10 Whose Climate Change Is It?

A Thousand-Year Example of Kali'na Responses to Shifting Coastal Landscapes in the Lower Maroni River

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Introduction

> *Climate change, climate change – everything is because of climate change according to these white people today. But me, I have already experienced coastal flooding and erosion in the past. But then the erosion stopped and things stabilized. My parents, their parents, and so on experienced that too. In the past when things got too difficult, it didn't matter the reason, Kali'na moved places. So I'm not worried, because the same thing is happening again with the beach. I'm not worried, we'll find solutions and I don't think the erosion will continue, it's just a cycle.*
>
> (76- year- old man, Yalimapo, 2018)[1]

Sitting under his carbet[2] in the town of Awala-Yalimapo, this elder recounted the continuous coastal changes that he and his ancestors have experienced over generations. Kali'na people have long resided in the coastal regions of French Guiana and eastern Suriname, which forms part of their broader territory ranging from northeastern Amapa state, Brazil, to northeastern Venezuela (Collomb, 2003). This man evoked Kali'na traditions of mobility to explain how his people have adapted to environmental and geological changes on the coast. This conversation highlights the fact that the perception of climate change as something self-evident and ongoing might not always be shared or perceived as a useful way to understand environmental changes experienced by local people.

Climate change is widely understood as one of the biggest collective challenges of our century. The IPCC and other multi-disciplinary and multi-lateral groups have utilized cutting-edge scientific assessments to project future climate scenarios for our planet. At the same time, the entrance of climate change into public discourse has allowed a variety of media and political interests to reinterpret the concept in relation to their own interests (Fernández-Llamazares et al. 2015). While impressive scientific

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developments have accelerated the rate and precision with which objective climate data can be gathered and analyzed, the meanings and interpretations that emerge from those cumulative data are filtered through social and cultural experiences of individuals and groups (Junqueira et al. 2021; Veteto and Carlson 2014). This can create tension between scientific understandings of climate change, which are touted as objective, impersonal, and apolitical, and the lived experience of local communities, which are socially, geographically, and historically situated (Jasanoff, 2010; Cameron et al. 2021). At the same time, the recognition of the utility of local communities' environmental knowledge for understanding climate change has offered them the opportunity to play a role in the world debate by asserting their own place-based experiences of climate change (Gill and Lantz 2014; Reid et al. 2014).

In this chapter, we present an analysis of Kali'na people's historical and contemporary experiences of environmental and socio-cultural change in the Lower Maroni River. We demonstrate the limitations of the climate change concept in this context, which arise from differences in temporal scales, the dynamic adaptive capacity and strategies of the people, and their deeply personal and sensitive experiences of environmental change. Using a chronological approach as an analytical tool to understand the stages of social–ecological change, we combine ethnographic, archaeological, and historical data to problematize local ideations of climate change. We argue that, as a scholarly phenomenon, climate change distorts temporal and spatial scales. When a global concept like climate change is brought to bear on a local community, it can create ambiguity that does not come from an inability to assimilate the scientific theory of climate change, but rather from the fact that scientific representations of time and space are at odds with Kali'na (or other local communities') ontology. We outline the history of continuous human occupation and geomorphological change in the Lower Maroni River region over the past thousand years and explain how Kali'na people situate themselves today in relation to this history and to the climate change discourse.

Chronicles of a Singular Coastal Region on the Northeastern Edge of Amazonia

The 612 km-long Maroni River is one of the longest rivers of the Guiana shield and forms a large stretch of the border between French Guiana and Suriname. Its estuary opens onto the largest muddy coast in the world, which extends between the deltas of the Amazon and the Orinoco Rivers. The high dynamism of this coast is due to the huge amount of fine sediment (about 800 million tons/year) dumped into the sea by the Amazon River. A part of this sediment is transported northwest along the shore as migrating mudbanks, which are deposited on certain portions of coast and rapidly colonized by mangroves. In areas where mudbanks are lacking, erosion

leads to the disappearance of mangroves accompanied by shoreline retreat rates of tens of meters to several kilometers over periods of a few months to a few years (Anthony et al. 2010; Toorman et al. 2018). These cycles of erosion and deposition have formed the young Holocene coastal plain of the Guianas, which is composed of sand ridges (*cheniers*) supplied by the Maroni River and separated by marshes (Augustinus, 1978; Wong et al. 2009).

