A Fluid way of life
Adaptation and ecologies of exclusion

Master's thesis for the degree of Master of Arts (M.A.) in Critical Urbanisms

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Introduction

> Living here it's both a pain and a unique experience... you have to be here to understand. Imagine, we had three floods, I think, in four years, and during the floods, we kept going. Then, after the floods, we had the pandemic. And during the pandemic, we kept going. We are one of the places that felt the pandemic the most because people live off the trade from the other side… People get used to this. It's truly admirable; the people of Puerto Elsa are very *sufrida* (INT: Claudio 2024)

> But this, for us, it's normal. That today you might be moving here by car, and in a month, it can be by boat. Do you understand? It's also normal for us and our children. It's something that you have to live to understand it. Truth is that people from outside, who move to the city for work, are quite surprised by the water and the way of living here. But they never leave either. (INT: Claudio 2024)

Urban flooding has become one of the biggest climate-related issues in Paraguay in recent years (IDMC 2020). The lack of urban infrastructure adapted to the hydrological conditions in the region often results in the disruption of urban activities and physical and psychological damage to individuals, as well as to goods and existing infrastructure throughout the country (Programa de las Naciones Unidas para el Medio Ambiente 2008). These conditions have resulted in the mobilisation of almost 54,000 individuals nationwide in previous years (IDMC, 58).

Flooding affects the territory along the Paraguay River on such a large scale and magnitude that, in places such as Puerto Elsa, the city can become completely covered by water for extended time periods (INT: Richard 2024; INT: Soraida 2024). However, urban life in Puerto Elsa continues despite these challenging conditions (INT: Richard 2024; INT: Soraida 2024). Although the water's presence is not permanent in most of the territory, its ever-changing frequency and magnitude make it a part of its inhabitants' everyday lives. In Puerto Elsa, people are living a fluid way of life: a life characterised by constant movement, adaptability and change

Analysing the case of Puerto Elsa poses an interesting learning opportunity that is valuable in two aspects: for the local context in Paraguay and in theoretical academic debates regarding diverse ways of living and adapting to climate. On the one hand, in empirical terms, the lack of understanding regarding local ways of living in flood-prone areas in the Paraguayan context often results in the neglect and marginalisation of these communities (Rivarola 2023). The people living in these conditions are either seen as victims, with little agency (INT: Claudio 2024), or are perceived as being completely adapted to this situation,

therefore undeserving of external support (INT: Soraida 2024). In both cases, the outcome related to these perspectives is (re)producing "ecologies of exclusion" (Kimari 2023), maintaining these community in a state of constant vulnerability (INT: Claudio 2024).

On the other hand, in regard to academic debates on climate research, a better understanding of Puerto Elsa's complexities can contribute to explorations of climate adaptation in the global south within Postcolonial and Feminist Urban Political Ecology. The field of UPE has extensively analysed the urban as a relational sphere where social, political, natural, human, and more-than-human dynamics interact and coexist (Kaika et al. 2023; Truelove 2011; Heynen 2014; Zimmer 2010; Swyngedouw 1996; 2004). This framework considers the city at a level where various forms of governance are structured not only by official authorities but also through daily interactions and connections between its inhabitants and the environment (Nightingale 2023, 143) However, while their work has taken climate research beyond the environmental aspect (Lawhon, Ernstson, and Silver 2014, 498), much of this research has been focused on the infrastructural and institutional structures of the city, particularly when analysing climate change adaptation (Lawhon, Ernstson, and Silver 2014). As institutional responses are often influenced by larger political dynamics, they often do not fully respond to localised needs and context nor represent local realities (Lawhon, Makina, and Nakyagaba 2023).

If one were to analyse Puerto Elsa's climate vulnerability from the perspective of large-scale institutional strategies and political participation, the conclusions would be in stark contrast to those drawn from an analysis done considering the perspective of its inhabitants' everyday lives. As in this case, a focus on large-scale and institutional approaches can result in knowledge gaps (Rusca and Cleaver 2022), especially when it comes to climate vulnerability in the global south (Lawhon, Ernstson, and Silver 2014, 506; Kimari 2023). As a result, UPE scholars have begun to explore climate from feminist perspective pushing the notions of scale (Nightingale 2023), with valuable findings regarding embodied experiences (Doshi 2017; Sultana 2020; Tschakert 2012), among other topics.

In this way, the aim of this research is to contribute to the understanding of a fluid way of life in the context of climate vulnerability in Puerto Elsa and explore its role in reshaping power relations. Additionally, it aims to invite questioning, within the frame of Urban Political Ecology, of which other marginal versions of adaptation and resilience in the global south might be currently invisibilised by exclusionary frameworks.

For this purpose, this research aims to answer the following questions: “How does fluidity shape the ways of living with climate vulnerability in Puerto Elsa?” and “How can fluid ways of living question local notions of climate adaptation?”.

The ways of living in Puerto Elsa indicate fluidity as a multidimensional component of their lives, permeating every aspect of their routines and behaviours, and challenge the local logics of ecological exclusion. Thus, thinking of fluidity as a lifestyle instead of a set of practices centres the community’s intrinsic adaptive capacity and reveals an embodied, multidimensional human-environment dynamic influenced by climate vulnerability.

This paper is based on academic research focused on the city of Puerto Elsa, which I conducted during a total of 14 weeks split between 2023 and 2024. It follows a qualitative approach, using in-depth interviews as the primary method of data collection. Participants in this study include current residents of Puerto Elsa, Puertoelseños living in Clorinda, political representatives of Puerto Elsa, residents of other cities within the metropolitan area of Asunción who commute daily for work in Puerto Elsa, and Asuncenos who regularly frequent Puerto Elsa for commercial purposes. It has been complemented with secondary sources, which include virtual ethnography, document analysis and newspaper articles.

This introduction is followed by a brief contextual background of Puerto Elsa, exploring its history, relationship with the border and with the natural environment. The following section presents a theoretical overview, where literature and concepts of urban political ecology, feminist, postcolonial and climate adaptation research are reviewed, finalising with a brief exploration of fluidity.

This study is divided into two sections. The first section begins exploring why fluidity is a way of life in Nanawa, explaining the link between their way of living and their hybrid environment as a mutually constitutive dynamic, where they understand the river is a part of their environment and have integrated it to their lives. This reveals fluidity as a multidimensional aspect in their ways of living.

To further explore this notion, each of the following chapters of the section delve into one different structural dimension of their lives, which reveal how fluidity configures their ways of dealing with climate vulnerability. Firstly, the temporal dimension is explored by an analysis of the practice of raising their things, which is an ongoing process involving permanent and immediate actions. This reveals the existence of multiple, simultaneous temporalities in Nanawa. The following chapter, “living in between”, explores the spatial

dimension of their lives, indicating space is understood as volumetric, where they are in constant motion. This motion also has a vertical axis, which configures how they position themselves both in space and society. The findings reveal not being bound to a specific space does not equate a lack of attachment to it, as they expressed attachment towards the way of life this space allows.

The second section of this work aims to analyse the dynamics which reproduce the ecologies of exclusion in Puerto Elsa, emphasising how fluidity is key to resisting those logics It highlights how fluidity challenges hegemonic imaginaries of urban life in Puerto Elsa, as it operates beyond the border's limitations. In this way, unregulated cross border connections play an essential role in the urban dynamics of the city, which generates political conflicts. This study concludes with a brief exploration of the potential of fluid ways of living in Nanawa to challenge prevailing institutional frameworks on climate adaptation and resilience.

Context

The first recollections of what is today considered the territory of Nanawa, dating to the late 18th century, Schuller's (1904) manuscripts, which encompass Azara's notes of his colonial expeditions down the Pilcomayo River, mention how the territory, characterised by the magnitude and convergence of rivers, was subjected to floodings in periods of rain, with the river reaching four times its original size (1904, 302). His annotations mention the existence of an island at the estuary of the Pilcomayo River, and the presence of Toba indigenous tribes in the region (Azara and Schuller 1904, 397), who lived a semi-nomadic life dictated by hunting and collecting fruits (p. 399). The 'hostility' of the natural environment made the Spanish imperial expansion more difficult to consolidate in the Chaco region (Azara and Schuller 1904, 402; Correia 2022, 1895), generating a notion of 'ambiguous sovereignty' over the territory (Connors 2022; Correia 2022, 1897).

Until 1880, the territory was still considered a "no man's land" (Correia 2022, 1896). It was not until 1879 that the region was definitively allocated to Paraguayan territory by U.S. President Rutherford B. Hayes, while arbitrating the boundary disputes between Paraguay and Argentina after the Paraguay war (Bethell 2018, 110; Connors 2022).

> Despite settler accounts describing a region that "produces practically nothing of workable value" (Grubb 1911, 65), the Bajo Chaco is now a cornerstone of the country's beef industry, which ranks in the top ten global exporters by slaughter weight (U.S. Department of Agriculture 2019). Settlers had to make a new waterscape to achieve this end. The process began with land privatization, which began in earnest after the Triple Alliance War (1864–1870) when the Paraguayan state sold off much of its Chaco landholdings. The ensuing resource rush saw over half the region legally converted from state lands to private property within a decade (Renshaw 2002). Foreign investors purchased land by the league to establish latifundium (Kleinpenning 2009, 483) that enclosed vast portions of Enxet, Sanapan a, and other Indigenous territories (Villagra-Carron 2010). English investors were keen to acquire lands in the Bajo Chaco, and the British Anglican Mission subsequently worked to create an Indigenous labour force to work on the new landholdings (Grubb 1911; Hunt 1933). (Correia 2022, 1895)

As a result of the civil wars around 1891, for many years politically exiled people moved to Puerto Elsa searching for refuge, as for a long time it was thought the territory belonged to Argentina (INT: Victor 2024; INT: Lorenzo 2024). Due to the popular notion of Puerto Elsa being a part of Argentinian territory at that time, this part of Nanawa's history is only remembered and shared by locals, as literary sources register those exiled groups relocating to Argentina (Sánchez and Roniger 2010, 140).

These people initially worked in farming and raising livestock (Ministerio del Interior del Paraguay 2010; INT: Victor 2024). However, after the flood of 1905, which caused the loss of their crops and livestock, most residents chose to change their occupation (INT: Victor 2024). As a result, they began working in the cross-border commercial exchange (INT: Victor 2024; Ministerio del Interior del Paraguay 2010).

The debate over the political delimitation between Puerto Elsa and Clorinda was only settled in 1954, and after the construction of the "Pasarela de la Hermandad" in 1967, the international bridge connecting both countries over the Pilcomayo River, the commercial boom of the city began, which resulted in locals abandoning the few remaining farming plots to turn to cross-border commerce with Argentina (INT: Victor 2024; INT: Lorenzo 2024).

Among the early migrants was Francisco Campos, a prominent political figure among the liberal party, and his family, who acquired the ownership of the land in which Puerto Elsa was situated (Ministerio del Interior del Paraguay 2010, 199). As his daughter Elsa Campos de Velásquez inherited the lands and named her private port after her, the place became known as Puerto Elsa (INT: Victor 2024; INT: Lorenzo 2024; INT: Soraida 2024; Ministerio del Interior del Paraguay 2010, 199).

The place is claimed to have also been refuge for the Chaco War soldiers, who demanded the Paraguayan government a place to live after they returned from battle (INT: Victor 2024; INT: Lorenzo 2024). In November of 1987, it was declared the district of Puerto Elsa, and as suggested by a Military General, Marcial Samaniego, it was named after one of the Chaco War battles, where Paraguay was victorious against Bolivia ('Nanawa', n.d.).

Water, the landscape and the in between

Coming from Asuncion, Puerto Elsa is on the '*other*' side of the Paraguay River, just an hour's drive away from the capital. As soon as one is across the river, the change in scenery becomes evident as the buildings in the landscape start being replaced by *Karanda'y*'s[1], occasionally surrounded by water. Being located in the south of the Presidente Hayes department, Puerto Elsa is a part of the *Bajo Chaco*, a region characterised by being a floodplain heavily influenced by the Paraguay, Pilcomayo and Negro rivers (INT: Richard 2024; INT: Soraida 2024)

[1] Karanda'y is the Guarani name of the Water Palm, a species of palm tree which grows in the humid areas of the Chaco region.

Being influence especially by the Paraguay River, (‘Nanawa’, n.d.) the area is susceptible to the seasonal rises in the river's water levels in what locals call the “crecida” (INT: Richard 2024; INT: Soraida 2024), This is mainly due to the seasonal rainfall that accumulates in the Pantanal region. As a result of the geographical characteristics of the area, it acts as a natural reservoir, slowly accumulating and delivering water regularly to the Paraguay riverbed for six months (Ministerio del Interior del Paraguay 2010).

Despite this being a seasonal phenomenon subject to variations influenced by the “El Niño” phenomenon, changes in the climate of the region have resulted in an alteration of the accustomed hydrological water cycle (Correia 2022). The frequency of the crecidas has shifted from every 15 years to 10, then to 5. Currently, after 4 consecutive years of an annual rise from 2014 to 2018, the *crecida* appears to be deviating again from the new expected 5-year pattern (Ramírez Rojas 2016; UNDP 2024; ‘Nanawa’, n.d.; *Perfil de Riesgo de Desastres Para Paraguay* 2018)

In this case, land-use changes and deforestation, which are a by-product of neoliberal extractivist policies, have contributed to an intensification of the contrast between the different stages of the water cycle (Aseretto, Baez Benitez and Echeverria 2022), making flooding and draughts more extreme and disproportionately affecting the most vulnerable communities (Correia 2022). The unpredictability of weather patterns keeps Puerto Elsa’s inhabitants in a constant state of uncertainty, as floods can rise to cover up to 90% of the city’s territory (Ministerio del Interior del Paraguay 2010).

Theoretical Framework – Literature review

As Donna Haraway said when explaining the need for narratives and concepts that can effectively capture the complexities of the world while remaining open to new and old connections: "It matters which concepts think concepts […] which systems systematise systems" (Haraway 2015, 160). With this quote in mind, I find essential to introduce and clarify the concepts, frameworks and fields that structure this research.

As I will explain throughout this research, flooding in Puerto Elsa is a climate related subject which is experienced both at an individual and urban scale. Aiming to build a framework with appropriate tools to explore water Puerto Elsa in the way Puertoelseños experience it, this section reviews concepts and discussions of urban political ecology, including postcolonial and feminist approaches, climate adaptation, geography and anthropology which were pertinent for this research.

Flooding or crecida

> "The *crecida* is normal for us, it's part of this place. […] But flooding… flooding is a big problem here" (INT: Mr. Figueredo, 2024)

'There is more to flooding than just water in Puerto Elsa' was the concluding note after my first day of fieldwork in Puerto Elsa. During my first conversations, I noticed whenever I asked questions about their experiences with flooding, the answer would be related to other aspects of their lives, diverting the conversation towards topics such as work, politics, community relations, among others. In some of these answers, the word "flooding" would be replaced by "*crecida*" [2], depending on which aspect of their lives they were discussing.

While essentially both terms referred to the same thing[3]; the presence of water in the urban fabric of Puerto Elsa, they were used to indicate two different aspects of it. On the one hand, *Crecida* is how locals refer to the seasonal rising waters in the territory; it is how they characterise their home, how they remember and relate to water, and how they situate it in

[2] Or *creciente*, both used indistinctively.

[3] While etymologically, it can be argued that these words can refer to two different magnitudes of a natural phenomenon (ASALE and RAE 2023a; 2023b; Marroquín 2022), the local use of those words did not vary in that aspect. For example, even when referring to times when the river levels reached almost 8,55 meters of height (completely covering the city) in 1992 (Ramírez Rojas 2016), it would still be referred to as "the crecida of '92", depending on the context. (Interview: Soraida, Richard, Maria, Evelyn, Victor)

their landscape. On the other hand, flooding is how they refer to water when it comes to their struggles, it has a clear negative connotation. For example, it is used when they explain the infrastructural challenges related to water or if they discuss the lack of support received by the state.

Puertoelseños' way of referring to (and living with) water reflects how it is a connector between the physical space in which they carry their lives, the broader sociopolitical dynamics and themselves. This link has been explored by scholars in the field of Urban Political Ecology (UPE) for many years, which offers a useful framework for its exploration (Truelove 2011, 144).

Urban Political Ecology

UPE provides a rich framework for analysis when contemplating the natural environment as an integral part of the city (Kaika et al. 2023; Truelove 2011). By examining the relationship between the environment, urbanisation, and politics in a holistic way, UPE has been expanded to consider political changes, critiques of capitalism, social factors, and the role of nature (Gandy 2022). Due to its long-standing presence within academic research, UPE has visible evolution through the years (Heynen 2014). Through extensive reviews of UPE literature within academic research, scholars identify several strands within the field, with distinct theoretical directions (Heynen 2014; 2016; 2018; Cornea 2019), making it a diverse field for urban exploration. This section will provide a brief overview limited to the concepts and literature directly related to the present research[4].

Considered to be one of the first scholars to theorise urban political ecology as a distinctive research agenda (Gandy 2022, 22), through an analysis of piped water infrastructure, Erik Swyungedouw (1996) conceived nature and the city as networks of interwoven hybrid processes (Swyngedouw 1996, 69). While there is a debate about the origins of urban political ecology, with one strand claiming it is rooted in neo-Marxist theories and another centring on the shift from rural to urban (Gandy 2022, 21; Zimmer 2010, 343), Swyungedouw (1996) bases his work on Marx's ideas of social development having natural foundations. In this way, he claims that social relations actively engage in and influence the process of metabolising the natural environment, which results in

[4] A more extensive review can be found in Heynen 2014; 2016; 2018; Cornea 2019, and Gandy 2022.

transformations, changes, and the emergence of new socio-natural configurations (Swyngedouw 1996, 70), creating a ‘cyborg’ city (Swyngedouw 1996, 80).

A key input of UPE has been the introduction of the term “metabolism” into the urban context, referring to the complex networks between humans and nature in cities (Heynen 2014, 599). “Metabolic processes constitute the material (re)production of the city and are intimately connected with the domestication of nature to produce commodities with use and exchange values” (Lawhon, Ernstson and Silver 2013, 501). As it originated in socionatural theory, metabolism is not viewed as neutral process (Zimmer 2010, 348). Although co-produced by humans and non-humans, the influence of human intentions and interests dominates and mediates metabolic processes (Swyngedouw cited in Zimmer 2010, 348).

It is important to note Latour’s influence on the conceptualisation of metabolism within assemblage theory, claiming that it “can only be grasped as the interaction within the assemblages, within the hybrids” (Zimmer 2010, 348). This poses metabolism as interactions within hybrids rather than a binary interaction solely between humans and a unified nature, implying that to understand metabolism, one must consider the interconnected relationships within the hybrid entities (Zimmer 2010, 348). In this way, certain aspects of poststructuralism have been added to theorise metabolism as a highly dynamic socio-political process (Lawhon, Ernstson, and Silver 2014, 501; Heynen 2014, 599).

