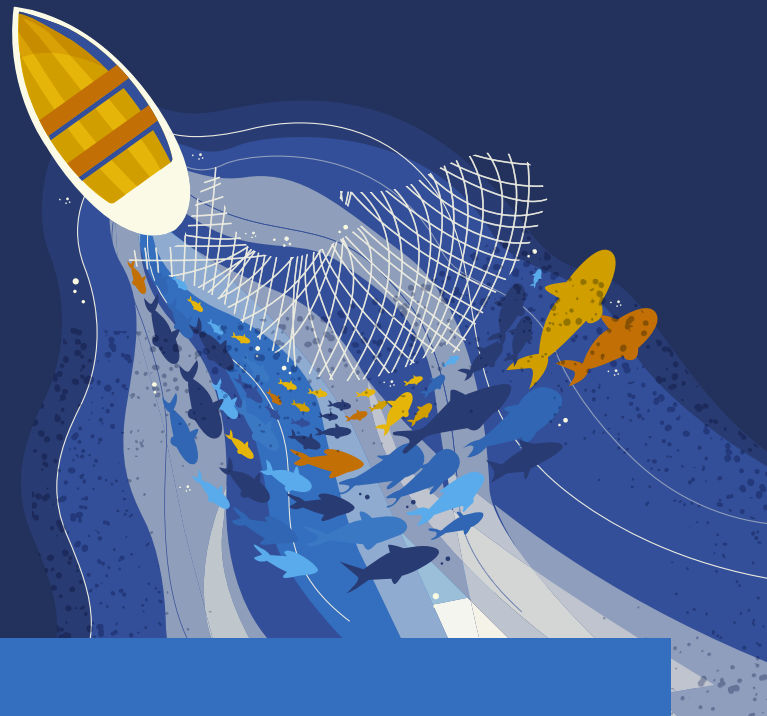


## CASE STUDY

# Belize – MONKEY RIVER



## GEOGRAPHICAL CONTEXT

Monkey River village is a coastal village located in the Toledo District of Belize, a country in Central America known for its rich biodiversity and cultural heritage.<sup>1</sup> The village is situated at the mouth of Monkey River, a significant coastal watercourse in southern Belize that originates from the Maya Mountains and flows into the Caribbean Sea. The community is predominantly Creole, with a strong tradition of fishing and tourism. The village, once a thriving town with approximately 2500 residents at the end of 19th century,<sup>2</sup> has been reduced to a settlement with around 52 households and 250 people.<sup>3</sup>

## 1

### ECOLOGICAL AND TERRITORIAL DISRUPTION FROM CLIMATE CHANGE AND HUMAN ACTIVITY

Monkey River village is facing significant ecological challenges, primarily due to the combined effects of climate change and human activities. The community is struggling to preserve its culturally rich environment, as the landscape erodes and the sea encroaches, potentially leading to complete relocation of its residents:<sup>4</sup>

1 Belize's Coastal Communities Face Existential Threat from Climate Change," UN News, January 26, 2023, <https://news.un.org/en/story/2023/01/1132262>.

2 *Community Development Plan: Monkey River Village*, Port Honduras Marine Reserve Project, Fundación para la Conservación de los Recursos Naturales y el Desarrollo Sostenible (Fondo SAM), [https://fondosam.org/nopublic/library-marfund/Sanctuary/Phase\\_I/Consultancies\\_in\\_the\\_four\\_Protected\\_Areas/Port\\_Honduras\\_Consultancies/Community%20Development%20Plan.pdf](https://fondosam.org/nopublic/library-marfund/Sanctuary/Phase_I/Consultancies_in_the_four_Protected_Areas/Port_Honduras_Consultancies/Community%20Development%20Plan.pdf). The village was known historically as a booming port community for the banana industry, with a population of almost 2500 inhabitants at the end of the 19th century. The main sources of income for households were from the banana industry, logging and export of rice. The decline of the banana industry forced most of the population to relocate in search of jobs. The Monkey River village was officially declassified as a village in 1981.

3 Caribbean Lifestyle Belize, "Saving Monkey River: The Historic Kriol Village Battling Erosion," *Medium*, July 13, 2021, <https://medium.com/@caribbeanlifestylebelize/saving-monkey-river-the-historic-kriol-village-battling-erosion-1ad38d1e9850>.

4 "Monkey River Crumbling into the Sea," *Channel 5 Belize*, October 12, 2021, <https://archive.channel5belize.com/archives/230044>.

- **SEA-LEVEL RISE SEA TEMPERATURE RISE AND COASTAL EROSION:** The community members have been witnessing a sea level rise 3–4 mm per year since the mid-1980's.<sup>5</sup> This rise of sea-level is causing coastal erosion, leading to the loss of land and disappearance of beaches. Homes, soccer fields, and gravesites have been submerged. Increasing sea temperatures have already led to massive coral bleaching within the Belize reef system, reducing the live coral cover in the region.<sup>6</sup>
- **EXTREME WEATHER EVENTS:** The community has been repeatedly impacted by extreme weather events and natural disasters, including hurricanes Mitch (1998) and Iris (2001). There was also an earthquake which took place in 2009 and damaged 27 houses.<sup>7</sup> These events have exacerbated the existing problems related to erosion and accelerated the loss of land. Fishers report that the seas are growing increasingly rough.