The human occupation of sand ridges in the Maroni region is attested to by archeological remains (ceramics, earth ovens, quartz debitage, *terra preta*), with the oldest sites found on the Pleistocene white sand formations and the Holocene river terraces (van den Bel 2015). Awala and Yalimapo villages are located on a Holocene chenier, whose formation has been dated to between 2000 and 1300 years BP (Brunier et al. 2022). The majority of the archeological sites of this region date from approximately 1000 BP onward and have been attributed to the Late Ceramic Age (Cornette 1987; Coutet 2014; van den Bel 2015, 2018). The former inhabitants of this region built raised fields in the savannas for agricultural purposes as a component of a complex subsistence system, similar to many historical processes of landscape transformation practiced by Indigenous societies throughout Amazonia (Balée 2013). These earthworks were created by the Arauquinoid cultures during their eastward migration from the Orinoco region along the Guianese coast between 650 and 1650 AD (McKey et al. 2010; Stier et al. 2020).

Another coastal culture known as Koriabo began just before the first Europeans arrived in the Americas (Barreto et al. 2020). The first descriptions of the "New World," which simply speak of "good" and "bad" inhabitants or describe Arawaks and Caribs, fail to account for the possible diversity of people that inhabited the area. The Guianas were considered unattractive by the Spanish colonists compared to other regions of the Americas that held more valuable resources (gold, silver). Also, the coast was inhabited by many "savages," hence the name *Wild Coast* or *Wilde Kust* used by English and Dutch colonists. Nevertheless, there is very little historical documentation from the region in the 16th century, and what exists is heavily colored by colonial ideas and interpretations. It was only near the end of the 16th century that Indigenous toponyms of the Guianese coast were documented due to the growing interest of the English, Dutch, and French, which eventually led to encroachment in the region (Collomb and van den Bel 2014).

The Maroni River became important for Europeans because of its theoretical potential to provide access to *Manoa*, the mythic city of *El Dorado* (Raleigh 1596). The English captain Lawrence Keymis was sent to search for passages to Manoa, and at the mouth of the *Amonna* (Mana) River he found a "very great" town called "*Iaremappo"* (Yalimapo) inhabited by "*Charibes*" (Keymis 1596). At the mouth of the "*Marawini*" (Maroni) River, Keymis encountered Paracuttos (see Figure 10.2). About 15 years after Keymis' voyage, the Maroni River was visited by Unton Fisher and Humfrey

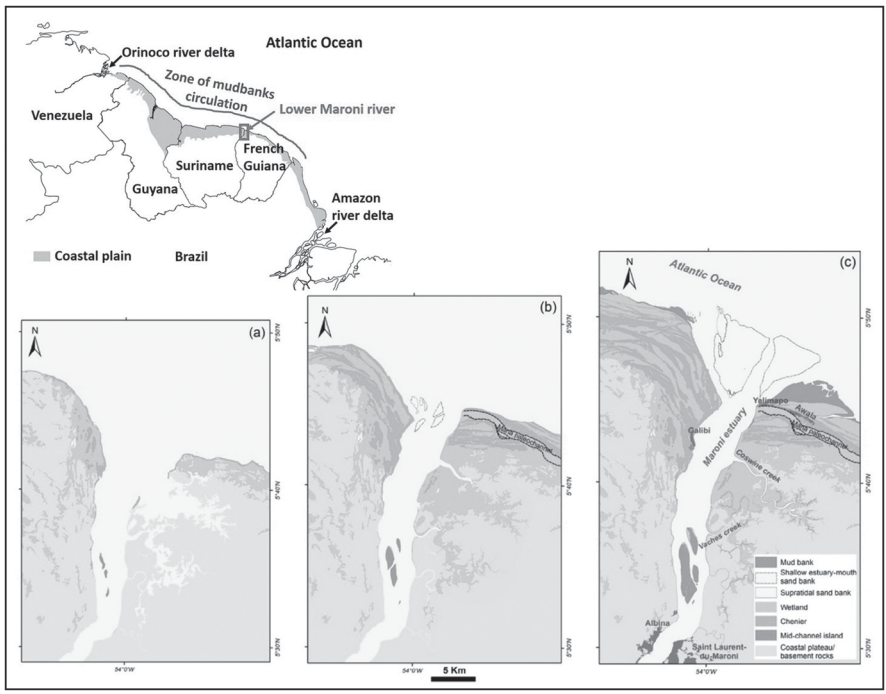

Figure 10.1A–C Schematic three-stage evolution of the Maroni estuary following the Holocene sea level rise. Part A: Young flooded estuary after sea level stabilization and formation of first cheniers. Part B: Median stage of estuarine development showing the increasing development of cheniers and coastal deposition. Part C: Present stage with mud bank settlement and transition to delta associated with Maroni River sand supply (A–C: Gardel et al. 2021; upper left map adapted from Allison and Lee 2004).