Hybrid spaces

In the context of Puerto Elsa, urban political ecology becomes useful for exploring its hybridity as a space that is both natural and urban. From Latour’s rejection of the nature-culture divide, Swyungedouw claims society and nature cannot be completely categorised “as one or the other” as they are a combination of both (Swyngedouw 1996, 66; 2004, 14).

An important part of conceiving flood-prone urban environments as hybrids is acknowledging the agency of non-human elements (Rivarola 2023; Nogues et al. 2023). Zimmer (2010) emphasises how when it comes to “human practices and discourses, hegemonic, dominant practices overlay subaltern ones” (p. 348). In exploring the concept of socio-natural hybridity within urban forms, Coelho (2018) mentions the importance of acknowledging the agency inherent in natural, technological, and “more-than-human” dimensions of urban ecologies (p. 21). The perspective draws inspiration from Latour's actor-network theory, directing attention to the actions of non-human actants (Coelho 2018, 21). These non-human entities play active roles within the assemblages that drive urban

metabolism, ultimately contributing to the production of power dynamics within the urban landscape (Coelho 2018, 20).

Dynamics of socio-nature production

One of the basic concepts within urban political ecology is the notion of nature production (Heynen 2014, 599). Swyngedouw (2004, 21) articulates that the production process of socio-nature encompasses both material processes and the proliferation of discursive and symbolic representations of nature. In the case of flood-prone urban areas, material processes related to the economy's dynamic flows on a local, regional, and global scale are well known to have a direct effect on the environment (Nogues et al. 2023). Global warming and the rise in temperatures, related to an irregular and more accentuated river cycle, maintain the socio-natural environment in a state of constant change (Nogues et al. 2023, 27), where, to use Swyngedouw's phrasing, "nothing is ever fixed" (Swyngedouw 2004, 21).

A Postcolonial approach

When considering the city to be a hybrid structure influenced by natural and socioeconomic factors, analysing the impact of colonialism is key in formerly colonised territories (Correia 2022). It was the beginning of the rupture of ancestral ways of relating to the natural environment in Paraguay (Causarano 2012), and its impact, to use Swyngedouw's (2004) words, "is both material and imagined". A postcolonial approach makes visible the relationship between the historical legacies and current unequal power relations on multiple scales (Kimari 2023). It enables relational thinking about cities, emphasising the importance of understanding the relationship between place, knowledge, and power (Roy 2015, 207).

It has been widely discussed that climate change has a greater impact on communities that have faced historical oppression and colonisation, especially in countries of the global south (Rivera 2020). These communities continue to feel the effects of colonisation through climate change, globalisation, and the development industry (Sultana 2022, 2; Rivera 2020). In her paper "The Unbearable Heaviness of Climate Coloniality, Sultana (2022) dives into how the impacts of climate change are distributed unequally and unjustly, not only on a micro level but also on a macro level. Drawing from Fanon's and Said's approach to how colonialism exists inside the mind of the coloniser and colonised, the relation it has to climate (Sultana 2022, 8) and Martinez's ideas of how climate coloniality relies on racial domination

and hierarchical power relations (Sultana 2022, 3,4,6), she describes a modern form of colonisation seen through the intersection of climate change, the development industry, and globalisation (Sultana 2022, 2).

Additionally, postcolonial theory challenges the sources of knowledge production, as it argues, not only for a critical lens when analysing existing theorisations but for the inclusion of different epistemologies (Roy 2016). Complementarily to Scholars within Black Geographies of Race and Ethnicity, who mainly focused on geographical perspectives that study the spatial implications of colonialism and discriminatory practices based on race and ethnicity (Noxolo, 1232), the postcolonial critique aims to create opportunities to speak from alternative perspectives and challenge dominant narratives by identifying their limitations rather than reinforcing them with data that fits their mould (Robinson and Roy 2016, 184). Furthermore, in the search for undoing current colonial power dynamics, there is a claim for these analyses to expand beyond the theoretical realm and become material solutions (Sultana 2022, 6, Johnson, Parsons and Fisher 2022).

From UPE to FPE and climate emergency

UPE scholars' interest in the role of metabolism and circulation in cities has led them to focus on urban infrastructures as key components in the study of the political ecology of urbanisation (Lawhon, Ernstson and Silver 2013, 501; Gandy 2022, 22). "Capitalist power is conceptualised as enacted through urban materialities, often giving precedence to class relations" (Lawhon, Ernstson and Silver 2013, 501). Therefore, in discussing water inequality from an urban political ecology perspective, scholars have predominantly concentrated on illustrating how social power dynamics contribute to class disparities and community-wide infrastructure deficiency within cities (Swyngedouw 1996; 2004; Bakker 2003; Monstadt 2009; Cantor 2021).

While the field has made significant contributions to the understanding of human-environment geography and raised questions about inequality, justice, and poverty in urban contexts, it was criticized for being predominantly influenced by Marxist analysis of capital accumulation and focuses on material flows and processes that shape the city (Lawhon, Ernstson, and Silver 2014, 497). Critiques argue for a more heterogenous UPE, which incorporates a post-structural approach of knowledge and practice (Lawhon, Ernstson, and Silver 2014, 498) Emphasising how UPE's focus on "metabolism and circulation" has resulted in its discourses being overly focused on infrastructures (Lawhon, Ernstson, and

Silver 2014, 501). This narrow theoretical lens limits its ability to fully grasp the socio-material construction of urban environments, particularly in the global south, where infrastructure might often be more ephimerous (Lawhon, Ernstson, and Silver 2014, 506; Kimari 2023).

In line with these notions, scholars expanded early theorisations of UPE by including racialized, postcolonial, feminist and indigenous perspectives (Heynen 2016, 839; Cornea 2019), this implied the adoption of a more post structuralist approach to analyse power dynamics (Cornea 2019). A base these explorations has been Escobar's (1996) on the construction of nature. His work explores the development of a post-structuralist political ecology and its analysis of the relationships between society and nature, arguing that these relationships should not only be examined through the lens of political economy but also through the discourses and practices that shape people's understanding of nature (Escobar 1996).

Drawing on African urbanist literature, Lawhon, Ernstson, and Silver's (2014) work propose a situated engagement through everyday practices (p. 506) can reveal diffuse forms of power (p. 508), as it offers a 'bottom-up' understanding which can "stabilise a different view of the city" and therefore redirection theoretical production (p.507). In response to the heterogeneity of infrastructural configurations in the African context, their work draws from Simone's (2004) conceptualisation of "people as infrastructure" becomes useful to overcome UPE's conceptual gaps. Simone (2004) discusses how people in cities adapt to the lack of just urban infrastructure and fill the gaps created by it. He relates the notion of infrastructure directly to people's activities in the city as they reflect the "incessantly flexible, mobile, and provisional intersections of residents that operate without clearly delineated notions of how the city is to be inhabited and used" (Simone 2004, 407).

In line with this notion, Truelove (2011) claims feminist perspectives in political ecology can be valuable in comprehending the generation of "different scales of analysis" (p. 145). These perspectives reveal the interconnections between daily routines and the construction of scales such as the individual's body, household, and the larger city, which can reveal further links to power and inequality beyond Swyngedouw's access and control (Truelove 2011, 144). Furthermore, Robin and Castán Broto (2021) argue that a situated analysis focused on different scales can redefine other categories beyond infrastructures, such as "finance" and "politics" (2021, 874).

Scholars further pushed UPE's limits of scale by arguing for an embodied analysis (Doshi 2017; Sultana 2020; 2011; Nightingale 2011). Sultana's (2011) explorations of the 'emotional geographies' of resource access, use and control highlight the way 'socio natures' are influenced by emotions and embodied subjectivities (Sultana 2011, 171; Cornea 2019). In line with these theorisations, Doshi (2017) proposes five directions in which embodied political ecologies can be furthered, those being an understanding of metabolism as embodied politics (p. 126), an analysis of how the dynamics of power are socially reproduced (p.126), (3) how intersectionality blurs the boundaries between gender (p.126), race and class, the relation between 'visceral experiences' and sociomaterial configurations (p.126), and the contradictory logics within embodied experienes (p. 127).

An embodied analysis also reveals the relevance of intersectionalities in relation to urban citizenship, for example, as Sultana (2020) states that claiming acces to water extends beyond physical necessity; encompassing a simbolic aspect, and representing a socially constructed sense of belonging and urban citizenship (Sultana 2020, 1409). Furthermore, Nightingale (2011) explores how these "simbolic meanings" are reproduced through everyday activities, extending embodied differences into space. These are only a few of the extensive research carried with an urban and feminist political ecology focus (Heynen 2018; Cornea 2019; Gandy 2022), which have incorporated critiques of patriarchy and gendered power relations, furthering analysis of scale through embodied experiences (Heynen 2018; Cornea 2019), which is of particular relevance to the present research.

UPE for a climate emergency

Based on the aspects mentioned above, UPE has extensively developed research focused on climate change (ref. to Kaika et al. 2023; Goldman, Turner, and Daly 2018; Tschakert 2012). In this section, I will mention a brief review of later discussions pertaining the field and introduce particular works and concepts which have been useful in understanding fluidity as a way of living with an everchanging environment in Puerto Elsa.

In an exploration of the potential of UPE to contribute to climate debates, scholars have recently argued for a need to focus on three particular aspects (Kaika et al. 2023): the expansion of urbanisation boundaries (p.6), further engagement with situated urban political ecologies (p. 12) and the consideration of more-than-human perspectives (p. 15).

The expansion of UPE's conceptual boundaries is explored by scholars through new ways of understanding the urban beyond the "urbanisation of nature" through the concept of

"extended urbanisation" (Kaika et al. 2023, 6), which refers to a global process which encompasses various forms of spatial and demographic growth, including diverse and often "contradictory" socio-economic dynamics (Johnson et. Al., 2018; Lawton 2019 in Kaika et. Al. 2023, p. 7), capturing the complex layering of growth, decline, and diverse urban forms across different geographies and economies (Taninis, 2020 in Kaika et. Al 2023, 7). The authors highlight this concept's potential of extending current understandings of marginality and challenge sustainability policy frameworks of urban centres (Kaika et al. 2023, 10).

The search for conceptual and empirical reorientation of UPE that 'mobilises a global south perspective' (Kaika et al. 2023, 12) in the context of climate is carried with an FPE orientation, with the notions mentioned in the previous section. Nightingale (2023) criticises the tendency of climate policies of treating social exclusions as mere side effects of climate change (p. 144), while she argues that in fact the knowledge politics involved in adaptation efforts actively shape and are shaped by these exclusions (p. 146). Nightingale (2023) demonstrates how intersectional social relations can determine decisions over who benefits from adaptation projects (p. 151), mentioning that "climate adaptation comes to be constituted through particular everyday practices" (p. 146).

Another useful contribution for this thesis has been the piece "Nairobi's bad natures", by Kimari (2023). Based on Mathare, Nairobi, she discusses how certain neglected urban spaces and the population inhabiting these areas are perceived and treated as "less" within the broader context of urban governance and societal attitudes (p. 161). She refers to these places "bad natures", explaining how Mathare is a product of material and immaterial colonial logics which generate "ecologies of exclusion" (Kimari 2023, 166).

Additionally, a noteworthy exploration of infrastructures has been done based on case studies situated in Kampala and South Africa, where Lawhon, Makina and Nakyagaba (2023), argue that the "modern" infrastructure ideal, has frequently resulted in social and ecological injustices by not adequately considering the heterogeneous realities of urban life (p. 191). They therefore propose a "modest" approach to infrastructure (p. 189): one that incorporates an understanding of the varied ways in which people actually use and maintain infrastructure (p.199), as the "modern", often associated with financial subsidies for infrastructure in lower-income areas, perpetuates social and ecological injustices (p. 187).

While many other works are also relevant in this context (ref. to Kaika et al. 2023), these works have been instrumental in the analytical process of this thesis, providing a rich conceptual frame for further explorations.

Situating theory

To mobilise the theoretical range introduced above to the local context of my research, some key concepts from complementary fields were incorporated.

Adaptation research

Mc Evoy et. Al (2013) have discussed the importance of clear adaptation frameworks, as it is decisive in knowledge production, as it influences "agendas, policy development and implementation" (p. 282). Additionally, they discuss how a resilience is being incorporated "as a part of the adaptation discourse" through a diverse range of academic and policy actors (p. 280), resulting in varied ontologies of resilience which could be applied to adaptation (p. 286). This way, the authors (2013) mention three main characteristics of resilience pertinent to adaptation research: "(1) Resilience as a response to disturbance, (2) as a system's capacity to self-organise, (3) as the capacity to learn and adapt" (p. 286). These notions are relevant as they informed my initial understanding of climate adaptation.

On a complementary perspective, Nightingale (2016) argues for a methodological plurality to capture the complexities of climate adaptation (p. 46) as a "socioecological process", where changes are seen both in the material and discursive realms (p. 43). In her work, through an example of Nepal, she explains how, not "assuming the biophysical dimensions of climate change shape human responses limits what can be know about possibilities of adaptation" (p. 46).

Similarly, drawing on critical adaptation research, Castro and Sen (2022) propose a conceptual expansion of adaptation to encompass the everyday (p. 2), which can allow an analysis of socioecological vulnerability (p. 3).

> Our theorization of everyday adaptation looks at adaptation as a set of decision-making processes and behavioural modifications rather than focusing on how policies move from international and national levels through local institutions. (Castro and Sen 2022, 3)

This way, they turn to "hyperlocal practices to explain macro-level shifts" (Castro and Sen 2022, 4), providing a framework to bridge both scales. With this aim, they propose four logics for analysing everyday adaptation: (1) lifestyle stability (p. 5), (2) socioecological

reactivity (p.5), (3) livelihood flexibility (p. 6), and (4) community capacity (p. 6). While their framework was not applied in this work, their logics for understanding adaptation in the hyperlocal scale were useful as an initial point of analysis.

More than practices of the everyday

A guiding concept of this work, which situated this analysis in the local context, is the chapter "¿Quién da voz al Río? Inundaciones y conflictos socioambientales en Asunción, Paraguay", by Rivarola (2023). There, he used the term "fluid lifestyle" to describe the experiences of Bañadense communities regarding seasonal flooding in Asunción (p. 229). With the aim of problematising the Paraguayan state's stance of "giving a voice to the river" by negating the occupation of estuaries (p. 233), he analyses the constant relocation in the Bañados as a way of challenging conventional notions of human-environment dynamics and urban life (p. 238). Based on his ethnographic research, the author states "Bañadenses live a 'fluid' life, one that is unsettled and volatile but that is also incredibly flexible and adaptive" (p. 236). He describes this life as a reciprocal interaction with the river (p. 238), which involves constant movement (p.225), renovation (p. 229) and water-mediated social relations (p. 227), while also emphasising the economic and emotional challenges consequent to the inherent uncertainty and instability (p.230). These notions have proven to be very pertinent to Puerto Elsa, as they encompass several aspects of its environment, becoming an analytical starting point in my own work.

Finally, inspired by UPC's encouragement for the exploration of diverse ways of understanding space and considering Rivarola's notions of fluidity, I found Steinberg and Peter's (2015) work useful to push my spatial analysis. The authors present the ocean as an ideal model for exploring volumetric thinking due to its inherent properties: depth, constant motion, and materiality (Steinberg and Peters 2015, 252). The ocean's volume is analysed as more than physical space, as a dynamic and ever-changing environment, turning into both a metaphor and a tool for rethinking geography and social theory (Steinberg and Peters 2015, 252). The authors argue that the ocean should not be seen as

> a space of discrete points between which objects move but rather as a dynamic environment of flows and continual re-composition where, because there is no static background, 'place' can be understood only in the context of mobility (Steinberg and Peters 2015, 252)

They argue for the consideration of volume as an analytical framework (Steinberg and Peters 2015, p. 251), which enables and complicates the theoretical construction of space in

their analysis of fluid cities (p. 251). Thinking about volumes allows an exploration of how "matter changes its physical state as it moves through and simultaneously constructs, both space and time" (Steinberg and Peters 2015, p. 252). In this way, space and people come into being by their interaction. In this sense, Ingold's (Ingold 2000) expansion of Heidegger's conceptualisation of dwelling provided a useful framework to understand how space and people are mutually constitutive. Which led me to a further exploration of how climate adaptation can become more than a set of practices if seen through a fluid lens.

Researching in a fluid environment

In many ways, researching about *fluid* ways of living implied a *fluid* way of conducting research. I had to embrace dynamism and change in most aspects of the research process and invest time in building close social connections to produce research appropriate to the context.

Concerned with the daily experiences of living in a fluid environment, this paper is based on academic research focused on Puertoelseños and the city of Puerto Elsa, which I conducted during a total of 14 weeks split between 2023 and 2024.

It follows a qualitative approach, using in-depth interviews as the primary method of data collection. Participants in this study include current residents of Puerto Elsa, Puertoelseños living in Clorinda, political representatives of Puerto Elsa, residents of other cities within the metropolitan area of Asunción who commute daily to work in Puerto Elsa, and Asuncenos who regularly frequent Puerto Elsa for commercial purposes. This has been complemented with secondary sources, which include virtual ethnography and document analysis.

Data collection process

This research process started with a detailed analysis of the Paraguay river's daily height measuring data, using information from the Dirección Nacional de Meteorología y Clima (DINAC/ National directory of climate and meteorology) available online. This allowed me to estimate the periods where the river would be at its highest, which was an influencing factor when planning my data collection schedule. My projections aligned with the general period of seasonal floods, which is estimated around April (Correia 2022, 1895; Ministerio del Interior del Paraguay 2010).

As Gupta (2014) stated: "The most important point here is that the field is not a given space that the fieldworker walks into. Rather, it is constituted by the network of connections and linkages forged in doing fieldwork" (Gupta 2014, 399). In this sense, building trust was essential for the research process. Having engaged with Puerto Elsa on an academic setting three times before (2016, 2017, 2020) facilitated my initial approach to the field, as I had already built superficial connections. Nonetheless, I decided to split my data collection in two

periods, which would allow me to (re)familiarise myself with the environment and establish new and further connections before engaging on in-depth interviews.

Another influencing factor for the selection of the specific dates was a search for a multiplicity of experiences within the aforementioned conditions of high waters. December and early January are considered to be two of the busiest months in Puerto Elsa, given they are the 'festive months', encompass the local summer break and are the times where employees receive their *aguinaldo*[5]. As Puerto Elsa is a mostly commercial city, these factors directly influence urban dynamics, as people from the region increasingly visit Puerto Elsa to carry their end of year shopping, making this the 'high season'.

