across 84 cases, a total of 1,709 impacts are recorded, meaning each case describes on average approximately 20 impacts with a standard deviation of 11.9. The sample records a total of 117 distinct impact categories where an impact is counted once if it is visible and again if it is only potential. When not differentiating between visible and potential impacts, a total of 69 impact categories are left. In the following I will principally refer to a combined count of visible and potential

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[131] All data is available for download from the Harvard Dataverse at Philipp 2023.

[132] Population data was generally taken from World Bank 2023 with missing data for the Falkland Islands and French Guiana being supplemented from The Britannica Group 2023.

[133] Cf. Annex: Fig. 2.

[134] The numbers provided in the EJA represent estimates and for measuring a total, further approximations were necessary.

impacts.[135] 19 of these impacts are only reported once; 27 impacts are reported five times or less. Divided into the three impact groups of the EJA, the sample counts 26 socio-economical impacts, 29 environmental impacts, and 14 health impacts. On average, 4.6 out of 7 dimensions of human security are affected by each impact with a standard deviation of 1.6.

A total of 11 impacts is reported by at least two-thirds of all cases. Most often is the socio-economic impact "**loss of livelihood**", which is documented by 89 percent of cases. The loss of livelihood is proportionately reported by all conflict categories. However, EJA data details a disproportionate effect on marginalized communities, particularly on low-income populations, Indigenous (e.g. Mapuche, Wayúus, Wiwa, Yupka, Kogui, Arhuaco, Kankuama) and "afro-descendent"[136] (e.g. Quilombola) communities, as well as children and women, and in one instance on people who were already previously displaced by the construction of another dam. Understood to mean the loss of the necessities for life with the respective economic and likely life-threatening implications, I assume the loss of livelihood to affect the economic security, food security, health security, as well as the personal and political security. As the loss of livelihood frequently makes the continuation of communal living and traditional practices impossible, I also presume it to affect the community security.

The impact "**Biodiversity loss (wildlife, agro-diversity)**" was indicated in 87 percent of cases and is proportionally distributed across all case categories except for the privatization of water for which only one case reports biodiversity losses. Especially affected are the same groups as for the loss of livelihood with the addition of the Koz Koz people in Chile. Putting it into a human security perspective, I assume that the loss of biodiversity, especially because it entails agro-diversity, threatens principally the economic and food security as well as the environmental and political security of local populations. However, depending on the scale of the loss of biodiversity, I acknowledge that health security as well as community security may also be threatened. Personal security with its focus on physical violence between groups and individuals, I believe, is of lesser concern in this regard.

The third most reported impact at 83 percent describes "**Surface water pollution / Decreasing water (physico-chemical, biological) quality**", with the same groups as described above particularly affected. Surface water pollution or decreasing water quality are prevalent in all categories of

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[135] The decision to combine potential and visible impacts into one count reflects that for some cases impacts are labeled as potential when the description details them as already visible or vice versa. In addition, considering potential impacts enables a comprehensive consideration of the whole bandwidth of corporate impacts, including the psychological stress that certain actions may be taken by corporations or that inhabitants preventively remove themselves from the danger of being impacted, e.g., by moving away.

[136] Case numbers 19, 54, 55, among others.

conflict proportionally. Based on the case descriptions I assume that the pollution of surface water and the decrease of water quality has such wide-ranging implications that it endangers the very substance of life and all categories of human security except for personal security. Depending on the intensity, I expect it to make life for individuals and communities even impossible while also endangering an intact environment.

81 percent of cases describe the environmental impact "**Loss of landscape/aesthetic degradation**". This impact is recorded in all conflict categories except for privatization of drinking water (n=1) and workers' rights conflicts (n=0). All groups detailed above are also affected by this impact. Due to its direct environmental impact, I categorize it as threatening environmental security. I also believe that it jeopardizes community security, as Indigenous communities in particular describe their dependence on an intact landscape. This impact is complemented with the "**Loss of landscape/sense of place**" which is listed as a socio-economical impact affected 79 percent of cases. I understand this impact to be related to land dispossession and encompass the loss of space for cultural practices and traditions as well as existing food provisioning systems. I therefore judge it to affect not only environmental and community security, but also economic and food security along with political security.

The "**Displacement of communities**" is recorded in 79 percent of all cases. Indigenous communities and Black communities as well as women and children are described as being especially affected. Dams and other hydroelectric plants are at 81 percent of cases disproportionately more listed as causes for the displacement. Diversion of rivers/canalization accounts for another 10 percent of cases with this impact while general pollution makes up six percent. As displacements are inherently violent and are often accompanied by additional physical violence against local populations and because it threatens not only the well-being but the survival of individuals and communities, I assume it to affect all dimensions of human security except for environmental security.