Croxton, who mentioned that "*Paragotos, Yaios, Charibs, Arwac*" nations were now inhabiting the lower part (Harcourt 1613).

There is hardly any detailed data for the first two centuries after contact except for a few mentions in logbooks or journals such as those attributed to Jesse de Forest (1625) and David Pietersz de Vries (1634), who also confirmed that various Indigenous groups lived on the lower reaches of the Maroni River. At the end of the 17th century, the Maroni River became a frontier after the Dutch captured Suriname from the English (van den Bel and Collomb 2021), and military outposts were built on both sides.

During the late 18th century, European colonists' maps represent possible movements of people along the coast, especially for the region between the Mana and Maroni estuaries. Other maps have been used by the geomorphologists Plaziat and Augustinus (2004) to outline the geological

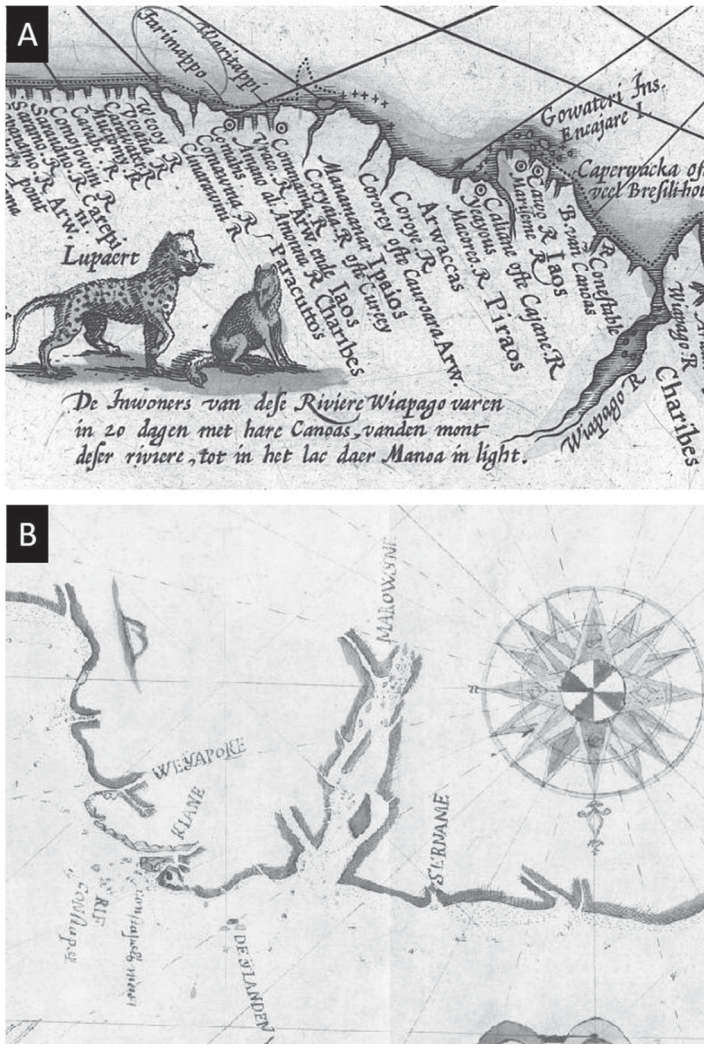

Figure 10.2A–B Part A: The coast of French Guiana at the end of the 16th century showing Iarimappo circled in red. Extract of a map by Jodocus Hondius called Nieuwe Caerte, 1599 (© Collection of maps, HB-KZL 104.05.04, Allard Pierson, Universiteit van Amsterdam). Part B: The mouth of the Maroni River. ©Nationaal Archief, Extract of Map of the Guiana coast between Demerary and the Amazone river by Joos Bastiansen, 1627. Facsimilated in Great Atlas of the West India Company part I p. 143. Archive inventory number : 650. File name : NL-HaNA 4.VEL_650.