In contrast, the second part of my data collection process was carried between the months of March and May. This is considered to be a 'slow' period in Puerto Elsa, as it is part of the seasonal floods driven by summer thunderstorms (Correia 2022, 1896), resulting in less commercial activity (INT: Soraida 2024).

In sum, separating my fieldwork in two segments allowed me, firstly, to have more time to build a trusting relationship with locals and secondly, to be present during the two expected highest periods of the Paraguay River, while experiencing the city in contrasting urban dynamics.

Primary sources

As analysing a fluid way of life relates to everyday actions, it was a crucial factor to consider from a methodological perspective. Pink (2012) notes in her book about researching everyday practices that "to understand everyday life as both a source of activism and change, […] we need to comprehend it from within – rather than by seeking to extract data about it to analyse somewhere else, to read it as if it were text or to try to read it from texts." (p. 12). In accordance with her argument about the need for involvement in research focused on the 'everyday', this research has been carried mainly through the use of ethnographic methods (both physical and virtual), which include in-depth interviews, oral histories and participant observation.

In the context of urban flooding, ethnography, particularly through the use of oral histories, plays an essential role in amplifying the voices of affected communities often side-lined in political discussions focused primarily on environmental aspects (Anderson and Jack

[5] The *Aguinaldo* is a mandatory end-of-year bonus consisting of the equivalent of a monthly salary.

2003). By capturing these communities' lived experiences, both past and present, and viewpoints, ethnography bridges the gap between academic discourse and the realities of those directly impacted by flooding (Harvey and Myers 1995).

In the process of setting up interviews, I came to notice one challenge was trying to shape the interview as a one-on-one conversation where both parties were fully engaged through the progression of the interview. As I will further discuss in the following chapters of this thesis, Puertoelseños have very dynamic routines, which involve constant movement. Part of this dynamic is given by the fact that most are engaged in commercial activities throughout the day, reason why setting meetings at specific times was a complicated process.

"Just come by during the week", or "You should talk to […], just go to their house sometime and knock on the door, its right down the street" were common answers I got. 'Just knocking' on people's doors resulted in a lot of waiting time and unsuccessful meetings, as the immediateness of daily life kept locals to be in constant movement. This also reflected the local preference for spontaneity and a general scepticism towards what they perceive as formality.

Therefore, I adapted my approach requesting to join locals in their daily activities, which proved to be a more appropriate approach. This mostly implied sitting with them behind the counter of the shops where they worked, which gave me the opportunity to have in-depth conversations without disrupting their schedule, while simultaneously being an active participant of their activities.

In this way, part of the research process was relatively spontaneous, combining emergent sample selection with pre-organized interviews. The interviews were conducted in two or more rounds to establish a comfortable environment. Initially, unstructured interviews were conducted to build familiarity and gain an understanding of the participants' experiences. Based on this initial step, semi-structured interviews were tailored to each participant's profile, with open-ended questions to elicit ample and genuine responses.

Something I considered to have been a crucial element during interviews, was sharing the local practice of drinking *tereré* together, a local habit consisting of sharing a cup filled with *yerba mate* and cold water, drank from a straw. Having grown up in Paraguay, I was familiar with the local customs and subliminal meaning of certain practices. While *tereré* is a popular drink across the country, it has a very social nature. It is usually present among groups of friends and social gatherings. In this context, being offered to sit and share a *tereré*

indicated me that my interviewees were comfortable with my presence and the idea of a long, relaxed conversation. Furthermore, the presence of *tereré* in our conversations occasionally acted as an invitation for others to join.

Another important aspect of the research process was a constant readaptation of my questions and focus. One of the things I noticed was how questions about certain terms or themes would be redirected towards tangent topics. While most of the questions were answered, this indicated a need for more flexible frameworks informing my understandings. In this way, the process of conducting oral histories was crucial as it allowed me to get certain types of information that can only be conveyed through oral means, as many topics were understood in an experiential context.

Another way in which I engaged with locals was participating on social activities. After gaining certain familiarity, I was invited to social weekly social gatherings within some members of the community at their homes. These meetings gave me further insights into the social and urban dynamics of the community, as well as some material aspects of their lives. In this way, researching about fluid ways of living implied I had to maintain flexibles timeframes and expect last minute changes.

Secondary sources

As my time in the field was limited, I focused on building deeper social connections which would allow me to extend my contact through distance. This sort of 'digital ethnography' (Pink 2012, 125; Pink and Morgan 2013, 353) allowed locals to share pictures, updates of their experiences, memories, videos and internet links, which contributed to furthering the data set.

Furthermore, by accessing their social media profiles I was constantly updated on their routines and thoughts. Through these platforms, I found out one interviewee in particular shared musical compositions he wrote and performed, which covered varied topics related to his struggles and self-perception. Another interviewee had a blog, where he used to post entries explaining life in Puerto Elsa and historical facts about the place. These different sources allowed not only for a more nuanced understanding of their individual relation to their environment but for an exploration of how adaptation extends beyond physical realms.

Finally, complementing ethnographic methods, archival research involving historical records, policy documents and newspaper articles constitutes a relevant aspect of the research. It is important to acknowledge how the limited academic sources available related to the context required me to expand my selection of sources to include newspaper articles to supplement the primary data. These were selected based on their credibility and relevance. These varied sources facilitated the examination of the socio-political landscape and historical underpinnings of Puerto Elsa, offering useful information of relevant policies, events and societal constructs that shape people's lives and behaviour.

Data analysis

As most interviews were recorded, the transcription process was mixed. Initially, I transcribed them manually a few days after the interview. Closer to the last month on the field, I switched to an online transcription platform (Turboscribe) which uses artificial intelligence to speed the process. As the transcriptions were not fully accurate, some with considerable variations due to audio quality and local expressions apparently exceeding the platform's knowledge of the language, I listened and edited each of them, building on the base provided by the platform.

The interviews were manually categorised according to topics and key words I found in common. The key words and expressions are as follow:

- "Tranquilidad" // "Tranquility"
- "Acá podés hacer de todo" // "Here you can do anything"
- "El puertoelseño es guapo" // "The people of Puerto Elsa are hardworking"
- "El puertoelseño es sufrido" // "The people of Puerto Elsa are long-suffering/resilient"
- "Nos conocemos entre todos" // "We all know each other"
- "Nosotros vivimos con Clorinda" // "We live with Clorinda"
- "me acostumbré" // "I got used to it"
- "[Puerto Elsa] Es una ciudad normal" // "[Puerto Elsa] is a normal city"

The codes were "Materiality", "Temporality", "Maintenance", "Way of living", "Emotional duality of flooding", "Self-perception", "Work", "Space", "Opportunities", "politics", "injustice", "expressions" and "relation to the river".

Ethics and positionality

Having grown up as a foreigner in Paraguay, I often stand in a grey zone between being considered a 'local' and an 'outsider', even in Asunción. When researching in Puerto Elsa, while people have a general sense of easiness as they perceive the regional accent and way of communicating, I still have to be mindful of my privileged background in context. Growing up in Asuncion, being able to access higher education and living abroad are factors which influence both my own as well as other people's perception of me and the power dynamics within our interactions.

I offered a thorough explanation of this research project, ensuring interviewees were fully aware of the aim of our interactions and how I would use their data, while also requesting their permission for recording some of our conversations. Conversations during social gatherings were not recorded, as it would change the dynamics of the events. I was also granted permission to use their names, however, as some topics can have social or political implications, I limited myself to using their first names on this document, as a way to protect their privacy.

In sum, researching the fluid ways of living in Puerto Elsa required embracing dynamism and flexibility, adjusting timeframes, and anticipating last-minute changes. Building trusting relationships was crucial, necessitating significant time investment. The methodology combined ethnography, participant observation, in-depth interviews, virtual ethnography, and document analysis to capture the complexities of everyday life in this environment.

Section I: A fluid way of life

A way of living

"The flooding of Puerto Elsa has always been a headache," said Richard (INT:2024), shrugging. Like every resident of Puerto Elsa, I had the chance to talk to, he was well-acquainted with the idea of water covering the city, with memories of living together with the water going back to his childhood years. As Richard's apathy indicated, while water in Puerto Elsa has been part of the region's environment for as long as locals can recall, it does not cease to be an issue for both the city's inhabitants and governing institutions (INT: Claudio 2024).

This duality, which makes urban flooding in Puerto Elsa a contentious topic in the Paraguayan context, served as the foundation of this research project. Interested in exploring Puerto Elsa's urban dynamics in relation to flooding from the lived experiences of urban dwellers, I initially intended to analyse the adaptation mechanisms' employed by residents of Puerto Elsa as a response to frequent flooding in the area.

As it soon became evident during my fieldwork and to my surprise, locals do not identify their approach to 'flooding' as a form of adaptation. As Victor explained: "There is now, how do I put this? Nothing we do… no preparation for the future like that… we live ready" (INT: Victor 2024). Similarly, after my inquiry regarding her approaches to dealing with flood events, Soraida further explained: "The *crecida* is a part of my life, my routine… because, you see, it is cyclical. So, it can come at any moment. Who can stop nature?" (INT: Soraida 2024). As in the previous examples, questions of immediate responses and preparations for the future related to flooding were answered either as non-existent or as "part of their lives and routines", therefore, not understood by them as climate adaptation efforts.

While previous work in the field already informed me of the existence of several practices that fit my criteria, the apparent disconnection between my own understanding of what "practices of flooding adaptation" are and the self-perceived notions of Puertoelseños' lived experiences led me to question the limits of my own framework. What practices, and ways of living, were being excluded by it? In this way, my exploration of urban dynamics of climate vulnerability turned towards their ways of living in this environment.

A fluid way of living

As I will attempt to illustrate in the following chapters, life in Puerto Elsa is mainly characterised by movement, interconnectedness, and constant change. It can be understood through Rivarola's (2024) description of a 'fluid lifestyle' when discussing water-mediated urban dynamics of the Bañados communities:

> By moving back and forward, following the seasonal course of the river, the Bañadense communities challenge the dualism of land and water. This is what I refer to as 'fluid lifestyle.' However, the Bañadenses' way of living also responds to what Di Baldassarre et al. (2013) have argued as 'complex interactions between water and human systems [taking] place in floodplains' (p. 3237). That is, life in the Bañados takes place as a form of human-water system in which environmental factors, like flooding, are not seen as entirely disruptive but as part of the complexities of life lived by the riverbanks. (Rivarola 2023, 229)

By framing the approach of the Bañadense community in relation to the river and sociopolitical environment, emphasising how the flexibility and adaptiveness of their lives defies current notions of urban life, Rivarola's (2023, 238) conceptualisation is useful for understanding Puertoelseños' way of relating to their hybrid environment. His conceptualisation of a "fluid lifestyle" extensively describes many complexities of life in Puerto Elsa, particularly the rhythm of movement between nature and humans (Rivarola 2023, 225), the economic challenges (p. 230), the uncertainty amid constant relocation and the political origin of climate vulnerability (p.230). However, many structural aspects of it remain unexplored. Furthermore, the focus of the fluidity in the Bañados on housing dynamics (Rivarola 2023, 236), the periodicity of water cycles (p. 222) and their appreciation for the river as a natural element (p. 227) does not fully align with the experience of Puertoelseños.

Understanding cultural territorializations "as complex and contingent results of ongoing historical and political processes" (*Culture, Power, Place: Explorations in Critical Anthropology* 1997, 4), it becomes essential to analyse the influence of the specific sociopolitical context of the Bañados on the way of living fluidly described by Rivarola (2023). As his research directly addresses the debate over the "ownership" of the Bañados and the validity of its community's way of inhabiting it, land ownership is a fundamental factor in its sociopolitical dynamics (Rivarola 2023). It highly influences people's perceptions and the state's responses (Rivarola 2023, 234–35), making flooding "a political conflict, not an environmental one" (p. 233).

While Puertoelseños, similarly to Bañadenses, find themselves in constant conflict with the central government as a result of their way of living fluidly, and root their climatic vulnerability in sociopolitical struggles, these struggles are not centred around land ownership. Furthermore, Puerto Elsa's condition of a peripheral, border city surrounded by rivers provides its residents with the setting to live fluidity beyond seasonal housing relocation. As I will argue in the following chapters, fluidity is present in all aspects of the lives of Puertoelseños, beyond times of high waters.

Fluid Lifeworlds

Shifting the conversation to narratives of their routines and everyday lives, water became evident everywhere, revealing an experientially grounded understanding of it. In this way, *crecidas* are part of Puertoelseños' lifeworld[6] (Buttimer 1976, 281). Victor's quote, mentioned in the previous section (p. 28), regarding how they "live ready" for flooding (INT: Victor 2024), reveals how the notion of water and climate vulnerability permeates every aspect of their lives at all times, making fluidity a multidimensional aspect of their everyday lives. Therefore, relating certain aspects of their way of living solely to 'flooding' would imply "decontextualising" and, therefore, flattening their lived experiences with water.

In most of the interviews with Puertoelseños, they actively acknowledged how "living in this place requires this way of living". "I got used to the system, to this way of being", stated María (2024), while explaining how the constant movement, change and uncertainty related to sharing space with the river is not an option in the city. Analysing the fluid way of living in Puerto Elsa as a result of "mutually constitutive relation" with their environment (ref. to Zeiderman 2019, 180; Escobar 1996; Ingold 2000), their personal preference in this matter is not central. As it was constantly stated during conversations with locals, life in Puerto Elsa is not easy. As mutually constitutive, fluidity cannot be separated from climate vulnerability.

Thus, exploring the fluidity in Puerto Elsa as a multidimensional, all-encompassing way of living presents an opportunity to think about adaptation from a different perspective. During my ethnographic fieldwork, I identified three particular aspects to be structural in the

[6] The concept I refer to is used by Buttimer (1976) based on Husserl's notion of Lebenswelt: "Broadly speaking, Lebenswelt could be defined as the 'all-encompassing horizon of our individual and collective lives.' In everyday life, one does not reflect upon, or critically examine, such horizons: the notion of lifeworld connotes essentially the pre-reflective, taken-for-granted dimensions of experience, the unquestioned meanings, and routinised determinants of behaviour." (p.281)

fluid way of living in Puerto Elsa: fluidity as multitemporal, fluidity through space and an embodied fluidity. I found these aspects, which will be explored in the following chapters, to be valuable in exploring and understanding fluid ways of living beyond traditional or rigid climate adaptation frameworks.

Raising your things

> The place here in Puerto Elsa is… how do I explain it? It's *un chisme* (a gossip). Let's say people tell you, 'So-and-so, the water is coming,' so then they start raising their things, building two-story houses so they don't get caught. It's a warning that people give you, 'Store your things well in Puerto Elsa because the river is there,' 'Raise your things', and then we start moving. This past year [2023] the water was supposed to come, and we were about to raise all our things… And that's how we move everything to the second floor until the water goes down (Richard, 2024)

"I just raise my things" has been the answer in most of my interviews to any question regarding their 'modus operandi' when the "*crecida* comes". During our conversation, Richard (2024) continuously emphasised the importance of raising his belongings, showing me the water stains from the last flood, still present on his walls, almost reaching his own height. While the need to care for one's belongings amidst the risk of "everything being ruined" (Richard, 2024) is imminent, the *chisme*'s emphasis on "lifting one's things" goes beyond the material risk. His quote above, brings depth into what seems to be a straightforward process, as he refers both to immediate actions and long-term processes.

As I have come to learn, through many other stories similar to Richard's, *raising your things* in Puerto Elsa is a multitemporal process; it involves a consideration of both permanent and immediate dynamics. To explore this process, firstly, this chapter will begin by introducing the uncertain dynamics of the Paraguay river cycle, followed by an analysis of their permanent state of readiness, concluding with the immediate nature of fluidity in relation to climate in their lives.

Periodicity and Calculated uncertainty

> "And normally, these days, because of the existing mechanisms, one is already preparing when there is *crecida*. It happened to us after, I think, 15 years; the *crecida* returned to our city. And the only thing I can tell you is that I lived it very, very closely. And why is that? We know, the locals know, we are used to it. But you would not think the same. Looking at the city, for example, as it is now, in times of drought, when you can see the river is practically dry, you might say that it is going to take a long time for it to get filled with water. But no. I mean, at a certain point, the water rose one meter per day. In 22 days, the city was completely covered." (Interview: Claudio Samaniego, 2024)

Time is always present in conversations about life in Puerto Elsa. When talking about the future, people often organise themselves based on predicted cycles. These cycles dictate each person's organisational system from the background of their mind. Of course, this is no surprise, considering the height of water levels of the Paraguay River has historically been

influencing the rhythm in Puerto Elsa for many years[7]. “It was cyclical, it was cyclical until ’98,” stressed Evelyn. “It used to be a lot more cyclical than now. Every four years, boom. So, people migrated to Argentina, to Clorinda, some to Asunción, Falcon, and so on” (Interview: Evelyn, 2024). However, when considering recent crecida, the regularity in the river’s cycles appears to have been lost (INT: Evelyn 2024; INT: Richard 2024; INT: Soraida 2024; INT: Claudio 2024).

Currently, there is no common agreement on the timeframe of the river cycle. This becomes clear when discussing the future, as some argue that water comes every 3 years, while others say it comes every 5 years. Many consider amounts around or between those figures to organize their lives and plans. Most importantly, an uncertainty margin is central in those estimations. When Richard (2024) explained how he maintains his house, he used an approximate timeframe to justify and organize his decisions:

> [*la crecida*] comes here, *ponele*, every 3 or 4 years, sweeps away…takes everything and then goes down again. And as my house stays underwater, I have to come and clean everything, repaint everything… One has to save [money] for that, it takes time (Richard, 2024).

In this quote, as throughout our conversation, he constantly used the expression “ponele”, when discussing the periodicity of the river. This Rio Platense expression is key to understanding the local temporal dynamics of the river; it is a casual term used to explain approximations while emphasising an acceptance of inaccuracy. While explaining that there is a certain regularity in how often the water covers Puerto Elsa, Richard not only estimates a rhythm to which he adjusts but also acknowledges the probability of imprecision in his own approximations. On a different occasion, upon being questioned about his preparations for the *crecida*, he elaborated further into how he mobilises his estimated timeframe considering uncertainty:

> It is about to be four years since the last crecida. Even COVID has already come. And *ponele* every 5 years [water] comes, so we could say there’s still one year left. Because here we have that notion that every 5 years it comes, so we are already calculating. Some, with that, will get mentally prepared and wait for that year to pass, and if [water] doesn’t come that year, then it doesn’t come. (Richard, 2024)

Considering the uncertainty posed by the climate in Puerto Elsa, one could wrongly assume its unpredictability shapes a lifestyle lacking structure. However, the frequent

[7] Refer to Context, p. 9 of this document.

mention of timeframes suggests the opposite. A fluid lifestyle in Puerto Elsa, therefore, involves considering timeframes as approximations and organizing oneself for the different variations of that timeframe. This realization made me wonder: how is this timeframe translated at an institutional level, considering how these structures are often more static due to bureaucracy?