A "**Large-scale disturbance of hydro and geological systems**" is described in 76 percent of cases across all conflict categories. The aforementioned groups are especially affected. 82 percent of cases are due to dams or other hydroelectric plants with the remaining cases distributed proportionally among general pollution and diversion/canalization cases. Due to the broadness of the category and the intensity of the impact inscribed therein, I expect all dimensions of human security to be affected, except for personal security. For the related impact "**Reduced ecological/hydrological connectivity**", which is recorded in 74 percent of cases, I assume the same dimensions of human security to be under threat.

The "**Loss of traditional knowledge/practices/cultures**" can be observed in 76 percent of cases in all conflict categories with Indigenous and Black communities (cf. specification above)

inherently affected alongside women, children, and low-income populations. Based on the importance of established knowledge and practices for the provisioning of food and services described by the cases, I consider the economic and food security of local populations as well as the community and political security to be threatened.

74 percent of cases give account of "**Land dispossession**" particularly affecting the aforementioned groups and being disproportionately more reported by dam and other hydroelectric plants conflicts. From a human security perspective, I judge it to affect all dimensions except for environmental security, although many cases detail environmental degradation occurring after the dispossession. This is in line with the human security dimensions I see impacted by the displacement of communities.

"**Deforestation and loss of vegetation cover**" is the last impact reported by at least two-thirds of cases, being detected in 71 percent of cases. It occurs across all conflict categories except for privatization of drinking water cases. The same groups as for the other cases are also particularly affected here. With soil erosion and the loss of landscape being separate impacts, I assume that deforestation and the loss of vegetation cover affect only the environmental security dimension.

Although not as frequent as the aforementioned impacts, I still want to draw attention to a few impacts that have an elevated impact on well-being and human security and cannot be easily subsumed under any of the more common impacts. "**Deaths**" are described in 20 percent of cases with the sum equally split into visible deaths that have already occurred and deaths that could potentially occur in the future. It is disproportionately more often mentioned in cases of diversion/canalization and privatization of drinking water. Although it is certainly one of if not the most severe impact, I cannot attribute it more than a threat to health, personal, community and political security, while environmental, economic, and food security remain principally unaffected. "**Food insecurity (crop damage)**" is present in 65 percent of cases and especially in conflicts centering on dams as 70 percent of all dam conflicts record this impact. I estimate that it impacts all dimensions of human security except for personal security and environmental security. "**Violations of human rights**" as a broad category I expect to affect all dimensions of human security and is observed in 60 percent of cases. "**Militarization and increased police presence**" are described in 46 percent of cases, affecting all but food and environmental security. 37 percent of cases report "**Mental problems including stress, depression, suicide**" thus threatening economic as well as health and personal security. "**Infectious diseases**" are particularly often mentioned in the context of pollution and mosquito introduction through the construction of dams, as well as a lack of drinking water, which is why I assume it affects health and personal security along with community and political security. They are detailed in 31 percent of cases. 31 percent of cases also write about

"**Social problems (alcoholism, prostitution, etc.)**", and while the parenthesized specification narrow the definition decisively, I believe it still broad enough to affect all dimensions of human security, apart from environmental and political security. The category "**Specific impacts on women**" is the only one in the EJA that focuses on the impacts on a particular group. 20 percent of cases record such an impact and owing to the broadness of the category I suppose that all dimensions of human security except for environmental security are affected. Unfortunately, not all impacts can be described here, but the full dataset is available for download online, cf. Philipp 2023.

E. Discussion

The main aim of this thesis has been identifying **corporate impacts on local populations** in South American water management conflicts. The EJA records a wide array of such impacts on the populations' well-being with an average of 20 impacts per case. With more than two-thirds of cases reporting loss of biodiversity, livelihood, traditional knowledge and culture as well as displacement and dispossession, the consequences of corporate activity in South American water management conflicts frequently threaten all dimensions of human security. The EJA also encourages reporting less frequent impacts as 19 out of 69 impacts are listed only once.[137] Some more frequent impacts such as the destruction of cultural heritage, lack of consultation of local population before construction or the lack of judicial guarantees/access to justice would be a valuable addition to existing categories in the EJA as right now they can only be extrapolated from the descriptions. With the conflicts in the sample distributed across only six categories and with dam constructions making up by far the largest part (61 percent), inferences based on these differences are subject to a high degree of uncertainty. I have also not taken note of any significant sectorial differences.