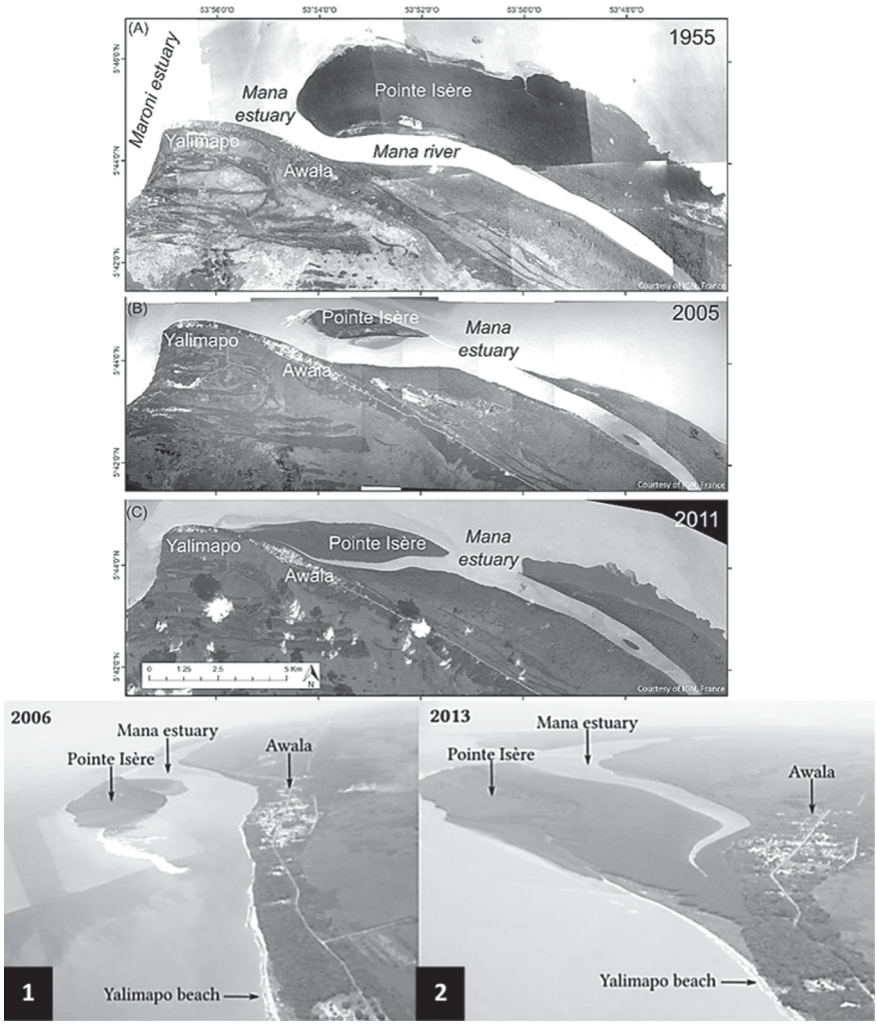

Figure 10.3A–C Parts A and B: Rapid shoreline changes associated with erosion of the mud cape of Pointe Isère between 1955 and 2013. Part C: The progressive closure of the former mouth of the Mana River between Awala and Yalimapo by shore-welded mangrove-colonized mud that has isolated the beach at Awala from the sea (Jolivet et al. 2019a). Part 1: The welding of Pointe Isère to the shoreline. Part 2: The colonization of the shore-welded mudbank by mangroves causing the closure of the mouth of the Mana River (photo credit: Daniel Payeur) (Jolivet et al. 2019b). Reproduced and modified with permission from the Coastal Education and Research Foundation, Inc.

evolution of the coast during the colonial period in French Guiana. During that time, the main geophysical change between the Maroni and Mana rivers was the development of a sandy cape, later named Pointe Isère, and the transformation of the Mana river mouth into an estuary. In the mid-19th century, Kali'na people settled on Pointe Isère after displacement due to the expansion of prison camps around Saint-Laurent-du-Maroni in areas previously used by Indigenous people for subsistence activities (Donet-Vincent 2003). During this same period, the Surinamese town Albina was founded on the site of a previous Carib village called *Kumaka* (Kloos 1971), leading Kali'na people to maintain distance with these new colonial settlements. In the 1850s, Point Isère was subjected to repeated phases of erosion and growth, but significantly extended toward the Maroni river mouth until the 1940s.