Victor, an employee of the Puerto Elsa Municipality who has worked in the emergency aid department for more than 10 years, clarified that the Puerto Elsa Municipality considers the timeframe recommended by the central government's emergency department:

> It is every 10 years one has to prepare for big floods. That's what people from the emergency secretariat usually tell us when we used to have meetings with them... when we requested stuff... like these materials and things for the people. (Victor, 2024)

"That's what we take into account; it's every 10 years now," he finished. The gap between the municipality's consideration of 10 years and the people's estimations of 3 to 5 years accentuates the local disagreement on a single timeframe for water-related planning. Furthermore, it also reflects the influence of external dynamics on how time is considered in this case. As Victor mentioned, in the case of "flooding," the Puerto Elsa municipality often seeks assistance from the National Secretariat of Emergency (SEN). This reliance on external assistance raises questions about the political influence of the central government on Puerto Elsa's municipal capacities and, as a result, the impact on how people in Puerto Elsa experience water[8].

In essence, while the climatic uncertainty in Puerto Elsa might seem to lead to a lifestyle with a disorganised temporal structure, this section has demonstrated that this is not the case of Puertoelseños. While consideration of water's periodicity gives them a sense of order in this dynamic environment and allows them to prepare economically and mentally for the challenges related to the *crecida*, irregularity is still anticipated. As a result, a fluid way of life in Puerto Elsa involves considering timeframes as approximations and organising oneself for the different variations of that timeframe.

[8] The role of the government and external aid in this context will be explored in greater detail in further chapters, as this section's focus is limited to the dynamism of timeframes considered in the daily lives of Puertoelseños.

The next sections of this chapter will illustrate two aspects of how they live with climate uncertainty through the multitemporal process of 'raising their things', which implies a permanent state of readiness and last-minute action.

Permanent readiness

Ña Cabrera clarified that water is something people are always talking about, "It was said that the *crecida* was going to come. And *even today*, they say the *crecida* is coming. But thank God, nothing yet. [...] (Interview: Ña Cabrera, 2024). Her emphasis on the current notices becomes key as the river was at a historically low mark at the time that the interview took place, making it highly unlikely to be of any risk. Nonetheless, the possibility of a flood was still present in daily conversations among locals. *El chisme* plays an intrinsic part in the process of raising one's things. Most of the stories I heard in Puerto Elsa about dealing with water started with *chisme*. "And it's said word of mouth. I mean, throughout the neighbourhood. You see, there's gossip there: 'They say the water is coming.' And then that spreads everywhere" (Interview: Ña Cabrera, 2024). However, *el chisme* is not limited to a set of occasional warnings set off by environmental changes; it is a permanent state of collective awareness and support through a large network of communication.

This state of permanent awareness is part of everyday life in Puerto Elsa, both individually and collectively. "I already have all my things upstairs, and I keep myself mostly upstairs," explained María. "People are prepared if the water comes... just in case, suddenly..." (Interview: Maria, 2024). Maria's way of organising her things in her home corresponds with the goal of most of Puertoelseños. Similarly, Victor mentioned the main notion he learnt from past experiences with the crecida to be the importance of having a two-storey house and keeping his things upstairs (interview: Victor, 2024).

However, the cost of building such type of structures is not minor. For many as Richard, who resides in a single-level home in a low-lying area of the Quinta neighbourhood, the best option is to distribute his belongings between his mother's two-story house in Puerto Elsa and another relative's residence in Clorinda:

> I already take my things before and stay with the bare minimum, with my bed, which is easy to lift and transport. Besides that, I take everything, my refrigerator, my stove, everything, there. And if [water] reaches me, I'll call a truck, load everything and take it to Clorinda. (Richard, 2024)

Richard continued to tell me proudly that he was able to get a foldable bed, which made the moving process considerably easier for him. “I can’t have one of those big, nice wardrobes full of things,” he emphasises, “I have to live light, you know?”. (Interview: Richard, 2024).

Soraida expanded on how this lightness is a part of the local routine:

> The *crecida* is like a routine for Puertoelseños. […] For example, our wardrobes in the lower areas are 6 meters long: a cord hanging from one wall to the other. That way, you just roll it, put it away and you don’t have any drama. Understand? In other words, everything we have on the ground floor is light. So, you move upstairs, take your hangers and a folding bed and relocate to the other side [Clorinda]. Some small stoves, and you’re set. (Soraida, 2024)

The permanent attention to water in their choices is identified as part of the local lifestyle. In this way, “raising one’s things” is not a single event at a precise time; it also encompasses multiple decisions throughout the years, which allows them to coexist with water. Furthermore, as in Richard’s case, the notion of raising one’s things is not limited to one’s residence. It is important to note that, as “raising one’s things” is a collective action to varying degrees, there is a consideration of the collective timeline and support in one’s efforts of “raising things”. Maria’s (2024) recounts of the market during high water periods further illustrate this point. For Puertoelseños, “raising their things” also involves setting elevated walkways, or “*tarimas*”, to protect one’s merchandise and continue working with water. She highlights how this wouldn’t be possible without the communal efforts:

> I spent several *crecidas* here [at the market] […] And yes, we were in the water; it reached about half of where I’m standing now [indicating the height of the walls of his shop]. We don’t leave; the ones who continue working stay here. And when you keep working, you get clever. You make *tarimas*... […] there are people who help with that. But we generally buy the wood and what’s needed to make them. We assemble them; we pay for them. […] And so, we continue working, but on top of the *tarimas*, until all the water goes down. (María, 2024)

She continued describing how this is an organised process where costs and labour are distributed: “There are people who take charge of organising the assembly of the tarimas,” she explained, “those who are a bit better positioned handle it, and we all collaborate. That’s how we all make the *tarimas* path together, and each one then stays in their shop.” (interview: Maria, 2024). It is important to note that, just as in their homes, the process of “raising one’s things”, besides being a collective effort, is also an ongoing process. As it will be explored in

further chapters, this continuous mutual assistance is essential for maintaining businesses and livelihoods during the high-water periods.

Until it reaches the door

> There are some [people] that, out of desperation, will lift their things in the first notice. Some will stay until the last very last moment, until [water] comes. If it comes, it comes, and they try to lift their things in that moment. But if not, ok… (Richard, 2024)

> We wait until it gets here, in my case, I wait for it to reach me. Before it goes up the last step of my porch, I will not move from there… something like that. (Victor, 2024)

Something that was repeated in every interview when discussing "raising one's things" was the decision to "wait until the last moment possible." Although, as discussed in the previous section, "raising one's things" is a continuous process which keeps locals in a constant state of motion, it simultaneously involves periods of stillness.

"Each of us prepares with anticipation. We live like in the times of Joseph in Egypt. Times of lean cows and fat cows. We must be waiting for those times of lean cows and be prepared" (Soraida, 2024). Like Soraida explained, preparation brings confidence in the face of anticipated stress, even though the exact timing is unknown. "That is why having a high house is a nice thing. That is to prepare and wait for it" (Ña Cabrera 2024). In this way, as Soraida and Ña Cabrera pointed out, waiting is also a result of preparation.

Furthermore, the idea of waiting is also related to the unpredictability of the environment, "we watched the water rise like crazy, really," explained Claudio, referring to the last crecida, "but it always gives you that time, right?" (Claudio, 2024). While noting that water can rise quickly, he clarifies the process is not sudden enough in the eyes of locals, to require immediate evacuation.

> And generally, we notice when the water starts to rise. It suddenly gives us two months, three months… In 2015, it was very quick. The water began to rise, and it began to engulf everything. It was something that, let's say, couldn't be foreseen at all. (INT: Lorenzo 2024)

The unpredictability Lorenzo describes influences residents to "wait and see", in hopes to avoid unnecessary expenses and efforts ahead of time. In this way, waiting is also a highly economical decision, "I personally, sort of, wait for water to come. You wait; you hope that it won't... Won't be as bad as they say, as people talk about, because, in the end, only God has the final say," explained Victor, "and that's how it works, we wait until the last moment. 'Until the water reaches the door', that's our motto..." (Victor, 2024)

It is important to note that certain factors such as having a two-story house, securing a place to stay in Clorinda, having a generator, having a boat, among others, influence individual decisions within a fluid way of living. Thus, the 'tolerance for wetness' is relative to each individual among Puertoelseños. Considering how intersectionalities have an influence on how each person experience climate change (Nightingale 2011; Sultana 2020), a deeper analysis into the intersectionalities of the fluid way of living in Puerto Elsa can reveal further insights on the dynamics of immediateness within the local context.

In sum, "waiting until the water reaches their door" means making final decisions based on real-time developments rather than estimations. The immediateness which dictates final decisions when it comes to water is not limited to this aspect, it permeates the daily rhythm of life in Puerto Elsa. "People get used to it," explained Claudio, referring to the local immediateness, "They make boats, and in one day, they finish a boat. Today, you go and pay, and you'll already have your own boat, your own car. It's like that with everything" (Claudio Samaniego, 2024).

The final aspect I wish to highlight about "waiting until water reaches the door" is the dynamism it involves. In Puerto Elsa, constant preparation is related to constant waiting. Waiting to save enough money to build a "tall house" or to buy a canoe, waiting for water to get there to relocate or to move one's things to higher ground, waiting for the "year of the crecida" to pass to repaint walls, waiting for one's children to finish the school period to so they return from Clorinda, waiting for the government's construction materials to relocate, waiting for the riverfront project to be put in motion… Waiting has been mentioned countless times in different contexts.

There are two sides of waiting which are particularly valuable when understanding the local rhythms of life. Firstly, waiting implies expectation, long-term vision and permanence. In other words, the wait of Puertoelseños reflects an order and positioning within their timeframe, making their way of engaging with the *crecida* not an irrational or improvised process. Secondly, waiting in Puerto Elsa is not a passive, static action. The waiting process in Puerto Elsa involves a dynamic, parallel action to support a greater goal. Cristina (2024), who works in a low-lying area, explained to me that many in the neighbourhood, who live on the ground floor, are constantly searching for places where they could temporarily relocate in case their homes are covered by water: "People are constantly walking around the city[9],

[9] It is interesting to note María's notion of "the city" beyond its imposed limits, as she later mentioned how these people's search radius also reaches Clorinda and Falcón, where many choose to relocate.

spotting empty land in the high areas while they wait for the crecida" (Cristina, 2024). Hence, the concept of waiting works within a flexible, dynamic conception of life.

Multitemporal

As it has been discussed throughout this chapter, in Puerto Elsa, people simultaneously live a dual temporality of a constant state of readiness paired with immediate decisions. In this way, when analysing fluid ways of living, a consideration of time beyond the eventual or long-term frames, as fluidity operates on both levels simultaneously, would allow more nuanced understandings of their daily decisions. These levels cannot be prioritised, nor are they mutually exclusive.

These findings bring the notion of time as another dimension for consideration within urban metabolic processes. Revealing a temporal notion which "time, as expressed through assembled matter, is nonlinear and fluctuating, and matter is mutable and leaky part of a process of ongoing reformation" (Steinberg and Peters 2015, 256).

It is important to note that while this chapter is centred around the temporal aspect of the practices of 'raising one's things' for the sake of conciseness, it is vital to keep in mind water cycles are just another component of this socionatural environment, therefore not the only component influencing this multitemporal dynamic (ref. to Goldman, Turner, and Daly 2018; Kaika et al. 2023).

In sum, a distinct notion of time structures the way the city is lived and the choices and expectations of its inhabitants in Puerto Elsa. This notion is often a central point of confusion and conflict, as it challenges outsider's notions of a "modern" (ref. to Lawhon, Makina, and Nakyagaba 2023, 189) urban life (INT: Claudio 2024). The way of living with water in Puerto Elsa, as analysed in this chapter, reveals fluidity as both produced by and an enabler of multiple simultaneous temporalities. These temporal layers may vary in duration and tempo; however, this does not impede them from coexisting in synchrony.

In this way, the two main points I argued throughout this chapter are: (1) Fluid lifestyles have individual, collective, permanent and immediate temporal layers simultaneously; (2) those layers do not have a linear progression; however, they are also not random.

Living in-between

Movement through volume

On one occasion, I was invited to participate in a weekly gathering at Soraida's house one late afternoon. As she directed me to her house, she advised, "I'll send you the location, but in case you get lost, keep going straight parallel to the river until you see the watermarks on the walls reach around your height, then turn right and at the end of the street […]" (Soraida, 2024). This was one of many occasions in which the watermarks on the walls had been referenced to situate us in the city. As I came to realize, watermarks in Puerto Elsa are more than a spatial reference; they are a visual representation of the city's relationship with water and orient residents through space and time.

When locals in Puerto Elsa talk about movement, they refer to it in a tri-dimensional space. In this sense, a consideration of fluids naturally implies thinking beyond a bi-dimensional field. In their work, Steinberg and Peters (2015) argue for a reimagination of space and place in geography and social theory by focusing on its vertical and three-dimensional aspects. Through 'Wet ontologies', they propose using the ocean's volume as a theoretical tool to view space as dynamic and fluid rather than static and fixed (Steinberg and Peters 2015). Considering Puerto Elsa to be a fluid, hybrid environment, this analytic framework can be used beyond the spatial realm of fluidity to explore Puertoelseños' way of living.

A volumetric analysis of space allows us to see movement as a permanent aspect of living in Puerto Elsa, as space, in this context, is not "a stable background, but a part of the unfolding" (Steinberg and Peters, 2015, 258). In this way, the city and their lives are not bound to a specific place. However, not being bound to a specific place does not mean that people do not feel an attachment to the city. They understand their attachment to the city as an attachment to the "fluid way of living" (the way of living in that specific place, what they call "a tranquil life".)

As I will argue throughout this chapter, an exploration of the volume in Puerto Elsa highlights three important aspects of a fluid way of life in relation to space: how they position themselves in the material and immaterial space through a notion of verticality, the complexities involved in movement, its intrinsic capacity for change, and the broader dynamics of pressure and permeability.

Vertical space

When telling me about past jobs, Richard (2024) recalled: “When I worked at the local casino, during the 2014 crecida, water reached around 7,5 meters high.”. “It was a tranquil time”, he mentioned, when explaining how the influx of customers was heavily influenced by the availability of transport (Richard 2024). Due to the casino’s location in a lower area, out of the pasarela’s reach, many relied on boats to get there. “Some people who had boats would tell you, ‘Well, I'm here until a certain time, so if you want, you can ride with me, or otherwise, you'll have to figure out how to leave with the water’” (Richard, 2024). In his case, his own height allowed him to carry more flexible schedules, as he was able walk to there “without any issues because, at its deepest, water only got to [his] chest” (Richard 2024).

Richard’s recollection of his time working at the casino, brings out two important points: firstly, constant movement there happens across heights, and secondly, when locals refer to their lives, often a notion of height helps them situates themselves in space and time. Furthermore, different heights such as the height of the river, the height of the places they frequent and their own position within these heights are structural in shaping their experiences, as they enable different behaviours and access to different places. In other words: how far, fast or when you move is relative to height. So is what you are able do. In this way, the notion of verticality in space influences the way people feel and behave.

> My house is prepared because I own land in a higher area. Here is the lowest area, right there, a hundred meters away, we have the lowest point. When the water rises, it reaches this neighbourhood first. And when that house down there is completely flooded, with water half a meter over its roof, my house only gets a little bit of water in the backyard. Imagine how high the land is. And if I have a house up there, my electricity cannot be cut off, you understand? But meanwhile, someone else is already much lower down. (Claudio 2024)

For many, such as Claudio, being positioned at a certain height allows them to secure access to urban infrastructure. Despite the danger of maintaining electricity in these circumstances, the position of his house influences authorities while making these kinds of decisions. In this way, height is also a measure of societal standing. Reaching a higher socioeconomic standing implies building a two-storey house; this is not only a necessity but also positions individuals in society. In this sense, analysing height in Puerto Elsa also means analysing hardship, privilege, and inequality, as height is a measure for practices which “contribute to an uneven making or urban waterscapes” (Rusca and Cleaver 2022, 11). While exploring the intersectionalities (ref. to Sultana 2011; Nightingale 2011; Sultana 2020;

Johnson, Parsons, and Fisher 2022, 1552) of height in the life of Puertoelseños is beyond the scope of the present thesis, it is essential to highlight the importance of its consideration in relation to volume and movement in a fluid context.

Furthermore, the relationship between water, infrastructure, space and climate vulnerability (ref. to Lawhon, Makina, and Nakyagaba 2023; Sultana 2020; Dajani and Mason 2018) is crucial when it comes to understanding a fluid way of living and will be explored in a further chapter of this research.

In sum, a volumetric consideration of life in Puerto Elsa is necessary when it comes to fluidity, as the vertical dimension is both the medium and configurator of movement. Building up on this notion, as I will showcase in the following two sections, an examination of fluidity as way of life through volume can provide valuable insights into its inner properties.

Constant movement

On one of my first days in Puerto Elsa, I was recommended to have a chat with Ña Cabrera. “She has lived it all”, a young shop seller explained, “she can tell you how things were even before”. As a born and raised Puertoelseña now in her seventies, she had experienced many floods throughout the years, making her a reference in the neighbourhood. When I enquired how to contact her, the answer was “just go to her house one of these days, you will find her there” (Richard 2024). As simple as it sounded, it took me weeks to finally get the chance to talk to her. I visited her residence many times, hoping to find her; however, her constant visits to Clorinda, Buenos Aires, and Asunción made it hard for me to find her casually. Upon meeting her, Ña Cabrera explained that her business and family life require constant movement. From weekly purchases of products from Argentina intended for resale in her own store in Puerto Elsa to visits to her granddaughter, who lives with her sister in Clorinda. Even in Puerto Elsa, she is still alternating between a street food stall, a minimarket, and a clothing shop that she and her sons own.

Ña Cabrera’s case is a good example of the dynamism in Puerto Elsa, where fluidity is related to multi-sited, interconnected lives marked by constant movement. If we analyse movement as the way the city comes into being and an inherent characteristic of fluidity (ref. Steinberg and Peters 2015), then, in this context, movement can also be considered the enabler of a fluid lifestyle (ref. Rivarola 2023; Steinberg and Peters 2015). While most of the

work in Puerto Elsa is directly related to Clorinda, the link between the two cities goes beyond a commercial convenience: people are living “in-between” the two places.