One central **shortcoming of the EJA** as well as of the dimensions of human security is that they both include no proper measure for the intensity of a conflict. Although the EJA measures the intensity of a conflict generally, it does not so for the distinct impacts. Measuring intensity entails methodological challenges, especially when accounting for the variety of perceptions, interests and preferences of local actors, who may perceive the intensity of one impact very differently. Nonetheless, I believe it valuable to future research to include at least some kind of measure (e.g., low, medium, high) to, for example, enable a differentiation between the displacement of a few families and hundreds without having to interpret the conflict description from afar. I also propose that the data in the EJA would greatly benefit from a publicly available, unified codebook. While it is undoubtedly important to make space for diverging definitions in distinct conflicts, future analysis of the data could be facilitated by providing standardized definitions for terms such as "loss of livelihood" along with a field for comments wherever the definition might not comprehensively grasp local perceptions.

I also aimed to analyze the case sample with regard to **existing power relations** and especially to gender, class, and race. The EJA does not include a standardized measure for these particularly or exclusively affected populations. By analyzing the conflict descriptions, I extracted this data and put it into relation to corporate impacts and dimensions of human security. It is apparent that

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[137] Although some of these impacts were listed by me based on the conflict description.

Indigenous groups, Black communities, women, low-income communities, and children are particularly affected by all of the most frequent impacts, and often by the remaining impacts. This is in line with historic continuities I outlined in the review of corporate impacts on well-being. The human security concept does not capture this historic culmination of impacts on specific groups, since its dimensions do not include a temporal component and analyze only the status quo. Although the EJA makes the description of such historic continuities possible, documenting in more detail who is experiencing which impacts would further improve its analytical value.

In a **comparison of the analysis' results with the literature review**, I see a clear reflection of Bullard's conceptualization of environmental racism in the impacts affecting Black and Indigenous populations. This also illustrates colonial continuities as described by Lugones and the OLCA. Unfortunately, I found the EJA provided little input for cataloguing intersectional discrimination mechanisms as developed by Crenshaw. Although a different setting than in the International Alert report, the analysis of the EJA reveals that the presence of statal or private security forces is described in 46 percent of cases as "Militarization and increased police presence" and harm to and exploitation of local communities is evidently described in all cases. Bribery and corruption along with human rights violations and environmental degradation are all detailed in the case sample as well as in the report by International Alert. The impacts recorded in the EJA frequently describe displacements and land dispossessions affecting Indigenous communities, mirroring the findings of Barkin and Lemus on the threats posed by corporate impacts to established ways of life and culture. While they explain why financial payments are unfit to compensate damages to Indigenous communities in principle, the EJA contains several cases where no compensation is paid at all.[138] For Homer-Dixon's concept of ecological marginalization, I could not find any examples in the sample, yet to me it seems likely that it occurs beyond the scope of the EJA. Many conflicts depict some degrees of resource capture, where corporations take exclusive possession of resources, usually water and space, which were previously used by the local population. The EJA also confirms the findings of Ceres by documenting a significant percentage of cases that report groundwater depletion (61 percent) and diversion and transfer of water (diversion/canalization make up 10 percent of the sample, large scale disturbances of hydro and geological systems is reported in 76 percent of cases). Eutrophication as well as metals and plastic pollution were not as frequently reported, although general pollution conflicts account for 10 percent of the sample.

There remains the question of **whether the concept of human security contributed additional insights** beyond the scope of the impacts listed by the EJA. The fact that many dimensions of

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[138] E.g., cases no. 23, 25, 49.

human security are affected all at once illustrates the overlapping and interconnected consequences for the well-being of populations caused by corporate activity. Perhaps surprisingly, maybe owing to fewer occurrences or possible biases in the description of conflicts, environmental and personal security are affected by significantly less impacts than the remaining dimensions of human security.[139] Assessing the impacts from a human security perspective also invites discussion of how one impact is related to the variety of actors that are responsible for the different dimensions of security. The loss of biodiversity taken by itself may seem like it affects mostly environmental security, but the dimensions of human security help to direct attention towards implications for economic and food security. It also enables a discussion of how such a loss could potentially affect community or political security. Unifying these different dimensions of security marks the strength of the human security approach.