The Lower-Maroni Region Since the 1950s: A New Era of Changes?

In the early 1950s, an intense episode of erosion began to affect Pointe Isère, where Kali'na and Creole villages coexisted (Lohier 1972). This episode led Kali'na families to move onto the continental coast where the villages of Aoura[3] and Yalimapo were founded. Mobility continued to make it possible to cope with the morphological and ecological coastal changes. In the late 1950s, mobility was still central to peoples' livelihoods: "*Many young people move from one bank to the other when they get married, and entire villages sometimes emigrate from Surinam to French Guiana and vice versa*." (Hurault, 1963: 146). This erosion period also coincided in the late 1950s with the closure of the penitentiaries, which made some land available once again for Kali'na use. In the early 1960s, the French government started to group Kali'na families in fixed villages near Creole towns and to educate children in "pensionaries" in order to assure their assimilation (Armanville 2012; Guyon 2013). This period gradually brought them into the labor economy, giving men access to wage markets and families access to social assistance that comes with French citizenship (Collomb and Jolivet 2008). At the same time that some Kali'na used the relocation program to take greater control of their socioeconomic circumstances, these social changes slowly coerced them to sedentarize along the coast. Despite this, the traditional strategy of mobility has continued to be employed for coping with coastal change as well as to meet the necessities of social life. For example, between the 1980s and 1990s, Awala inhabitants experienced a phase of erosion that swept away sections of roads, a football field, and a school. The response of some families living on the shore was to move further inland as soon as the flooding reached their homes – which in general marks for them the "right time" to leave. Their displacement was self-organizing, relied on intra- and inter-family solidarity, and was facilitated by the lightweight building materials of their homes.

In 2011, the old mouth of the Mana River was sealed off and a new one slowly formed from a breach on Pointe Isère (Palisse et al. 2022). The beach in front of Awala village was then completely cut off from the sea as mangroves grew over the offshore mudbank (see Figure 10.1). Awala's shore has remained stable until today, whereas Yalimapo's coast recently began to change. The arrival of a mudbank in 2016 and the formation of a sandy spit at the mouth of the Maroni River perpendicular to Yalimapo beach reversed the direction of offshore currents, intensifying the rate of erosion. Since 2019, the beach at Yalimapo has continued to experience significant erosion.

Among all these coastal change, Pointe Isère continues to mark the collective memory since it has been significantly eroded over the last fifty years (Jolivet et al. 2019a). Kali'na people's experiences of the constantly alternating advance and retreat of the coastline is primarily perceived through human time scales and culturally-defined perspectives of time.

Environmental Changes Seen Through the Lens of Local Temporalities

Studies on climate change with local communities often start with observations of local environmental changes, which are then interpreted in light of global climate change (Funatsu et al. 2019). This approach risks simplifying or mischaracterizing how people experience and deal with change in their lived environments, and results from the temporal and spatial differences that often exist between local and global perceptions of environmental change. Climate change and ongoing natural climate variability do not occur at the temporal scale of human experience, and what researchers record "*includes perceptions of environmental change, which is either attributed to global climate change impacts, to local weather patterns, or simply unrecognized as impactful*" (Wolverton et al. 2014: 274). The concept of climate change inscribed in a distant future is confronted with that of a near future experienced every day by people (Rosengren 2018). Within the scientific temporal framework, climate change is presented in terms of a linear conception of time comprising a series of geological eras, which culminate in the current Holocene (or recently proposed Anthropocene) epoch (Bonneuil and Fressoz 2016).

However, in other time perceptions, like those of Buddhism and Hinduism (which believe in a circular universal cycle of destruction and creation) and for many Indigenous peoples, the relation to time is defined by nonlinear temporalities (Wander 2021; Wright et al. 2020). For these groups, time is relational, linking present experiences with historical and ancestral pasts, and embodied across varied spaces, places, and bodies (Chisholm Hatfield et al. 2018; Whyte 2017). The transformation of the relationship to time in the context of climate change can be influenced by local populations' appropriation of knowledge originating within the framework of climate change

awareness campaigns (Hulme 2009). But in many cases, the difficulties of the climate change discourse on a local level lie in the projection of a new and distant global temporality which may not match local people's temporalities (Döring et al. 2022).