As Richard stated when explaining his daily routine, “Here, we're constantly going back and forth” (Interview: Richard, 2024). He crosses the border every day to shop for his home, supply his business, and visit friends and family. His daughter, like most kids in the city, attends school in Clorinda.

> Here, we could say around 80% of kids go to school in Clorinda. So, you would find the youth are mostly there rather than here. Small children, teenagers, all of them. And they come and go daily to school. And they are not the only ones; people from there come here daily to work as well (Ña Cabrera 2024)

Thanks to an urban project carried out in the early ‘80s, which included backfilling and the construction of a riverfront, the *crecida* does not reach Clorinda (‘Destacan Plan Contra Inundaciones Local Que Incorporo Un Replanteo Ante El Cambio Climático’, n.d.). This stability, paired with the economic benefits the Argentinian government offers students, plays a critical role in parent’s decisions when it comes to education. “She needs stability” he mentioned, “otherwise, she risks losing the school year and falling behind” (Richard 2024). This fluidified border (Rumford 2006, 156) supports Puertoelseños’ daily needs regarding education, shopping, and healthcare. Furthermore, weekly *pikivoley* matches and regular cross-border parties showcase how their relations extend into social bonds. “It’s like one big community divided only by a tiny bridge” (Ña Cabrera 2024), where, just as nationality[10], belonging is fluid, as space, in this context, is not “a stable background, but a part of the unfolding” (Steinberg and Peters, 2015, 258).

This brings us to the second point I wish to make in this chapter: movement in Puerto Elsa is not seasonal but a permanent aspect of local life. In other words, a fluid lifestyle here implies more than seasonal relocation in times of *crecida*; it implies a life of constant movement and connection involving one’s work, social life and needs.

In this way, movement can be understood in Boas et. Al’s (2024) notions as a way to reclaim territory which is deemed ‘potentially unavailable’ by climate change (p. 525). This way, climate can be thought as more than the reason for people’s movements but also through

[10] Locals estimate that half of Puerto Elsa's population holds Argentinian and Paraguayan nationalities (Claudio 2024, Victor 2024). This will be further explored in the following chapter.

its capacity to influence ‘the ways in which movement is experienced’ (Boas, Farbotko, and Bukari 2024, 525).

While the relation of these movements to climate vulnerability is something which will be explored later in this paper, it is important to highlight that, considering constant questioning and proposals for “relocation” of communities living in flood-prone areas, not being bound to a specific place does not mean locals do not feel an attachment to the city. This was evident in Richard and Cristina’s recollections of attempting to relocate to ‘gran Asunción, where they recall not only the difficulties of finding employment and housing but also the limitations in movement, a general lack of safety and contrasting urban rhythm. As both mention, the ‘tranquil life’ fluidity in Puerto Elsa allows them to have cannot be found elsewhere (Richard 2024, Cristina 2024). This ‘tranquil life’ was continuously mentioned throughout interviews as their most valued aspect of the city. In this way, their attachment to Puerto Elsa is understood as an attachment to the fluid way of living the place allows.

Permeability

In Puerto Elsa, fluidity produces a porous and permeable environment within the urban atmosphere and in Puertoelseños’ routines. This permeability, facilitated by cross-border relations, plays a crucial role in its spatial fluidity. The fluid cross-border dynamics of Puerto Elsa create a unique economic environment where individuals can find diverse work opportunities.

The economic flows are a significant draw for individuals seeking to escape the economic vulnerabilities prevalent in other parts of Paraguay, therefore encouraging internal migration from economically vulnerable areas in the countryside (Finnis 2017, 386). In this way, the migration to Puerto Elsa, driven by economic vulnerability, which “newcomers” to adjust to a fluid way of life and face the hardships of ecological exclusion, can be understood as a form of “climate gentrification” (March and Swyngedouw 2022, 28).

Richard (2024) elaborated on the demographics of Puerto Elsa, stating, “The majority [of people] here, almost 50 to 70% of Puerto Elsa, are all people from the countryside.” This significant influx of rural migrants illustrates how Puerto Elsa’s economic opportunities transcend the physical boundaries of the city, attracting individuals from diverse regions. He further emphasises the ease of finding work in Puerto Elsa compared to other cities:

> Everyone here will tell you that in Puerto Elsa, you can work at anything. You won’t lack daily bread for your home; you won’t lack food. You can do anything. If you go to

> Asunción, it's not like that. Life is harder in Asunción. Here, you can sell gasoline; you can go out and sell *milanesa* sandwiches. You sell anything and make money. Even in Asunción, it's not the same. That's why people come to Puerto Elsa; many people come from far places, from the countryside. Here, they come and work well, they are able to build a two-story house, they buy a car… (Interview: Richard, 2024)

While the economic benefits of fluidity are constantly highlighted, its allure is not limited to this aspect. "The advantage of being in a border area is that there are many favourable aspects for family life," mentioned Victor (2024) before explaining how his family benefits from the health and educational system in Argentina. Furthermore, the allure of the opportunities in Puerto Elsa is further reflected in the permanence of its residents amidst the hardships related to the *crecida*:

> The truth is that people from outside, who move to the city for work, are quite surprised by the water and the way of living here. But they never leave either. Whoever comes to Puerto Elsa never leaves Puerto Elsa, you know? That's because we have work everywhere. (Claudio, 2024)

While adjusting to the fluid way of living is considered challenging for new inhabitants of Puerto Elsa, most 'foreigners' living there emphasise that once 'they grow used to it, they enjoy a better life in Puerto Elsa than they would anywhere else' (María, Cristina).

"My grandfather was from Caraguata'y, and my grandmother was from Villeta. They met after moving to Puerto Elsa and never left," explained Jabes. After winning a scholarship to pursue further studies in Spain, he mentioned constantly expressing to his mother his desire for her to join him there if he succeeds, not wanting her to be alone. However, he understands her determination to stay in Puerto Elsa, as he concludes, "Puerto Elsa is a good place to live, here you can have a tranquil life." (Jabes 2024).

Without aiming to romanticise the "practices of social exclusion" that lead to climate vulnerability (Nightingale 2023, 148), I wish to emphasise the importance of lived experiences within the frame of "a way of life" (as opposed to practices), in understanding the duality of life in Puerto Elsa and its effect on both individual and urban scales.

In summary, Puerto Elsa's fluid lifestyle, supported by the economic permeability created through cross-border commerce, attracts and "retains" internal migrants from across the country. The continuous creation and availability of economic opportunities make Puerto Elsa a good option for many seeking to improve their living conditions, outweighing the location's climatic challenges. The main aspect I wish to emphasise in this section is that

spatial fluidity is not merely about physical movement but also about the economic dynamics that influence these movements. As Richard concluded, “That’s what’s different here in Puerto Elsa; it’s a place where you can work and live well.”

Conclusion

As it has been reviewed in this chapter, movement is a permanent aspect of life in Puerto Elsa as people “move to reclaim, repossess and revitalise culturally significant places, and reclaim the meaning of habitability in the face of climate risk” (Boas, Farbotko, and Bukari 2024, 525). Following a volumetric analysis, we can understand movement both across space and with space (Steinberg and Peters 2015), bringing more depth into the influence of climate vulnerability in the way people move in Puerto Elsa. The vertical dimension is highlighted as an essential axis to position Puertoelseños in space and time, in a material and immaterial way. And finally, the duality produced by fluidity, which influences sociodynamics beyond the local scale of the city is highlighted. As this chapter finalised indicating an embodied experience of moving, this analysis will be furthered in the next chapter, which will explore in depth the embodied dimensions of fluidity.

We, Puertoelseños

When Puertoelseños describe their routines, where several of their daily activities take place Clorinda, they often mention 'You see, here, we are practically all Argentinian' (INT: Maria 2024). The link between their daily lives and a collective identity has been constantly mentioned throughout interviews, indicating fluidity is seen across different scales in Puerto Elsa.

As it has been explored in the previous chapter, cross-border movements are a part of the everyday lives of Puertoelseños, and their city's dependency on Clorinda is not limited to their livelihoods but extends to all aspects of their lives. Understanding people's way of engaging with space as the way they come into being (ref. to Steinberg and Peters 2015; Ingold 2000) takes us to the embodied dimensions of fluidity.

Besides hearing about their identification to a hybrid nationality, in conversations of their lives, two other particular phrases are common; "Puertoelseños are *guapos*" and "Puertoelseños are united". These will organise and serve as the entry points of analysis throughout this chapter, allowing for an understanding of fluidity at an individual and collective scale, and how these shape and reshape social structures.

'*El Puertoelseño …*"

"We still don't have a hospital in Puerto Elsa," mentioned Evelyn, after recounting how her mother was born on a boat halfway across the Paraguay River. The lack of medical facilities in the city forced her grandmother to embark on a journey to Asunción during active labour (INT: Evelyn 2024). Up until this day, the lack of hospitals in Puerto Elsa forces most births to take place outside of the city. This situation has a great influence in local social dynamics:

> Here we have a health centre, but due to the population size[11], we already need a hospital [...] That's why people don't give birth in Puerto Elsa. Everyone goes to Clorinda to give birth. And in the process, they register babies as Argentinians. So of course they will go there to give birth. Because of that, there are many Argentinians in Puerto Elsa. Some people want to be born in Puerto Elsa, and they can't; so, they must go there. (INT: Evelyn 2024)

[11] The actual population of Nanawa is a common topic of controversy; this is analysed in more depth in the second section of this material.

"Even the children born in Puerto Elsa are taken to Clorinda to be registered," she concluded. While the lack of hospitals in the city plays a big influence in this dynamic, the interest in Argentinian citizenship goes beyond health services. The benefits of having Argentinian citizenship, which include free access to healthcare and education, and simplified border crossing, are essential in their everyday lives (Victor 2024; Richard 2024; Claudio 2024; Sur 2021, 95).

Moreover, these benefits have proven to be critical during the crecida, as Victor reflected: "Thank God, I have children who are Argentinian, so [during the last crecida] we sought refuge on the other side easily. Even I had to legally settle on the other side because of it" (INT: Victor 2024). Understanding "citizenship is thus also about claiming and belonging, rather than status" (Sultana 2020, 1409), Puertoelseños' mobilisation of Argentinian citizenship can be directly related to the support and opportunities present in Argentina to live with an everchanging climate. Their claim for citizenship, therefore, could be understood as a form of inverse 'infrastructural citizenship' (ref. see Shelton 2017 in Sultana 2020, 1411). However, these claims also have an embodied dimension:

> "We live with the Argentine society, with the bordering city of Clorinda. So here we have a mix of identities. […] But honestly, it is practically just one culture because of the number of Paraguayans in Clorinda." (INT: Lorenzo 2024)

As Lorenzo reflected, the deep cultural blending in the region, marked by the strong presence of Paraguayans in Clorinda, has led to a perceived shared cultural identity between the Paraguayan community and the Argentinian city. Scholars have critically explored the dynamics of culture and identity, emphasising them as a socially constructed process (Hall 2007, 138), which is not tied to territory or political borders but shaped through people's 'daily practices and life projects' (Prokkola 2009, 33). While the border itself can be considered as a shaping element of people's experiences and perceptions (Rumford 2006) and therefore, themselves, in this section, I wish to emphasise the influence of *vulnerability*[12] on this dynamic. With this aim, Ña Cabrera's quote can be useful establish this link further:

> We depend a lot on Clorinda for working... For everything really. When customs were closed, trade ended, and I had to close my store here. Only recently I was able to reopen it, now at my house. […] Because one must work, right? We work. Just as the saying goes: 'the people of Puerto Elsa know how to move forward. Some turned to food-related

[12] Here, I refer to vulnerability as a product of a deep understanding of being deeply intertwined with the environment rather than existing in isolation from it (Alaimo 2009, 30).

> businesses. There are always things to do. Whatever it is, it gets done. People keep changing and always find a way. (Interview: Ña Cabrera)

As Ña Cabrera identifies adaptability, proactiveness and resourcefulness in the locals' approach to work, her explanation positions this as a defining characteristic of the collective identity[13] of Puertoelseños. Therefore, while the border plays an important role in their collective identity, as she makes clear in her recollection of how individuals switched to selling food when cross-border commerce was restricted, her notion of 'resourcefulness' is not limited to it.

Another notable example of this 'resourceful' identity, bridging the collective and the individual notions, I found was from Soraida. While we were sitting in front of her store during one of our interviews, I noticed an older man with a distinctive metallic artefact over his face approaching us. As soon as she noticed him, she asked me, "Do you mind if I leave for 15 minutes? I also work as a physiotherapist, and he is a patient of mine who needs a quick adjustment." A few minutes after her return, to my mention of being unaware of her work in that field, she replied:

> What don't I do? [When the water comes] a lot of things get suspended here. I am a dressmaker, I am a physiotherapist, I have this shop… So, if I can't do one, I already start doing the other. I know how to make *empanadas*; I know how to make *asadito*… In any situation, one comes up with something. I didn't study engineering at the Universidad Nacional, but I think I am more of an engineer than many there. All of us in Puerto Elsa are… We seek to work. […] (Interview: Soraida Cabral)

"The puertoelseño is *guapo* [14]," she concluded. This phrase, relating her everyday lives, with their collective identities and vulnerability, was regularly used to explain how people in Puerto Elsa constantly change their lives according to their surrounding environment. In Soraida's life, dynamism and flexibility can be seen beyond her routine and livelihoods, even at an intrinsic level, making her sense of self fluid and responsive to external demands. While there is a clear acknowledgement of the necessity behind it, reflecting this fluid identity, characteristic of Puertoelseños, in her own life was a great

[13] I refer to Hunt and Bendford's conceptualisation of collective identity as "individuals' identifications of, identifications with, and attachments to some collectivity in cognitive, emotional, and moral terms. Rooted in and shaped by particular sociocultural contexts, collective identities are produced and reproduced in ongoing interactions between allies, oppositional forces, and audiences who can be real or imagined." (Hund and Benford 2007)

[14] While 'Guapo' literally translates to handsome in Spanish, in Paraguay, this expression is used to describe a person who is hard-working, resourceful and diligent. Some extended definitions include 'a person who faces difficult situations courageously'. (ASALE 2024)

source of pride for her. In this way, embracing fluidity as a defining characteristic of their lives and identities brings Puertoelseños a sense of stability and control.

Yet, assuming this notion of pride and control is a straightforward, simple, process would be a mistake. The same reasons for which Puertoelseños identify themselves as '*guapos'*, are simultaneously used to identify themselves as '*sufridos*[15]*'*. This notion highlights the risks of simplifying or romanticising fluidity in Puerto Elsa. Moreover, this emotional duality conveyed by fluidity is significant as it can further inform daily practices and survival strategies among individuals (Sultana 2011, 163).

The mobilisation of identities by individuals has been questioned in light of their sociopolitical context by scholars, who urged critical scholarship to question the meanings these identities convey instead of relating them to universal criteria (Bayart and Bayart 2005, 251). While it is beyond the scope of this research to explore in depth the social and cultural nuances in this context, in this section, I wish to bring emphasis to the relation between Puertoelseños' way of living, their individual and collective identity and the power dynamics present in it.

Puertoelseños demonstrate what Razon and Ross ((2012, 495) conceptualise as fluid identities; referring to the 'dynamic, overlapping, and sometimes conflicting identities' that individuals navigate, emphasizing their movement and flexibility. As it has been explored, vulnerability, particularly in response to external pressures such as economic and environmental challenges, plays a crucial role in creating and shaping the collective identity of Puertoelseños. Their identity is characterized by resourcefulness and adaptability, as individuals constantly adjust their livelihoods and social roles in response to their environment. This fluid identity is a source of pride, bridging individual and collective notions of self.

'*El Puertoelseño es unido*'

Besides being a resourceful community, Puertoelseños also identify themselves as a united community. "Everyone here knows and helps each other", continued Richard:

> What I mean is that if you have a problem, they form groups. They add you to a group called 'Puerto Elsa Emergency.' You can send a message saying you're going through something, you need something, and the message reaches the Mayor or the Community, and

[15] 'Sufrido' translates to 'long-suffering'; it refers to a person who endures suffering with patience and resignation. ('Sufrido' 2024)

> they immediately take action and provide help. That's the difference in Puerto Elsa—people are united. (INT: Soraida 2024)

Community support is also a part of the collective identity, with people readily offering help without expecting immediate economic retribution. “People are aware, we cannot charge for help. As we say in Guarani; ‘aratutapicha[16]’… knowing how things are” (INT: Richard 2024). By referring to others as ‘aratutapicha’, Richard acknowledges him, just as others in Puerto Elsa, can be in a difficult situation and need collective support. This reflects the collective notion of Puertoelseños as equals bound by a shared consideration of vulnerability. Furthermore, this shared notion of vulnerability extends to Clorinda as well:

> [if you need,] you move to the upper part, take your little hanger and a folding bed, and go to the other side. […] And you manage by renting there [referring to Clorinda]. And it’s great because they welcome you there wonderfully. (INT: Soraida 2024)

“People over there also understand the situation”, continued Soraida, when explaining how she manages to continue her life amidst the crecida, highlighting the cross-border community support in contrast to the local authority’s shortcomings. This can be understood in Sur’s (2021) explanation of how at borders, the ‘values of reciprocity – as exchange, trust, dependency and protection – have both political and spatial implications for mitigating unequal relations’ (2021, 95).

Furthermore, it is important to highlight that, while this notion of support collaborates with making possible a fluid life in the region (INT: Maria 2024; INT: Richard 2024; INT: Ña Cabrera 2024; INT: Soraida 2024), it should not be mistaken as an indicator of closeness.

> We all know and help each other. I don't know if we are a close community, but we do know each other. In the community, everyone looks out for themselves, and looking out for yourself means helping others too. That's what I see. Sometimes, people go out to sell things because someone is sick… People help each other out. There is always a lot of mutual aid and solidarity among the people. (Maria, 2024)

“But I don’t think of them as friends”, concluded Maria. While she recognizes the community’s solidarity with each other, she doesn’t consider it as friendship. Puertoelseños generally make a clear differentiation between friendship and solidarity. This delineation reveals that the shared notion of risk and vulnerability binding the community in Puerto Elsa is not only a structural aspect of living fluidly but is intentionally mobilized for this purpose.

[16] The Guarani expression ‘Aratutapicha’ comes from the words ‘Aratu’: ‘sad, sorrowful’, and ‘Tapicha’, which translates to ‘person, other, equal, fellow” (Godoy 2022)

Thus, it is important to acknowledge the danger of romanticizing communal support in the face of adversity, as one risks advocating for an unfair distribution of the burdens of climate vulnerability (Sultana 2022).