While environmental protection agreements such as the Paris Climate Agreement of 2015[140] provide the objective of a sustainable, 1.5°C future, they fall short of defining the values that are central for a socially just transition.[141] The dimensions of human security can build a connection between climate goals and the well-being of individuals and communities. The Sustainable Development Goals (SDGs) can be subsumed under the concept of human security to provide more specific objectives and policy goals within each dimension.[142] Applying human security to conflicts of environmental justice unifies the objective to reduce greenhouse gas emissions and the reduction of environmental pollution with other measures for well-being and prosperity. As such, it could reduce the probability that environmental and social issues are pitted against each other by portraying them as two sides of the same coin and lay out a unified policy framework. Nonetheless, neither the SDGs nor human security addresses contradictions between the pursuance of equality and the commitment to economic growth. They provide a framework for assessing damages and threats, but a criticism of the structures of inequality only becomes possible through a discussion of the contradictions between dimensions of human security. In addition, human security does not

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[139] Economic security = 55, food security = 46, health security = 56, environmental security = 37, personal security = 34, community security = 52, political security = 45.

[140] United Nations Framework Convention on Climate Change, FCCC/CP/2015/L.9/Rev.1 (12.12.2015), http://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf.

[141] Galgoczi 2018; Kenfack 2022.

[142] This subsumption is also recognized by UN officials, UN News 2017.

measure temporal continuities, making a further development necessary if concepts relying on historic inequalities, such as Loss and Damage,[143] are to be placed within this framework.

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[143] Loss and Damages describes a climate justice movement that highlights historic and contemporary imbalances between countries in their contributions to climate change and in the impacts felt by populations. The UNFCCC COP27 in Sharm El-Sheikh established a Loss and Damage Fund to respond to claims for compensation. Cf. United Nations Framework Convention on Climate Change 2023.

F. Conclusion

In every conflict I have analyzed as part of this thesis, all dimensions of human security are affected. This finding alone stresses the need to think of well-being and security in a holistic manner, where health and food security cannot be separated from environmental or community security. The results of my analysis have also largely confirmed earlier research and underscore the need to regulate corporate activity in order to ensure the well-being and survival of communities. Thus, the Environmental Justice Atlas proves to not only be a theoretically valuable database through the inclusion of co-produced activist-rooted knowledge but also a practical source of data for analysis. The analytical value of the EJA could however be improved upon by detailing who or which group experiences which intensity of impacts. Intersectional mechanisms of discrimination still remain largely invisible within the EJA. To become a proper tool for analyzing cases or informing policy, I propose that the concept of human security needs to be expanded to include a dimension for historic continuities and to eradicate contradictions between the different dimensions of security. Whether or not so-called Green Growth, meaning continued economic growth without negative impacts for climate and environment, is possible remains heavily disputed.[144] It would appear hazardous to limit a central concept such as human security to measures stemming from such a heavily debated paradigm. While a basic income from remunerative work, as proposed in the UNDP report, is often a valuable tool to reduce poverty, the focus on it as the principal provider of economic security does not express a desired outcome but a process at best. If human security is to inform a discourse on sustainable development, it will need to propose more coherent measures for sustainable development. If anything, the analysis of the EJA shows that the dimensions of human security are inseparable from each other and not addressing such inherent contradictions undermines the concept as a whole. A decolonial and feminist conceptualization of environmental justice may provide a framework to update the concept of human security.[145] As important as the tools of analysis are the sources of data: For now, the EJA is the largest co-produced database of environmental conflict data and still suffers from a strong pre-selection and selection bias. As a result, one is left with the question of how many stories – or rather perceptions of the same story – remain untold and how to produce research and policy that makes them be heard.

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[144] Hickel and Kallis 2020.

[145] Menton et al. 2020.

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Annex

Figure 1. Temporal Distribution of cases.
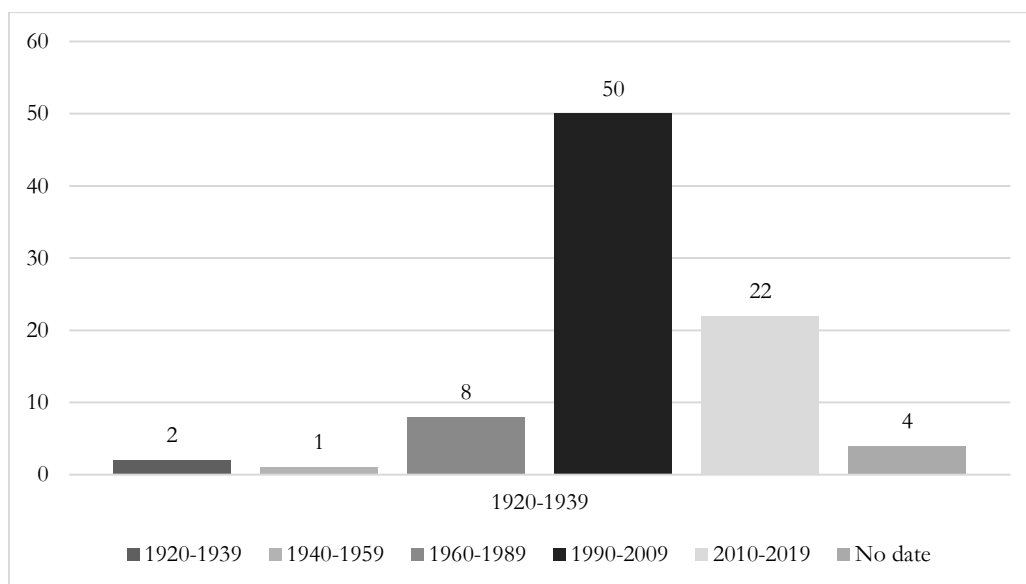
Figure 2. Distribution of cases across countries.