In Kali'na language and culture, temporality is not entirely commensurate with geophysical prescriptions of time in the age of climate change. A bio-circular temporality is represented by natural cycles of seasons, days, months, and human lifespans (birth, growing old, death). This place-based temporality is then linked with a symbolic cosmogenealogy based on meaningful historical events (usually recorded in myths and related to individual and collective social experiences), including colonial memories (e.g., travel to France for exposure at the human zoo Jardins d'Acclimatation at the end of the 19th century, religious missions, first contacts with the European colonists, etc.). An asynchronous temporality represented and reachable through dreams and spiritual journeys also exists and has consequences for lived experiences of environmental change. Like in other Amazonian Indigenous societies, the oral tradition is also for Kali'na people a conservatory of geographical knowledge, songs, myths, and stories that are used to teach skills, transmit cultural values, convey news, record family and community histories, and explain the world (Santos-Granero 1998; see also Virtanen et al.'s chapter in this volume). In this sense, the relation to and transmission of history is based on orality (Kloos 1971), and the elders have a role as transmitters to pass it down to the next generation.

People's Perceptions of Environmental Change and Their Responses in Awala-Yalimapo

When people in Awala-Yalimapo notice changes in their environment, they explain and analyze these changes within their own framework of time and in relation to a long history of environmental dynamism. Most individuals challenge linear narratives of a dreadful future of climate destabilization by offering their own accounts of history that highlight resilience in the face of constant change and global uncertainty (Sachdeva 2016). Others challenge science's claims to objectivity by pointing out that measuring is not the same as understanding change:

> *They said it is the Amazon River, they make projections that it will reopen in a few years, that some mudbanks will move down shore a few kilometers, et cetera. But they are not God, things can happen differently, nobody knows!*
>
> (43-year-old man, Awala, 2018)

> *They like to do a lot of studies on the beach evolution. I don't remember how many scientists came to Awala-Yalimapo to study the environment, certainly too many. But what I can say is that their studies don't bring anything useful because we continue to have the same problems that are*

> *not solved. I am a man of action, and for the type of coastal constraints we face here, we have to act quickly and move just like our parents used to do in the past. They don't need to spend money on studies to know that the sea can be a danger if we stay here, they should rather use this money to help us build up somewhere else before it's too late.*
>
> (52-year-old man, Yalimapo, 2021)

This last quote also clearly illustrates one of the key problems with the climate change concept for Kali'na people: since it unfolds on a vast spatial and temporal scale, mitigative action is too slow, out of step with their intimate knowledge and experience of constant coastal change. For this man, the reality of the impacts of coastal change are, in effect, too fast and too relevant for climate change rhetoric to be of use.

An important episode of flooding occurred during the rainy season of March 2022, during which the two main coastal roads were cut off by overflowing rivers and swamps. The floods were heavily covered by the media and roads were closed for several days. The western part of French Guiana, including Saint-Laurent-du-Maroni, was isolated while the Mayor of Mana declared a state of emergency. Awala-Yalimapo, located 20 km from Mana, was not directly affected by the floods; however, the people were worried. In this context, most inhabitants expressed astonishment without mentioning climate change:

> *I never saw such floods before on this road section, it's impressive!*
>
> (53-year-old man, Awala, 2022)

Other inhabitants expressed their surprise at the extent of the flooding, adding that it must be caused by climate change:

> *Yeah, it's climate change! It's unusual, normally we have a little calm period in March before it starts to rain hard again.*
>
> (53-year-old woman, Awala, 2022)

Conversely, another inhabitant stated that there was nothing unusual about the event during the rainy season, and that, rather, the issue was not climate change – it was the defective infrastructure of French Guiana:

> *For me, all of these floods happening now are normal, it's the rainy season, and it already happened before. I don't know why people react each year the same way when they should know what happens during the rainy season. I don't think it is climate change. The problem is the roads are not adapted and well-built to support heavy rains.*
>
> (61-year-old man, Awala, 2022)

The ways that coastal change is understood to be related to climate change differ among different generations of inhabitants:

> *Maybe it's because of climate change, maybe not, I don't know. But what I see every day is that the sea is getting a little bit closer to our houses.*
>
> (55-year-old man, Yalimapo, 2018)

> *I think the coastal changes and risks we encounter might be related to climate change since they say it has an influence on sea level rise, and that some weather phenomena will become more frequent in the future. But maybe it's not climate change, who knows, I'm not a specialist.*
>
> (24-year-old man, Yalimapo, 2018)

This man expresses the ambiguity associated with the drivers of climate phenomena. Climate change may or may not be touted as an explanatory cause of an observed phenomenon. Also, power relations shape his discourse: "*I'm not a specialist*." It shows that sometimes some locals may adopt or be persuaded by scientific discourses, disregarding their own reasoning, place-based knowledge, or oral traditions (Geniusz 2009; Rosengren 2018; Whitaker 2020).