A life of connection

When the water reaches 7 meters of height above ground level, all single-storey buildings become completely submerged, and the electricity supply is discontinued. As a result, most families relocate to Clorinda or Falcón. Although Puerto Elsa is generally regarded as safe from criminal activity during 'dry' seasons, the occurrence of house break-ins becomes frequent when water rises. As a result, a few young adults in each neighbourhood, who have access to two-storey homes, often remain in the city to care and protect property while others are away. Those who choose to stay regularly monitor their neighbours' properties and report any observed changes. Additionally, the same dynamic can be observed in the assembly and maintenance of *tarimas* on the market[17], where vendors constantly distribute tasks and responsibilities according to their needs. Even though the flexibility of social structures has critical importance during the crecida, their nature remains throughout seasons.

The fluidity of social roles can also be seen at a smaller scale, within households. When explaining why he lives by himself in Puerto Elsa, Richard mentioned that, as his daughter attends school in Clorinda, taking her to school there every day would imply a lot of wasted time as he would have to cross the international pedestrian bridge four times a day, limiting the operating hours of his business. While he recognizes the easiness of border crossing contributes to having this possibility, his family dynamics play a substantial part.

"I have a house in Clorinda", he stated, before proceeding to explain that the house belongs to his aunt, in whom he relies to welcome and care for his daughter during the school term. Like him, many interviewees expressed having several homes with which they count on a regular basis, later indicating these places to be owned by relatives[18][19]. Richard himself is

[17] The collective construction and organisation of *tarimas* are explained in more detail in the section "Permanent readiness".

[18] While scholars have linked extended households, which are prevalent in the Latin American context, to vulnerability (Esteve, Castro-Martín, and Castro Torres 2022; Cahn et al. 2018, 47; Guarin et al., n.d., 6), this should be analysed in relation to traditional indigenous social structures based on multifamily household (Ganson 2003, 72; Service 1951, 244) and the role of colonialism is in the reconfiguration of these dynamics (Service 1951, 252; Potthast 2020).

[19] It is important to note that interviewees often referred to close friends using terms such as "uncle" and "cousin." This is a common practice in Paraguayan culture, where familiar relations are often considered to

currently ‘hosting’ a distant uncle during his search of job opportunities in Nanawa, a process which has been ongoing for a year. In this way, his family dynamics function as a ‘global household’ (Safri and Graham 2010, 107), where fluidity generates a constant renegotiation of social roles and dynamics at a domestic scale.

While an analysis of gender relations and influencing intersectionalities is beyond the scope of this research, it is important to mention the prevalence of extended family members, particularly females, in assuming the roles of providing primary care to their relatives in Paraguay (Pacheco, Elías, and Misiego 2013; Esteve, Castro-Martín, and Castro Torres 2022), emphasising the need for further research into the ecologies of care (Doshi 2017, 127) using intersectional an intersectional approach (Sultana 2020) within fluid lifestyles

The examples mentioned above are two, among many, of how living fluidly in Nanawa involves maintaining social connections whose form is in perpetual transformation, both influencing and influenced by internal and external pressures. This way, collective social roles are constantly being created and renegotiated with the reciprocal influence of the environment[20]. Furthermore, the solidarity related to their collective identity emphasises their sense of identification and belonging within a shared social group (Hund and Benford 2007, 439). In this context, this connection between people across space in Nanawa goes beyond the physical realm, encompassing a shared notion of risk and vulnerability.

Embodied fluidity

> The notion of vulnerability as an embodied experience implies the dissolving of scalar boundaries not only between impacted people across the globe but also between human actors and nature. (Tschakert 2012, 148)

In sum, fluidity can be seen at an individual and collective identity level in Nanawa as Puertoelseños constantly adjust their livelihoods, social roles and relations in response to their fluid environment, making sense of their identities in these everchanging dynamics, where climate vulnerability and constant movement are identified as structural elements. This creates a fluid sense of self, as they understand adaptability, resourcefulness and dynamism as their distinctive characteristics.

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extend beyond blood ties. While scholars have not specifically discussed this in the Paraguayan context, it is considered a reflection of extended kinship relations (Kronenfeld 2014, 165).

[20] Here, I refer to the environment as a hybrid and dynamic construction of human, natural, material and immaterial elements (Swyngedouw 1996; 2004).

The fluidification of Puertoelseños' identity, when analysed in relation to their environment and daily lives, reveals the "embodied" effects of climate vulnerability (Doshi 2017, 126). Likewise, it also reveals an "embodied adaptation" to their environment (Castro and Sen 2022, 2).

When considering the ways in which Puertoelseños produce and mobilise their identity, at an individual and a collective scale, considering historical and current political debates, 'fluidifying their identity' can be understood as a display of political resistance. However, is an emotionally complex 'embodied metabolic process' (Doshi 2017, 126), as it involves overlapping feelings of pride, familiarity and suffering.

Section II: Fluid lifestyles as a form of resistance

While Section I explored how fluidity structures the lived experience of Puertoelseños across time and space, this section considers how such fluid ways of living can be understood as forms of resistance. In Puerto Elsa, resistance is not always loud or formalized. Instead, it emerges through everyday practices that contest state neglect, border controls, and rigid frameworks of urban life. Through spatial tactics, political absences, and discursive negotiations, Puertoelseños assert alternative modes of urban belonging and adaptation. This section explores three interwoven dimensions of resistance: spatial resistance through infrastructural improvisation and cross-border flows; political resistance through survival in conditions of abandonment; and discursive resistance through contesting dominant narratives of vulnerability and resilience.

Nanawa or Puerto Elsa

As soon as one arrives at Puerto Elsa, signs and banners saying, “Welcome to Nanawa” and “I [heart] Nanawa” can be seen lying beside the main street and accompanying people through its inner corners. As one navigates its main street, parallel to the river, the urban influx automatically directs you to what is widely considered the heart of the city: the commercial area. Gradually, streets become narrower, and cars start disappearing, being replaced by pedestrian crowds and a few motorcycles, filling every space of this busy market. A quiet, tranquil city becomes alive in its market.

Figure 1. The Fraternidad Bridge (Blanco 2017)

Figure 2. Picture from inside the Fraternidad Bridge (Blanco 2017)

In Puerto Elsa, the market itself connects Paraguay and Argentina. Stalls, stores and walking vendors are situated along the bridge and around both sides of it. This is a border where, while fenced and guarded, one can buy clothes, fresh fruits and vegetables while crossing the customs check.

A few years ago, one could easily get lost in this flow of commerce and movement and suddenly find oneself on the other side of the border without noticing (ref. figure 1 and 2). However, after several projects to "expedite cross-border traffic" (*La Mañana* 2017; Caballero 2011a; 2011b), the number of sellers on the bridge itself these days has been considerably reduced, and border control has become more visible. Despite constant government efforts to regulate cross-border relations, Puerto Elsa is a place where the rigidity of borders seems to dissolve into the fluidity of daily life.

In the market, the sound of constant chatter, offers, deals being made, music, grilling of street food, and people moving fills the space. Products are offered both in *guaranies* and in *pesos* to people walking in both directions. Meshed between those sounds is a different name than the one on the city council's doors, as for its people, this is Puerto Elsa.

> "A lot prefer Puerto Elsa because this really is a Port. This place doesn't have a historical value related to Nanawa to have that name. Because this is a port. Nanawa sounds grandiose; it reminds me of the war or something related to that…but it doesn't represent what this place is. Nanawa's name is Puerto Elsa" (INT: Soraida, 2024)

While it has officially replaced 'Puerto Elsa' many years ago, long and short-time residents alike hardly acknowledge 'Nanawa' as a fitting name. Nanawa carries a historical significance, commemorating a battle during the Chaco War, where Paraguayan forces emerged victorious over the Bolivian troops for the Chaco territory. However, what seems to be bestowed to assert Paraguayan dominance of the region is met with quiet defiance by locals. Their preference, Puerto Elsa, reflects an opposite, more accurate reality—one of constant relation and exchange across the border.

> I like Puerto Elsa more out of sentiment. Because Puerto Elsa in that era... I mean, it has a history. Mrs. Elsa and her port are part of a very emotional story for us. Around 1930, people started coming from Asunción to this place. People would come here and then go to Clorinda; I mean, they would cross there in canoes. So even back then, the commercial flow with Clorinda was already happening. (INT: Victor 2024)

In Puerto Elsa, the importance of cross-border relations, particularly commercial, is unquestionable among locals. These relations have been structural to the identity and way of

living in Puerto Elsa throughout its history (INT: Victor 2024) and are a source of pride for locals. Yet, they are discouraged and restricted by the central government, resulting in a political disagreement over the way of living in Puerto Elsa.

In this way, the two names of this territory represent two different positionalities within the political landscape. The central government's choice of renaming the place "Nanawa" can be questioned as an attempt to invisibilise the urban dynamics of a multi-sited community (Lagae, Boonen, and Dibwe 2016, 184). To which, the local's choice to keep using Puerto Elsa can be a verbal expression resistance (Cumbe 2016).

As the first section of this work has focused on exploring three different aspects of how fluidity is lived in Puerto Elsa while occasionally (and rather timidly) suggesting the influence of broader sociopolitical dynamics, the second section will explore the political dimension of fluidity and its relation to climate vulnerability, arguing that the state's lack of attention is a form of 'ecological exclusion' (Kaika et al. 2023, 161), and that a fluid way of life in response is political.

It begins with the argument that a fluid lifestyle implies a different conception and way of living with borders that can clash with imposed regulatory regimes. By analysing the relation between fluidity and vulnerability, I will argue that the lack of attention to Puerto Elsa from the central government keeps the city in a constant state of vulnerability, to which Fluidity is a medium to be integrated into a "legalised" urban life. Finally, this chapter concludes with a short analysis of the risks of romanticising fluidity as a form of resistance.

In this way, the everyday practices which compose the fluid way of living in Puerto Elsa have the potential not only reveal the power relations and political structures present in the context, but also their own role in actively reshaping and redefine these relations (Kaika et al. 2023, 20)

Ports and bridges

Analysing people's identification of the place as Puerto Elsa, it becomes interesting to note how the character of "port" is mentioned as the defining trait of the place. Yet, if one were to search for a port there, one would find that the closest registered port is located 15 km away, in the nearby city of José Falcón ('Puertos', n.d.)

Figure 2. A Puentecito. (Pamplona 2024)

When asking for directions on the streets to where the port is, the answer was mainly "Which one?". As an older gentleman sitting in front of his porch kindly explained, "The river-coast is full of small ports, if you just walk around, you'll see them. However, if you are looking for the big one, you'll have to go to *Falcón*". While I knew an international port was located in the city of Falcón, I was ignorant of the smaller ports he referred to. Only later, while walking along the river, was I able to understand what he meant.

As water levels were remarkably low then, these ports took the shape of pedestrian bridges made of pallets, spanning the vegetation and water all the way up to Clorinda. Locally known as 'puentecitos' and referred to as 'clandestine bridges' by outsiders, these makeshift structures are integral to the region's daily lives and commerce. They offer the flexibility that the 'Pasarela de la Amistad' lacks, providing unregulated crossings, reduced costs, and flexible hours. Locals frequently use them for business and household shopping, for a small fee of around 5,000 guaranies applicable in case of transporting any goods. This fee often involves the assistance of a *pasero* in transporting packages (Interviewees: Maria, Victor, Richard), who bear the costs of the bridge's building and maintenance.

While these bridges in Puerto Elsa are mostly used for business purposes, the time restrictions[21], and monitoring at the 'official' border crossing make them popular for late-

[21] Border control at the 'Pasarela de la Amistad' is limited between 8:00 and 19:00, outside of that timeframe, border control is closed, and individuals are not allowed to cross. (Richard 2024; Victor 2024; "Clorinda: Cruzar La Frontera, Puente, Horarios, Compras" 2024)

night social events. “[After 19:00] you can’t pass through customs because it’s closed,” explained Richard, “They won’t give you options to go partying or see your families and friends. They have cameras, and their superiors give them trouble if they let you pass” (Interview: Richard, 2024). This inspired Victor to build a bridge near his property, located in front of a popular football field where Argentinians and Paraguayans often play together. The increasing popularity of weekly senior football matches also led him to open a liquor store at the site, where he currently waives the round-trip fee for using his bridge to customers of his store (interview: Victor, 2024).

In this way, these bridges act as ‘counter-infrastructure’, opposing asymmetrical power relations (Dajani and Mason 2018, 114). Critical scholars have furthered the analysis of urban infrastructures to encompass how their dimensions go beyond the material into the social realm (Simone 2004; Truelove and Ruszczyk 2022). Considering the role of social networks in the everyday lives of Puertoelseños, these immaterial structures also reveal daily resistance and remaking of power asymmetries. A clear example of this can be seen in the way Puertoelseños obtain Argentinian citizenship.

Given the registration of newborn children as Argentinians is considered common practice in Puerto Elsa, during an interview, I enquired about the operational mechanisms of this process. Highlighting its ‘easiness’, Evelyn (2024) explained: “There is always a way [to obtain Argentinian nationality]. At the hospital, with the certificate, at the civil registry...[...] There is always a way.” She mentioned how these social networks are well known among locals, emphasising how there’s always ‘someone who can make it happen’ (INT: Evelyn 2024).

While similar forms of urban everyday resistance can be found in a multiplicity of forms and places (Truelove and Ruszczyk 2022; de Koning, Jaffe, and Koster 2015; Sur 2021), their consideration through the context in which they take place has revealed their role in reshaping environmental dynamics (Menga and Swyngedouw 2018, 131–46). This way, if we consider the role of these counter-infrastructures in making fluidity possible, a fluid way of life can be understood as a form of contestation to hegemonic ‘citizen agendas’ (de Koning, Jaffe, and Koster 2015), which reinforces the ecological exclusion of the region.

Lack of attention

During my interview with the Mayor, Claudio Samaniego, the first ATM in Puerto Elsa was being installed in front of the municipality. While noting the importance of this event, he mentioned: “We were incredibly lucky to get the BNF ATM. Because they didn’t want to come. No bank wants to come, no cooperative wants to come, all because of the fear of the flooding.” (INT: Claudio 2024). This lack of infrastructure is generalised in Puerto Elsa, with the absence of a hospital, financial services, provision of clean water, among others.

Claudio (2024) explained the difficulties his community faces while trying to fulfil the government’s expectations and demands for an ‘economic formalisation’, emphasising how “abandoned by the country’s authorities” the city has always been (Claudio 2024). One clear example of this situation is Puerto Elsa’s noncompliance with the border laws, which dictate every national border should be equal in infrastructure to its international counterpart:

> All projects involving the borders must be done jointly. If they are going to build a riverwalk in Clorinda, Puerto Elsa must have a riverwalk. If they are going to build a shed on the riverbank, the same thing must be done here. […] Ayolas, for example, had housing on one side of the riverbank so they built it on the other. It’s the same thing everywhere. All borders must be equal. But that didn’t happen here. That’s the difficult aspect of our city... We are forgotten by the government (Claudio 2024).

References to the two riverfront projects initiated by the Argentinian government since the early 1980s are often made, highlighting their impact on transforming Puerto Elsa into a basin. However, despite the influence these infrastructural projects on Argentinian territory have on altering natural water cycles and how they are experienced in Puerto Elsa, locals feel Paraguayan authorities contribute more to the city’s vulnerability than its neighbouring government, from whom they feel more support and understanding than their own.

> […] [Argentinians] welcome you [in Clorinda] wonderfully. That’s because people there also understand the situation. And that's one way God provides, and he is the only one who provides. If you wait for the authorities to do something... They do, but they do their worst. (Soraida 2024)

Claudio revealed that “residents of Puerto Elsa receive more assistance from the municipality of Clorinda than from the central government”, which becomes evident in times of crecida (*ABC Color* 2019):

> Since they have their riverfront, which is just 100 meters from here. […] People go behind the riverfront to the public square. Can you imagine that in the public square, they build little houses for the people? They set up the house, very simple, of course. There, they also provide water, electricity, gas, and food. […] They even feed the dogs, you know? They give them kibble in the morning and in the afternoon. The assistance we get from them is wild. (Claudio Samaniego, 2024)

"They obviously have a lot more resources than we do; they have support and actual funding. They get something like 300 million [guaranis] per day. What we get in 3 months of *royalties,*[22] they get in 3 days," he reflected, concluding that the government's lack of attention and unlikeliness to invest such significant amounts in Puerto Elsa is linked to Puerto Elsa's small population[23] (INT: Claudio 2024).

It is important for these considerations about the size of Puerto Elsa's population to be analysed considering the many controversies regarding the legitimacy of Paraguay's statistical data, as the latest two censuses (2012, 2022) have been severely questioned. The 2012 census faced significant criticism for its lack of accuracy, underreporting, and methodological flaws, which resulted in a lack of trust in the data collected (*Última Hora* 2013) Many areas were not fully covered, leading to incomplete and inconsistent data. Similarly, the 2022 census encountered issues such as logistical challenges, insufficient funding, and political interference, which further compromised the reliability of the population data (*Última Hora* 2023b).

This way, the estimated 5.457 inhabitants Puerto Elsa has, according to official sources ('Municipio de Nanawa' 2024), stands in stark contrast to the local estimations of between 8.000 and 10.000 inhabitants (INT: Soraida 2024; Ministerio de Salud Publica y Bienestar Social 2019; Ministerio del Interior del Paraguay 2010, 199). Apparently, no one seems to know how many people are living in Puerto Elsa. While the constant movement and multiple nationalities of the population in Puerto Elsa may contribute to the discrepant

[22] Royalties are the financial compensations the government receive for the extraction and exploitation of natural resources, particularly the Itaipú and Yacyretá hydroelectric plants, which generate electricity from shared water resources with Brazil and Argentina. These funds are typically used for regional development, infrastructure projects, social programs, and other public services to benefit the local population and support the country's economic growth.) ('Itaipu Binacional: Royalties' 2024; 'Plataforma Urbana y de Ciudades: Royalties', n.d.)

[23] Nanawa has an estimated population of more than 8.000 inhabitants (Ministerio del Interior del Paraguay 2010, 199) (although this is a source of debate, as it will be explained later), in contrast to other large bordering cities in the Paraguay such as Ciudad del Este (around 320.000), Pedro Juan Caballero (75.000) and Encarnacion (around 75.000).

notions regarding its size, the common justification of scale for the city's limited budget[24] and lack of infrastructure is highly problematic. The use of 'poor numbers is a way in which communities are invisibilised and can enhance their vulnerability (Jerven 2013). Therefore, which data is used, or the lack of it, can be analysed as a way in which power is operationalised through 'knowledge politics' (Kaika et al. 2023, 151).