Country	Count of cases	Percentage of sample	Percentage of population in South America	Difference of sample portion to percentage of population
Argentina	8	0,091954	0,10567	0,01372
Bolivia	9	0,1034483	0,02794	-0,0755
Brazil	17	0,1954023	0,49211	0,29671
Chile	19	0,2183908	0,04481	-0,1736
Colombia	15	0,1724138	0,11856	-0,0539
Ecuador	9	0,1034483	0,04114	-0,0623
Peru	8	0,091954	0,07782	-0,0141
Venezuela	2	0,0229885	0,06469	0,0417
Total	**87**	**1**	**0,97274**	

Figure 3. Impacts by share of cases (visible and potential impacts summarized).

Impact	Share
Toxification through eutrophication	1,2%
Risking dam-breach	1,2%
Respiratory and skin diseases	1,2%
Political ignorance towards SDGs	1,2%
Negative impact through the use of antiobiotics in fish…	1,2%
Negative impact on glaciers	1,2%
Loss of Wetlands	1,2%
Loss of infrastructure	1,2%
Local weather impacts (fog)	1,2%
Lead Poisoning	1,2%
Lack of compensation for displacement	1,2%
Insecurity about being possible displaced depending on…	1,2%
Increased risk in case of earthquake	1,2%
Heat stress	1,2%
Genetic contamination	1,2%
Exposure to toxic algae	1,2%
Disinformation campaign	1,2%
Destruction of protected natural areas	1,2%
Acceleration of glacier melting	1,2%
Loss of fields	2,4%
Introduction of mosquitos	2,4%
Oil Spills	3,6%
No access to water	3,6%
Mine Tailing Spills	4,8%
Fires	4,8%
No access to drinking water	6,0%
Declining fish/shrimp populations	6,0%
Exposure to unknown or uncertain complex risks…	10,7%
Noise pollution	16,7%
Waste overflow	19,0%
Occupational disease and accidents	19,0%
Deaths	20,2%
Health problems related to alcoholism, prostitution	22,6%
Other Environmental related diseases	25,0%
Accidents	25,0%
Violence related health impacts (homicides, rape, etc..)	27,4%
Air Pollution	27,4%
Specific impacts on women	29,8%
Social problems (alcoholism, prostitution, etc.)	31,0%
Infectious diseases	31,0%
Desertification/Drought	31,0%
Soil contamination	35,7%
Global warming	35,7%
Mental problems including stress, depression, suicide	36,9%
Unemployment	38,1%
Soil erosion	38,1%
Loss of employment (Firings)	38,1%
Lack of work security	38,1%
Labour absenteeism	38,1%
Increase in violence and crime	41,7%
Displacement of indigenous people	42,9%
Malnutrition	44,0%
Militarization and increased police presence	46,4%
Floods (river, coastal, mudflow)	54,8%
Increase in Corruption/Co-optation of different actors	58,3%
Violations of human rights	59,5%
Groundwater pollution or depletion	60,7%
Food insecurity (crop damage)	65,5%
Deforestation and loss of vegetation cover	71,4%
Reduced ecological/hydrological connectivity	73,8%
Land dispossession	73,8%
Loss of traditional knowledge/practices/cultures	76,2%
Large-scale disturbance of hydro and geological systems	76,2%
Loss of landscape/sense of place	78,6%
Displacement of communities	78,6%
Loss of landscape/aesthetic degradation	81,0%
Surface water pollution / Decreasing water (physico-…	83,3%
Biodiversity loss (wildlife, agro-diversity)	86,9%
Loss of livelihood	89,3%