In relation to this recent event, as well as for other episodes of environmental change, the positions expressed by locals might effectively be divided among those who "support" or acknowledge climate change and those who are skeptical and object to it. Depending on the context, people might use climate change as a justification for exceptional events, while others, like in the quote above, point to other causal factors of environmental change. In some cases, neither justification nor rejection of climate change was apparent – some preferred to remain silent. The questions raised by the climate change discourse are further compounded by the media, where complex data and scientific discourses are framed and filtered through emotive and affective language and imagery (Hulme 2009). The diffusion of pictures and videos on TV and social media and the level of education in Awala and Yalimapo play a role in some inhabitants' reception of the climate change discourse. Some seem to know what climate change is and its consequences, but at the same time they express skepticism and uncertainty about its influence on their local level, and they often do not label natural hazards as disasters.

Even after severe coastal flooding in 2019, most inhabitants remained skeptical about climate change and coastal risks (see Figure 10.4).

Furthermore, inhabitants do not perceive coastal and ecological changes as phenomena profoundly compromising their way of life. Conversely, they see them more as natural constraints that they cannot fight against but can respond to by adapting their social practices. Mobility was and still is a form of response, although it may be seen as insufficient or as doing nothing by people external to the community. Adjusting how livelihood activities are practiced is another response. Today, sea access for Awala's fishermen is mainly dependent on empirical observations of tidal dynamics, sandbank movements, and daily weather conditions in order to navigate safely through the estuary to the sea. When there are shortages of high-value large

Figure 10.4 Rapid erosion on Yalimapo beach and beach overwash.

species, fishermen buy new nets to target smaller but still profitable fish while waiting for a return of preferred species. This management of fisheries shows inhabitants' capacity to cope with ecological change on an individual level. Regardless of what responses to environmental change people call upon, their awareness of natural constraints does not lead to radical changes in their behavior (Jean-Jacques 2018).

However, how natural constraints or environmental change are understood differs significantly between the inhabitants who experience them directly and those involved in managing and studying them. For older generations, disasters and risks are often experienced from a spiritual perspective. For them, it is the transgression of social and cultural prohibitions, for example the presence of menstruating or pregnant women on the beach, which offends *palanakɨlɨ*[4] (the spirit of the sea), who then causes coastal erosion or the disappearance of beaches under mudbanks and mangroves. The youngest generations, on the other hand, evoke the explanations of scientists and catalogue these phenomena as natural processes. The choice to speak or not speak about spiritual explanations reveals again that conversations between environmental or risk "specialists" and the public are driven as much by the personal experiences and values of participants as they are by scientific knowledge. In conversations about climate change and coastal risks, inhabitants share or hide their beliefs and values based on whether the expert knowledge of the scientist is resistant or sympathetic to such personal viewpoints. The words, statistics, and visual devices used by scientists to convey complex ideas about future climate scenarios may or may not find traction with the listening public. In some cases, inhabitants may feel judged by outsiders – or

even stigmatized by other community members – for sharing a shamanic worldview, especially since some inhabitants are being converted to monotheistic religions which demonize shamanic beliefs and interven tions by *pɨyai* (shaman).

Although most inhabitants consider coastal changes from the perspective of their own daily reality, the municipality officials have to deal with coastal risks on an administrative level and must apply the French state's temporal framework to make future planning projections. This makes displacement more complicated than in the past. As a French municipality, Awala-Yalimapo is subject to highly restrictive land management rules that are poorly adapted to local realities. In France, every coastal town has a "*coastal risk prevention plan*" that regulates spatial occupation and takes into account climate change, especially predictions about sea level rise. In accordance with this risk prevention plan, the mayor of Awala-Yalimapo recently issued a municipal decree to relocate the inhabitants of Yalimapo because, legally, he must apply the plan as a matter of security. However, although this seems to be a way that French rules can support the Kali'na tradition of mobility, according to the mayor, the decree did not lead to a consensus among the inhabitants, who reacted with incomprehension, further complicating relations between them and elected officials:

> *When Awala was undergoing intense erosion, the inhabitants reacted only when they saw that the sea was too close to their homes. Today in Yalimapo, I'm not surprised they react the same way to the same phenomenon. The old generation's experience of the cyclical process of erosion and deposition gives some credibility to their assumption that the phenomenon won't go further. And the younger generation, because they never really experienced that before, they observe it but don't really have an opinion on it and rely on the experience of the elders, who don't worry.*
>
> (Jean-Paul Fereira, Mayor of Awala-Yalimapo, 2022)

Conclusion

We have shown that the Kali'na have a millennia-long history of responding to social and environmental change primarily through mobility, a response attested to in the literature concerning other Indigenous groups in Amazonia (Alexiades 2009). For most Kali'na people, environmental changes in the lower Maroni River region are related to natural ecological processes and also to human influences through inappropriate behavior toward spiritual entities (see also chapters by Virtanen et al. and Whitaker in this volume). They do not necessarily perceive the actual environmental change as exceptional or linked to broader patterns of "climate change."

In fact, French Guiana's coast, while a little bit urbanized, is still well preserved in contrast to neighboring Guyana and Suriname, where the coastline and coastal space (more densely populated) has experienced significant

transformation since the 17th and 18th centuries (Nijbroek 2012; Vaughn 2018). Coastal dynamics specific to the Guianas, with the movement of mudbanks and associated mangroves, may indeed be impacted by climate change. An acceleration in mudbank migration rates has been observed, increasing from 1 km/year to 2 km/year (Gardel and Gratiot 2005; Abascal Zorilla et al. 2018). In French Guiana, observations by Météo France show an increase in the average sea level of 3.5 mm/year between 1993 and 2012. With sea level rise, storm swells would generate more surges, aggravating the risks of coastal flooding and coastal erosion. However, despite increasing insight into these coastal dynamics, many of the complex mechanisms are still poorly understood. Overall, geomorphologists recognize the unpredictability of shoreline change on the Amazon–Orinoco coast (Jolivet et al. 2019b), as do the Kali'na people.

But the discourse around environmental transformation has been shaped by a positivist standpoint where humans are often perceived as being locked in a struggle for domination with nature, and thus must attempt to control it. The dualistic separation of humans and nature continues to underlie the conceptualization and management of socio-ecological systems. This point of view is present in international calls for collective efforts to reduce greenhouse gas emissions, as if the product of centuries of development could be solved simply by reversing a trend and negotiating with time. With climate change, the idea propagated by the media, political parties, and private companies is that we have already created change in one direction and that through our actions we will be able to limit the damage of this change. This approach reinforces the belief in the superior power of human action over nature, which is reassuring for humanity.

The concept of climate change embodies spatial and temporal scales that are different from those experienced by local people. It is therefore misleading on the part of some scientists and governments to assume that local communities, because they are subject to changes in shoreline mobility similar to those purportedly induced by climate change, will react to these changes in the same way and have the same reactions to the challenges of climate change as scientists and governments themselves. Experiences and reactions to such changes will rather be unique for each community. It should be recognized that an unambiguous vision of climate change by local populations does not exist, since perceptions are influenced by a large number of factors and phenomena that are expressed in different ways (Worliczek 2013).

A critical anthropological approach to temporality recognizes that time is constructed, embodied, implemented, and memorialized differently in each context. Therefore, the purposes of employing the climate change concept in different time-space contexts, especially when it reproduces a different understanding of time, should be questioned. As is sadly often the case with sustainable development, the climate change narrative can also serve as a new injunction, a disguised means of ecological interference with local communities (Hartnett 2021). Thus, the neocolonial potential of climate change

discourse and the top-down management that sometimes follows it can enable the maintenance of unequal power relations and the application of ideologies of environmental dominance (Collins 2020), even when local communities are clearly not responsible for the causes of climate change (Whyte 2017).

Notes

1 All quotations were translated from French conversations with inhabitants of Awala and Yalimapo. Inhabitants expressed their will to be anonymized and chose to give only their gender and age.
2 Wooden shelter, usually with a roof of (woven) palm leaves propped up by wooden stakes and without walls.
3 Ancient French name of contemporary Awala.
4 This is according to the official Kali'na spelling in French Guiana (Renault-Lescure 2008).

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