Furthermore, despite the community's emphasis on the infrastructural deficiencies in Puerto Elsa, the constant dismissal of the city's basic necessities within the government's priorities is also questioned in other aspects. In 2022, Claudio joined public protests requesting the opening of the Fraternidad bridge, claiming "all other frontier crossings in the country are open, and this bridge is the only one which we cannot get clearance on", stressing the government's dismissal of cross-border relations in Puerto Elsa, where the most affected were the children, at risk of losing the beginning of the school year (*Extra* 2022; *Clorinda al Dia* 2022).

It seems that the periodic presence of water over the territory continues to excuse its treatment as a 'no man's land', as it was once considered by hegemonic power structures (Correia 2022). In this way, Puerto Elsa keeps living under 'ecologies of exclusion' (Kimari 2023, 161), where postcolonial logics of urban governance are still present, and are experienced daily through the lack of infrastructure (Kimari 2023, 165). However, as I will argue in the next section, these limitations exceed the material realm.

The point I wish to highlight in this section is how the central government's politics of exclusion can be seen through its lack of attention to Puerto Elsa, combined with its active restrictions regarding cross-border dynamics, continuously (re)produces Puerto Elsa's ecological exclusion, keeping their inhabitants in a continuous state of vulnerability.

The only way

Contrary to the commentaries heard among *Asuncenos* around the urban dynamics of communities living in flood-prone areas, produced by the state's framing of this dynamics (Rivarola 2023), fluidity in Puerto Elsa is not the 'easy way', it is the only way.

> "As a kid, before I was cognitively capable of understanding it, I would constantly ask 'Why do we live here? Why do we live like this?' […] Adults often said, ''We live in a flood-prone area here for a reason. If we lived elsewhere, we wouldn't have work, so we endure it.' I believe a big part of growing there was sharing that understanding and

[24] During a conversation, it was mentioned that Nanawa has the lowest budget within the Presidente Hayes Department (Richard 2024). However, I was unable to corroborate this with government sources.

> compartmentalizing it. It isn't an emotional issue, it's economic. You're in Puerto Elsa for an economic reason—smuggling. So, you make a lot of money, not easily, but it's the only way you're able to get ahead in these conditions" (interview: Evelyn, 2024)

Evelyn (2024) recognized that critically understanding their lifestyle and seeing beyond hegemonic imposed norms was a fundamental part of her upbringing. Although she determined from a young age that her mother's path as a *pasera* 'wasn't for her'[25], she acknowledges that the only reason she had this choice was due to the privileged economic position afforded by her mother's work and her efforts in making it possible for Evelyn to access the Argentinian educational system. However, even after years of academic excellence and multiple degrees, transitioning from cross border commerce is extremely difficult:

> "For us, there's no other choice, and the truth is, even with all of my academic preparation, for me, it's an even bigger struggle to leave this way of life and the informality. I saw my mom working as a smuggler and told myself 'That's not for me'. [...] After graduating, there were times when I would take whatever job I could get. Even though, as a novice in the profession, you don't earn what you should, my mom, with her business, would make more money than most professionals with a good job would." (Interview: Evelyn, 2024)

As Evelyn's mother, twenty years of working as a *pasero* allowed Victor to acquire the means to study and eventually get a degree in journalism. Like many others, Victor started working as a *pasero* when he was seven years old, transporting things and guarding people's belongings. He recognizes without that opportunity; he would have never been able to access stable jobs and live a 'tranquil' life.

While urban 'informality', particularly in the case of flood-prone areas, is usually related to conflicts of land ownership (Zeiderman 2019; Rivarola 2023), the inhabitation of Puerto Elsa, and commercialisation of these lands is legally recognized by the national cadastre ministry ('Convenio Marco de Cooperación Interistitucional entre el Ministerio de Hacienda (Servicio Nacional de Catastro) y la Municipalidad de Nanawa' 2016)[26], despite the flood risk. However, as the district of Puerto Elsa, at the time of this research, does not have an urban development plan (*Diario ABC Color* 2024), it is important to recognise the

[25] It is important to note how, as Evelyn herself highlighted on numerous occasions, her notions are highly influenced by the financial stability her mother's work provided and the prejudice she suffered outside of Nanawa, a product of the city's illegalised cross-border dynamics.

[26] Their presence in the National Cadastre system implies that these lands are taxable, fulfilling the regulatory criteria for 'legal' commercialisation. It is important to note that the municipality provided me access to the digital file of the city's cadastre. While I cannot assert its accuracy, it appears to correspond to satellite images of the area taken from Google Earth. ('Convenio Marco de Cooperación Interistitucional entre el Ministerio de Hacienda (Servicio Nacional de Catastro) y la Municipalidad de Nanawa' 2016)

influence of ‘clientelist’ dynamics and its inherent power relations in relation Puerto Elsa’s urban development (ref. to Coates and Nygren 2020).

Yet, access to land ownership was not considered an issue by locals in Puerto Elsa in conversations, with some going as far as mentioning how land is very cheap in comparison to other places (INT: Richard 2024; INT: Jabes 2024; INT: Victor 2024) [27]. This is reinforced by the presence of certain private employment schemes where people from the countryside, brought to Puerto Elsa to work in construction, are given land and houses as a part payment for their work (INT: Jabes 2024). While these schemes are claimed to ‘benefit from cheap labour’ (INT: Jabes 2024), they reflect how unregulated business allows vulnerable individuals to enter the urban fabric and ‘get ahead’.

In this way, fluidity is not only the ‘only choice’ (INT: Maria 2024) to live in Puerto Elsa, but also, a medium to be a ‘good citizen according to the normative agenda (de Koning, Jaffe, and Koster 2015). While the influence of hegemonic narratives about fluid life (Rivarola 2023) is noticeable outside of the city, the way Puertoelseños discuss their way of living showcases an understanding of “rightness” shaped by the socioeconomic context. This is mostly evident regarding cross-border commerce, which is the most visible aspect of a mostly invisibilised city:

> This is a border area where, if we don’t have the flooding situation, one can earn money doing anything... except illegal things. But while smuggling itself is illegal, we see it as something normal here. (Victor, 2024)

Victor’s quote above clearly differentiates between “illegal activities and licit practices” (Roitman 2015, 249). However, the reasoning in Puerto Elsa behind “illegal yet licit practices”, in contrast to Roitman’s (2015) findings on the Chad basin, which do not indicate a political resistance, does not fully encompass the Puertoelseños’ perspective. While unregulated cross border commerce by itself can be, using Roitman’s words, “rather a means to participate in prevailing modes of accumulation and prevailing methods of governing the economy” (Roitman 2015, 249), they are part of a way of engaging in urban life that sits on the grey zones of ‘legality’. In other words, Puertoelseños’ political resistance is to the systematic violence which illegalises their only option for survival. As Maria firmly stated in one of our interviews, “What’s right for you is what keeps you alive.” (INT: Maria 2024).

[27] The cost for a plot in the ‘lower’ areas starts at 5.000.000 guaranies (INT: Richard 2024; INT: Jabes 2024), equivalent to around 660 usd, which is currently two times the minimum monthly salary, established by national regulations, of 2.798.309 gs (‘Reajuste Del Jornal y Salario Mínimo Rige Desde Hoy’ 2024)

It is important to note that when Puertoelseños refer to cross-border commerce as 'normal', they refer to consumption and hygiene products, which can be 'legally' sold under the pacotille agreement (*Última Hora* 2023a; 'Decreto Nacional N° 2421' 2014).

While Puerto Elsa is known for being a "transit point" for large-scale drug and other forbidden schemes (INT: Evelyn 2024), locals claim the only ones being affected by controls are small-scale entrepreneurs supplying their shops with packaged Argentinian products and clothing items (INT: Soraida 2024; INT: Evelyn 2024; INT: Richard 2024), collaborating with the collective notion of injustice reinforced by "regulations who only apply to some" (INT: Soraida 2024).

In sum, the systemic violence and injustice which bursts from regulatory institutions destabilises frameworks of legality on peripheries (Comaroff and Comaroff 2008, 17). However, while the notions of unregulated cross-border commerce in Puerto Elsa are not solely subjected to the legal framework, they are not deprived of consideration of justice and the collective good, as Jabes (2024) reflected during our conversation: "It is hard not to see as normal something you and everyone around you have been doing all of your lives and has helped so many".

Conflicting views

> Smuggling control is impossible to enforce in Puerto Elsa. If we were to enforce it, we would be arresting the majority of the town's residents. If that happens, God help us, because we would face a serious conflict with the citizens. More than seven thousand people would come against us. In this regard, they are very united when it comes to protecting their interests. And it's understandable because there's nothing else for them to do for work here. Since I took office two years ago, I have informed the Villa Hayes Prosecutor's Office about this situation, but they disengage from the issue precisely because they can't remedy a problem that has existed for almost 100 years and is part of the city's history. The Government needs to pay more attention to this region; there is a need for job opportunities that are not illegal for the people. The residents engage in smuggling because there is nothing else, they can do to support their families. Most of them are humble people who just want to work. (Carlos Antonio Vera, head of the Police's 7th Precinct in Puerto Elsa at the time, (2011). Interview carried shared by Victor in 2024)

As it has been previously reviewed, cross-border relations have been instrumental in the city's subsistence amidst the crecida since its origins[28], and the 'normalisation' of unregulated cross border commerce is transversal to the local population.

[28] Refer to the historical context section on page 7.

"It's illegal, but everyone knows that's how it works here… The municipality doesn't bother us, nor does the police," explained María, "they know those are local people". She acknowledges residents, local authorities and the people of Clorinda to fully accept the fluid dynamic, emphasising the collective understanding of the hardships residents of Puerto Elsa face, particularly when it comes to the crecida (Interview: María, 2024). As the local mayor asked during an interview with a local newspaper: "What kind of control can I expect of people after the *crecida*, after the pandemic?" (*ABC Color* 2022c).

While the local municipality recognises the importance of cross-border commerce for the local economy (see Roitman 2015; Claudio 2024; Maria 2024; Victor 2024; Richard 2024; Soraida 2024), this perspective is not shared across scales. This becomes evident in the central government's increasing measures to discourage illegal commerce. Driven by pressure of the Paraguayan industrial union (UIP) and the Paraguayan supermarket association (CAPASU) (*ABC Color* 2022b), recent actions from the national government have involved adding a new "border control" 10 km outside the city along the highway to Asunción, in an effort to disrupt the flow of goods from Puerto Elsa to the capital. Additionally, new checkpoints have been added at various points to monitor the connection between the informal market and the capital.

> Stalls are being vacated. Or they are stopping their business operations. Because now, sales have dropped by about 85%. Sales have dropped significantly because we have two customs checkpoints along the way. There are police and military officers to whom you have to pay, I don't know why. Because the issue is from Paraguay to Paraguay. They are irresponsible. Maybe it's enjoyable for them, taking the fruit of your effort. Because it's from Paraguay to Paraguay. And handing over your goods. It seems to me that they take advantage of people's needs. And the huge trucks that pass by full of goods, those they don't control. And that's how it is. (Soraida, 2024)

While controlling the movement of people and goods in such a porous border has proven to be a challenge (INT: Victor 2024; INT: Claudio 2024), these new control measures, accompanied by regular dismantling of 'clandestine' bridges (*ABC Color* 2022a), and the Argentina's inflation have had a considerable negative impact on local business (*La Nacion* 2024; INT: Richard 2024; INT: Claudio 2024; INT: Victor 2024; INT: Soraida 2024; INT: Maria 2024).

Throughout the years, both locals and industry representatives from Asunción, have highlighted the ineffectiveness and disparity of these control measures, mentioning not only drugs but also commodities are smuggled in large quantities, passing through customs with

ease, while smaller contraband attracts most of the regulatory attention (INT: Evelyn 2024; INT: Soraida 2024; INT: Richard 2024; *ABC Color* 2013; *ABC Color* 2021; *ABC Color* 2022d), arguing these so-called 'formalisation attempts' to be a "new opportunity for more bribery and corruption" (INT: Soraida 2024) and highlighting the vertical nature of these unregulated economic structures (see Roitman 2015).

When discussing this topic, María (2024) jokingly told me: "Wanting to understand injustice here is going to lead you to an endless pit; you might have to stay for longer". With this notion in mind, as analysing the systemic nature of unregulated cross-border business is beyond the scope of this research, I wish to conclude this section by highlighting how the dynamics of fluidity in Puerto Elsa, which blur political and institutional lines, are tightly linked to broader socioeconomic dynamics. Therefore, understanding that "flooding in Puerto Elsa is not about water" (INT: Evelyn 2024), and any attempt to limit fluidity reinforces Puertoelseños' climate vulnerability.

Romanticising fluidity

After a review of the political dynamics of Puerto Elsa, and the effects it has on the population, I wish to conclude by underscoring the importance of analysing ways of living fluidly across scales.

> "I remember that at one time, I don't recall the exact year, those government people came to distribute things […] The National Emergency Secretariat, the SEN. And they came and said: 'Apparently, the people of Puerto Elsa don't need anything. Because they are on the canoes, putting up metal sheets there, with their grills… drinking their wine, having their barbecues' So, what are they going to bring? Beans full of holes? Do you understand? So, they say: 'There's no need, they're apparently doing fine here.' Because here no one stops working. It's not like they're just waiting for aid to come." (INT: Soraida 2024)

"Some people here can barely manage, others not so much, and others can't at all," concluded Soraida, expressing her frustration over the insufficient assistance received, which fails to support Puertoelseños appropriately, and risks of assuming that 'resourcefulness' equates sufficiency. While the fluid way of living in Puerto Elsa is essential for the city's endurance, it also generates an external perception of self-sufficiency. In this aspect, it is important to highlight the many aspects in which understanding a fluid way of living in the context of climate vulnerability can be a risk if not seen across scales.

Considering *crecida* “normal”, and a “part of the environment” does not mean they do not pose a challenge for residents. Puertoelseños’ reliance on the Argentinian government’s direct and indirect support, particularly in times of crecida, exemplifies the limitations of fluidity in addressing the underlying the socio-economic challenges of the population in Puerto Elsa.

As it was previously mentioned, in this context, living fluidly means to be constantly assuming risks and uncertainties (Rivarola 2023, 229), this generates a duality of “feelings, material and emotional costs” (p. 230). Understanding the river as a part of the urban environment, does not equate justifying vulnerability, as doing so would be a perpetration of current ecologies of exclusion. Hence the importance of maintaining a critical lens towards fluidity. Furthermore, in highlighting people’s capacity to incorporate fluidity as an intrinsic aspect of their lives, the aim is not to contribute to an even more uneven distribution of the burdens of climate adaptation, rather, its value resides in being an intersecting point between scales (Tschakert 2012, 154).

Conclusion

As this brings us to a closure of the second section of this research. Here, I have argued for the potential of understanding the fluid way of living in Puerto Elsa as a form of resistance to the local politics of ecological exclusion. Analysing Puerto Elsa through fluidity reveals a “marginal” understanding of the relation between the city as a hybrid environment in the face of climate vulnerability. Framing this as a way of living instead of a static set of practices highlights the dynamism, adaptability, and transversality of fluidity, as well as its deep roots in their lived experiences. Furthermore, as a multitemporal fluidity dictates the rhythms of daily life, where permanent readiness is combined with immediate action through the consideration of flexible, overlapping timeframes.

The lives of Puertoelseños also reveals that fluidity is not only temporal but also spatial, as constant movement, both through and with a volumetric space composes the way their behaviour and actions are made, both in a physical and symbolic sphere (Steinberg and Peters 2015). In this sense, their connection to the place is understood through their attachment to the way of life Puerto Elsa “allows”.

Fluidity is also embodied by Puertoelseños in an individual and collective scale. In this way, social structures are not only essential in maintaining a fluid lifestyle, but are also in constant creation and renegotiation, as they respond to internal and external tensions. While

residents take pride in their fluid lives, it is important not to romanticise this approach as it is entrenched in a dynamic of ecological exclusion. This makes fluidity not only an environmental response, but a form of political resistance.

The fluid urban dynamics in Puerto Elsa challenge hegemonic notions of "modern" urban life. While this highlights their role as active actors, it generates sociopolitical conflicts across different scales of governance. Fluid lives highlight the persistence of colonial politics of ecological exclusion that shapes the waterscape of Puerto Elsa, influencing people's experience of climate vulnerability.

In sum, the fluid way of Puertoelseños to live with climate vulnerability reveals historical legacies, broader sociopolitical dynamics, and their connection to the way climate is experienced in Puerto Elsa.

Adaptation from the margins

In the middle of this research process, a workshop to identify indicators for the climate change adaptation goals in Paraguay took place in Asuncion (UNDP 2024). Organised and led by the Ministerio del Ambiente y Desarrollo Sostenible (MADES/ Paraguayan Ministry of Environment and Sustainable Development), with the participation of several local institutions [29], the workshop aimed to establish a foundational baseline and status report on Paraguay's climate change adaptation efforts, with the intention of enabling the measurement of progress in these actions and fostering investment in the sector (UNDP 2024).

Reading about this event while in the process of writing this research made me reflect on Puertoelseños' perception of their fluid way of living with the river outside of climate adaptation frames. How can they feel part of a climate adaptation which, at best, does not consider and oftentimes directly invalidates, their way of living?

Based on Eriksen, et. Al's (2015, 523) understanding of adaptation frameworks being determined by political processes (p. 523) and the fluid way of life in Puerto Elsa, this section aims to question the theoretical limitations of the local climate adaptation framework and exemplify how a consideration of the fluid way of living in urban peripheries has potential to contribute to a more plural understanding of climate adaptation in the local context.

Good and Bad Adaptation

Kimari's work points out how intentional ecologies of exclusion result in Mathare being one of the most notorious examples of climate change in Kenya (p. 165), and thus, the creation and reproduction of the link between 'bad environments' and 'bad subjects' on institutional and collective notions (Kimari 2023, 166). Following her line of thought, the

[29] The information publicly available mentions the participation of the Dirección Nacional de Cambio Climático (DNCC/National Climate Change Directorate), the Programa de las Naciones Unidas para el Medio Ambiente (PNUMA/United Nations Environment Programme), the Programa de las Naciones Unidas para el Desarrollo (PNUD/United Nations Development Programme), the Secretaría de Emergencia Nacional (SEN/National Emergency Secretariat), the Instituto Nacional de Estadística (INE/National Institute of Statistics), the Universidad Nacional de Asunción (UNA/National University of Asunción), the Servicio Nacional de Calidad y Sanidad Vegetal y de Semillas (SENAVE/National Service for Plant and Seed Quality and Health), the Servicio Nacional de Calidad y Salud Animal (SENACSA/National Service for Animal Health and Quality), the Ministerio de Urbanismo, Vivienda y Hábitat (MUVH/Ministry of Urbanism, Housing, and Habitat), the Ministerio de Salud Pública y Bienestar Social (MSPBS/Ministry of Public Health and Social Welfare), the Dirección de Meteorología e Hidrología (DMH/Meteorology and Hydrology Directorate), and the Comisión Nacional de Cambio Climático (CNCC/National Climate Change Commission) (FCA UNA 2024; INE 2024; Machado 2024; FCA UNA 2024; UNDP 2024; DNCC 2024; MITIC 2024; SEN 2024)

stigma across residents of Asunción and other parts of the country, of communities living in flood prone areas as "unruly" and "opportunistic"(Rivarola 2023, 235), which, while not in the same way as towards communities living in unregulated settlements[30], extends to Puerto Elsa, can be directly related to the Paraguayan central government's institutional framing of what territories are considered "part of the River's territory" and who gets to be there (Rivarola 2023, 234).

These forms of social of exclusion are constitutive of how climate change is produced and addressed (Nightingale 2023, 144), as adaptation efforts are intertwined in the city's metabolic processes (Nightingale 2023, 147). In this way, the framework of "what counts as adaptation" is highly political (Eriksen, Nightingale, and Eakin 2015, 524).

Exclusionary political frameworks which permeate informal discussions in Asunción, are explicit in institutional adaptation strategies and policies (ref. to Füngfeld and Mc Evoy, 2010 in McEvoy, Fünfgeld, and Bosomworth 2013, 282) in Paraguay.

The "Estrategia Nacional de Adaptación al Cambio Climático" (ENACC/ National climate change adaptation strategy), which serves as a basis for institutional climate regulations and projects, when introducing the mission and core principles of the ENACC, states:

> Although the ENACC focuses on public competencies, it is considered essential to have the broad and inclusive contribution of society as a whole, so that public and private efforts align with the same objectives.
> The implementation of the ENACC must be carried out with adequate consideration of the country's economic and social context. In particular, the high vulnerability of the poorest populations and at-risk groups, such as indigenous peoples and rural populations in general, must be taken into account, and a gender approach must be incorporated to address the effects of climate change. In recent years, the primary cause of the increasing exposure of people to extreme natural events has been the considerable increase in population in vulnerable areas. Migration and the expansion of cities onto floodplains, associated with deficient construction practices, are some of the reasons for this increase. (Oficina Nacional de Cambio Climático 2015, 44)

While the ENACC verbally acknowledges the high vulnerability among poorer communities and at-risk groups, it also deposits a degree of responsibility on these populations for their increased climate vulnerability. The government's position, which

[30] In this aspect, I have noticed through conversations with residents of Asunción and analysing the portrayal by the media of flooding in Nanawa that land ownership lessens the stigmatization of the population over their 'right' to live in flood-prone areas. However, this stigmatization is still present but directed to their livelihoods. (Victor 2024; Evelyn 2024; Victor 2024)

problematises the occupation of floodplains (Rivarola 2023, 235), encompasses historically constituted urban areas in these conditions (Rivarola 2023, 235). In this way, fluid ways of living are framed, both as an urban and environmental problem (Rivarola 2023, 234). While framings of adaptation can be explicitly and implicitly disclosed in strategies, policies, planning approaches, processes and assessment methodologies policies (Fünfgeld and McEvoy 2010 in McEvoy, Fünfgeld, and Bosomworth 2013, 282), analysing the climate policies in Paraguay lies outside the intended scope of this research. However, further exploration into this topic is suggested.

As Eriksen et. Al. argue (2015),

> what counts as 'adaptive' is always political and contested. What is seen as positive adaptation to one group of people may be seen as mal-adaptation to another, and political processes determine which view is considered more important at different scales and to different constituencies. (Eriksen, Nightingale, and Eakin 2015, 523)

By analysing Puertoelseños' notions of their fluid way of living not encompassing adaptation practices with this logic, the boundaries set by the ENACC become evident. The ENACC, basing most of its conceptual definitions on the 2014 IPCC, carries many of its ontological controversies, particularly its predominant focus on the natural sciences and lack of epistemic plurality (Asayama, De Pryck, and Hulme 2022, 151; Hulme 2011). Therefore, the potential of these institutional definitions of adaptation and resilience to exclude the experience of Puertoelseños with crecida should be critically assessed.

Adaptation from the margins?

This research has shown how Puertoelseños live a highly dynamic, adaptive and flexible life in response of their hybrid environment's ecologies of exclusion. As this fluid way of living contests the country's legal frameworks (refer to "P", p. 56 of this work), it also has the potential to contribute to a more plural climate framework in Paraguay.

Thus, how can an understanding of the fluid way of living challenge hegemonic notions of adaptation and resilience in the local context? Given the methodological constraints of this thesis, a comprehensive exploration of this question is beyond its scope. However, the following insights, built based on an analysis of the frameworks used on the ENACC and how they are operationalised in the *Actualización 2021 de la NDC de la*

República del Paraguay'[31] (Paraguay's 2021 updated NDC) in relation to life in Puerto Elsa, will briefly illustrate two aspects in which considering fluid lifestyles could contribute to a more plural understanding of climate adaptation in the local context.

Firstly, in line with recent theorisations which frame adaptation as

> a contested social-political process that mediates how individuals and collectives deal with multiple types of simultaneously occurring environmental and social changes (Eriksen, Nightingale, and Eakin 2015, 524)

understanding the fluid way of living in Puerto Elsa as a form of adaptation implies a holistic understanding of climate vulnerability which is simultaneously immediate, eventual and long-term. This way, by considering fluid lives as a permanent way of adaptation, the notion of resilience moves past the highly problematised natural science's understanding of it as system's capacity to recover (ref. to Williams 2012, 66; McEvoy, Fünfgeld, and Bosomworth 2013, 290) to a capacity for continuous change and transformation, discarding 'resilience imaginaries' (ref. to Pitidis, Coaffee, and Bouikidis 2023) as a fixed goal. Additionally, it emphasises the multiscale nature of climate vulnerability, revealing the connection between 'horizontal' structures that 'challenge the dominance of vertical scalar hierarchies' (Tschakert 2012, 154).

Furthermore, since fluid ways of living involve high levels of flexibility, they reveal a "different mode of infrastructural provision and a different infrastructural imaginary" (Kaika et al. 2023, 187). This is evident in the temporary nature of material infrastructures, which can easily adapt to changing conditions. Likewise, this fluidity is also present in immaterial infrastructures (ref. to Kimari 2023), exemplified through adaptable social networks and embodied practices, thereby challenging the rigidity of purely material-focused adaptation strategies. In this way, considering adapting to climate change involves not only addressing effects but also engaging with the narratives, values, and social processes that shape how risks are perceived and managed (McEvoy, Fünfgeld, and Bosomworth 2013, 290),

In sum, considering fluidity, including its transgressive forms as ways of adapting, advocates the consideration of understandings of resilience that emerge from conflict (ref. to Gonda et al. 2023), emphasizing bidirectional power dynamics, where communities are also seen as active agents, rather than only subjects of external pressure (Gonda et al. 2023, 2320).

[31] This document was crafted based on the ENACC, as it is the sets the framework, strategic objectives and conceptual definitions for climate change projects, policies and regulations in the country.

Considering these notions pose great risk for the romanisation of resilience and an unequal distribution of adaptation responsibilities (ref. to Ziervogel et al. 2017, 126), it is important to emphasise that the value of this approach, as an "extended everyday", sits on its capacity to be a 'bottom-up' approach serving as a link for individuals to inform and reshape broader power dynamics (ref. Lawhon, Ernstson, and Silver 2014, 507).

Finally, it is important to highlight that this research does not aim to reconceptualise notions of adaptation and resilience within climate and urban research. Rather, it aims to invite questioning, within those fields, of which marginal versions of adaptation and resilience in the global south might be currently invisibilised by exclusionary frameworks.

Conclusion

Puertoelseños live a highly dynamic lives characterized by constant movement, change and adaptability. This research reveals a deeply interrelated relation between their lives and their hybrid environment, where fluidity permeates their notions of time, space, identity and social dynamics, shaping their way of living in Puerto Elsa.

The theoretical framework for this research laid mostly in the field of urban political ecology, combining feminist and postcolonial perspectives and recent explorations of climate seen through this field. UPE allowed me to understand Nanawa as a hybrid space of constant production and reproduction where human and non-human actors are in constant interaction. To complement recent critiques of the limitations of UPE as a field being focused on institutional and infrastructural aspects and claims for an expansion of the conceptual notions of space, this research resorts to wet ontologies as a way to think and conceptualise space, implying a volumetric understanding of space where nothing is static. This way, the lives of Puertoelseños can be though as mutually constituted with their urban environment, in a constant process or reproduction. The concept of fluidity becomes pertinent to explore this way of life, complementing previous notions of socionatural processes.

The findings of this research are mainly based on ethnographic data collected by the author in a total of 14 weeks, split between the months of December of 2023, January, march, April and May of 2024.

This work has demonstrated that in Puerto Elsa, fluidity is not limited to a set of adaptive practices but a way of living that is deeply entrenched in the community's social, cultural, and spatial notions. The ever-changing interaction with water, explored through the practices of “raising their things” or embodied movement across and with space, indicate a temporal and spatial fluidity that belies linear and static conceptions of urban life. This fluidity is not an occasional response to the environmental challenges posed but a permanent and integral part of life in Puerto Elsa, shaping how people position themselves in relation to both their immediate surroundings and the broader socio-political landscape.

Furthermore, this study reveals that fluidity is embodied by Puertoelseños, going beyond the material realm to impact their very identity. This fluid sense of identity is present in both individual and collective scales, as is mobilised by a self-perception of flexibility and adaptiveness, combined with a notion of solidarity. It can be seen within a constant process of

negotiation and renegotiation of individual and collective roles within the community, as it adapts to internal and external pressures inherent of the local ecologies of exclusion.

This thesis argues that fluidity is a form of resistance to the social exclusion dynamics in Puerto Elsa, as it implies a different conception and way of living with borders that contest imposed regulatory regimes. By analysing the relation between fluidity and vulnerability, I conclude that the lack of attention to Nanawa from the central government keeps the city in a constant state of vulnerability, to which Fluidity is a medium to be integrated into the "institutionally accepted" form of urban life. A highlight is made over the risks of romanticising fluid ways of living, especially when discussing adaptation. The purpose of this analysis is to provide a cross-scalar perspective of how horizontal dynamics of life intersect with vertical power structures.

In this way, the everyday practices which compose the fluid way of living in Nanawa have the potential not only reveal the power relations and political structures present in the context, but also their own role in actively reshaping and redefine these relations.

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AI Based tools table

	AI-BASED TOOLS	APPLICATION FORM	AFFECTED PARTS OF THE WORK	REMARKS
1	Grammarly	Proofreading tool applied to check spelling and grammar	Whole work	
2	Turboscribe	Transcription of interviews	Interview Claudio Interview Victor Interview Lorenzo Interview Evelyn	
3	ChatGPT 4.0	Translation of Interviews from Spanish to english	All interviews	
4	ChatGPT 4.0	Generation of the AI prompts searches, as shown below	Whole work	

Chat GPT Searches

ChatGPT version 4.0, OpenAI: openai.com/chat. "How can I predict the Paraguay River water levels for 2024 based on data from 2015 to 2023 on excel?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Is there a platform where I can try to code this online?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Can you write a code for calculating this with python?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "How can living in flooding areas become safe for vulnerable individuals? Whose responsibility is it to ensure their wellbeing?", reply to author 15/08/2024

ChatGPT version 4.0, OpenAI: openai.com/chat. "How to theoretically challenge infrastructural violence in indigenous communities in Canada", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Example of challenging infrastructural violence theoretically in indigenous communities in Canada", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Real-world example of challenging infrastructural violence theoretically in indigenous communities in Canada", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "How are everyday practices shaping urban theory?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Can you give me examples?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Which everyday practices of the people living in flood prone areas in Latin America in a semi nomadic way can be important for understanding the situation of these communities?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Could you pretend to be an anthropologist and help me write open-ended questions for an ethnographic fieldwork interview to learn more about the interviewee?" Reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. " Can you pretend you're and anthropologist and analyse this text?" reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Could you correct the spelling and grammatical errors in the following text?" Reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "How does the concept of people's constant readaptation fit into urban studies research," reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "What is resilience?" reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "How can I ask about personal memories related to dealing with a flood in an anthropological interview?" reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Assistance in choosing between potential research topics", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Explanation of static coping mechanisms and dynamic adaptive strategies", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Guidance on starting a literature review in urban political ecology", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Enhancing the research gap in a thesis based on existing literature", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "I have to write my master's thesis in critical urbanism. It will be largely based on ethnographic work carried by myself, and I wish to write in a very interesting, storytelling way. Do you have recommendations for me?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "I have an interview that lasts 2:17:09. I uploaded it to a transcribing online tool, but it cut my interview into 30-minute segments. The timestamp for the first paragraph of the second segment says '(0:01 -

3:57).' Could you update it to match the complete audio recording?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Can you update the timestamps for the following segments? '[Isabella] (4:00 - 4:02) Está organizadísimo entonces. [Evelyn] (4:02 - 6:34) En pandemia, sí, hasta 2022, 23 casi...'", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "The following interview fragment has timestamps which start from zero. However, in the original audio they start at 59:58. Could you make a list of the Names and the old timestamps next to the modified timestamps in a way that they correspond to the original audio?", reply to author 15/08/2024.0.

ChatGPT version 4.0, OpenAI: openai.com/chat. "The following interview fragment has timestamps which start from zero. However, in the original audio they start at 1:30:00. Could you make a list of the Names and the old timestamps next to the modified timestamps in a way that they correspond to the original audio?", reply to author 15/08/2024.0.

ChatGPT version 4.0, OpenAI: openai.com/chat. "This is not right, would you revise the text again?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "The following interview fragment has timestamps which start from zero. However, in the original audio they start at 1:59:00. Could you make a list of the Names and the old timestamps next to the modified timestamps in a way that they correspond to the original audio?", reply to author 15/08/2024.

ChatGPT, OpenAI: openai.com/chat. "Who has used the term 'fluid' as a concept in the social sciences and in which context?", reply to author 15/08/2024.

ChatGPT, OpenAI: openai.com/chat. "How is actor network theory related to UPE?", reply to author 15/08/2024.

ChatGPT, OpenAI: openai.com/chat. "Do these examples from the following interview which showcase a flexible, fluid way of life?", reply to author 15/08/2024.

ChatGPT, OpenAI: openai.com/chat. "I am looking for a different word for informality that doesn't have a negative connotation, can you give me options?", reply to author 15/08/2024.

ChatGPT, OpenAI: openai.com/chat. "Can fluid work as an option?", reply to author 15/08/2024.

ChatGPT, OpenAI: openai.com/chat. "How can social roles and dynamics within the community be renegotiated?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Can you indirectly quote this? 'Gates repeatedly announced that he preferred ‘positioning oneself in a network of possibilities rather than paralyzing oneself in one particular job.’", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "What does Bauman say about time in relation to liquidity in 'Liquid Modernity'?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "What are synonyms for 'standard'?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Is there a word for an 'imposed standard'?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "What does 'cannon' mean?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "How is the concept of a fluid lifestyle used in climate research?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "What are social sciences research articles related to this?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Is there any article about the relation between a lifestyle and climate adaptation?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Climate research on adaptation seems to be focused on the 'changing' aspects when it comes to lifestyle and climate, is there any research done on how some places require a certain lifestyle due to climate?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "I have a meeting with my thesis supervisor to check on my progress. Could you summarise the structure and main ideas of the following text […]", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Can you summarise the following text in bullet points? 'Urban flooding has become one of the biggest climate-related issues", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Which urban theories do you mean by other? 'Urban Political Ecology (UPE) and Planetary Urbanization are distinct theoretical frameworks", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. " What is this about? "“Theory of Parallel Climate Realizations” (Tél et al., 2020) or the notion of “Contingency” (Gould, 1989)"", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "How is a fluid's density related to compressibility and pressure?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Translate the following quotes as accurately as possible, trying to consider the overall context?" reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "What is the expression that describes the movement a person does with their shoulders as in a 'so what'?" reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "What does a shrug mean?" reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "What does this mean 'Apart from analysing the many reasons influencing how each of them understood the crecida’s temporality in an opposite way, which will be discussed later in the chapter, something that became crucial in my analysis of time in a fluid lifestyle was not trying to situate the variety of experiences present in my data into the same logic and timeline.'?" reply to author 15/08/2024.

ChatGPT TurboScribe Transcription, OpenAI: openai.com/chat. "Which aspects of the temporality which influences their lives are mentioned here?" reply to author 15/08/2024.

ChatGPT TurboScribe Transcription, OpenAI: openai.com/chat. "Which aspects of the time which influences their lives are mentioned here?" reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Can you analyse this author's writing style and structure?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "What makes this author unique?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "For my bibliography, can you give me a summary of all the prompts I have used?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "How is the expression 'ponele' used in Paraguay?" reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Is 'ponele' used differently in other Spanish-speaking regions?" reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Which would be accurate English translations for this?" reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Which temporal aspects can be analysed about how often a city floods and the way of life of its inhabitants based on the following quote?" reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "What can be said about how people feel?" reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Podrías corregir la ortografía de este texto...", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Podrías mantener los 'queres' en vez de 'quieres'?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Could you do the same here?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "How can one be 'ready for something' but at the same time, 'wait until the last minute' to do something about it, in the case of urban flooding?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "How does the semantic construction of the Spanish language shape the way Spanish speakers think?" Reply to author, 11/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "How does that differentiate to English?" Reply to author, 11/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Are there any papers about this? 'It is important to note that in Paraguayan culture, familiar relations often extend beyond blood ties. For example, a family friend may be considered and referred to as an aunt.'" Reply to author, 11/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Can you indicate articles about this in Latin America?" Reply to author, 11/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "Where can I read about how Paraguayans call family friends 'tio' or 'tia'? And consider far extended family as close?" Reply to author, 11/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "How can I write a great anthropologically conscious, critical, comprehensive, and reflexive methodology section for my thesis in social sciences, where my data was based on ethnographic fieldwork carried out in Paraguay, where I grew up?", reply to author 11/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "What words or expressions are used in academic research within the social sciences to refer to 'lifeways' in the context of climate change and adaptation?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "What is lifeworld?", reply to author 15/08/2024.

ChatGPT version 4.0, OpenAI: openai.com/chat. "For my bibliography, can you give me a summary of all the prompts I have used?", reply to author 15/08/2024.