Anthropogenic activities – including sand mining, agricultural expansion and deforestation – have significantly accelerated coastal erosion. These practices disrupt the natural sediment supply that is critical for replenishing beaches and stabilizing shorelines. For example, river water abstraction for irrigating banana, citrus, and mango farms diminishes the river's flow and reduces its capacity to carry sediment to the coast.<sup>8</sup> Similarly, sand extraction for construction deepens and widens the riverbed, altering its natural dynamics and undermining the stability of adjacent land. Aquaculture intensifies water extraction and industrial salt mining further intensifies erosion, contributing to habitat degradation and fragmentation, which in turn jeopardizes the survival of local species.<sup>9</sup>

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5 "Dr. Colin Young: Sea Level Rise and Flooding at Monkey River," YouTube video, 1:00, posted by News 5 Belize, October 12, 2021, [https://www.youtube.com/watch?v=F\\_zxnr-L6Gs](https://www.youtube.com/watch?v=F_zxnr-L6Gs). According to Dr Colin Young, Executive Director, Caribbean Community Climate Change Center (CCCCC); „The sea level is rising, and it rises based on what we have been able to ascertain as three to four millimeters per year. While that sounds very tiny, the rule of thumb is that the relationship between sea level rise and flooding is one to a hundred. So, if there is a one-inch rise in sea level, it floods a hundred inches of beach.”

6 Brian Handwerk and Lise Hafvenstein, "Belize Reef Die-Off Due to Climate Change?" *National Geographic News*, March 25, 2003, [http://news.nationalgeographic.com/news/2003/03/0325\\_030325\\_belizereefs.html](http://news.nationalgeographic.com/news/2003/03/0325_030325_belizereefs.html).

7 *Port Honduras Marine Reserve Management Plan 2017–2021*, Southern Environmental Association, p. 36, <https://rris.biopama.org/sites/default/files/2021-02/PHMR%20Management%20Plan%202017%20-%202021.pdf>.

8 Eugene Ariola, quoted in "Monkey River Crumbling into the Sea," *Channel 5 Belize*, October 12, 2021, <https://archive.channel5belize.com/archives/230044>.

9 Dr. Colin Young, quoted in "Monkey River Crumbling into the Sea," *Channel 5 Belize*, October 12, 2021, <https://archive.channel5belize.com/archives/230044>. Dr. Young noted that sand mining "widens the river channel because as you pull the material, the channel of the river is getting wider and wider and it is getting deeper and deeper."



**THE IMPACTS OF CLIMATE CHANGE ON FISHER PEOPLES'  
HUMAN RIGHTS, LIVELIHOODS AND WAYS OF LIVING**

A remote village, primarily accessible by boat and characterized by minimal infrastructure, including just two streets and no cars,<sup>10</sup> serves as a compelling example of climate change impacts. The community is grappling with growing strain due to the escalating effects of rising sea levels, with coastal erosion and frequent flooding posing serious challenges. Its dependence on boat transport further exacerbates this vulnerability, as high waters threaten both access routes and internal mobility. Already, property loss and displacement are creating daily hardship and heightening vulnerability for the fisherfolk. These pressures compromise access to food, undermining the realization of several human rights:

### **RIGHT TO FOOD AND NUTRITION**

Coastal erosion is eliminating beach and nearshore areas, which are vital habitats for many marine species. This degradation reduces the availability of fish and other marine resources that local fisherfolk depend on for their income and food.<sup>11</sup> Further contributing to the decline in fish populations, water diversion for agriculture and deforestation disrupt sediment flow and alter river ecosystems, negatively affecting fish habitats. Nutrient runoff from upstream plantations, including pesticides and chemicals, also leads to algal growth on coral reefs,<sup>12</sup> deteriorating habitats for key species such as lobster, the area's most commercially valuable catch.<sup>13</sup> As one fisher explained, increased slime and fungus on rocks—caused by environmental changes—drive lobsters away from their preferred habitats. Aside from lobsters, fishers also report that conch and finfish are also declining, while species such as hog snapper and sawfish have disappeared.

In the village, about 20 fisherfolk fish daily to make ends meet. Interviewed fishers emphasize that climate factors like sea level rise, heavy rainfall, warmer seas, and changes in salinity are pushing fish further out to deeper waters. Ecosystem disruptions mean fish migrate to new areas. Fisherfolk must constantly adjust and search for new grounds, which costs them both time and fuel. One fisher noted that due to rough seas, fishers are forced to reduce the number of fishing trips. Before COVID-19, they could catch 500 pounds of fish over 6 months, a figure that has dropped to 200 pounds in same period despite best efforts. This implies an income reduction of more than half. To cope, many households supplement fishing income by working in tourism-related jobs (e.g. cooking, guiding, and running homestays) and by

10 "10 Interesting Things About Monkey River," *Chabil Mar Villas*, accessed July 22, 2025, <https://chabilmarvillas.com/10-interesting-things-about-monkey-river.html>.

11 "Monkey River Living in the Shadows of Erosion," *Channel 5 Belize*, September 2, 2009, <https://archive.channel5belize.com/archives/6064>.

12 Elizabeth A. Graham and Scott Simmons, "What We Have Lost and Cannot Become: Societal Outcomes of Coastal Erosion in Southern Belize," *ResearchGate*, 2015, [https://www.researchgate.net/publication/273300424\\_What\\_we\\_have\\_lost\\_and\\_cannot\\_become\\_Societal\\_outcomes\\_of\\_coastal\\_erosion\\_in\\_southern\\_Belize](https://www.researchgate.net/publication/273300424_What_we_have_lost_and_cannot_become_Societal_outcomes_of_coastal_erosion_in_southern_Belize).

13 Andrew Baird et al., "Coral Reef Degradation and Reef Management in Belize," *Global Environmental Change* 31 (2015): 111–122 <https://www.sciencedirect.com/science/article/abs/pii/S0959378015000321>

selling diversified items (e.g. fudge, coconut oil, and small homemade food items). Although fishing families have access to markets, rising costs for essentials (e.g., food and gasoline) since early 2021 have squeezed their incomes, while fish prices remain low or stagnant.<sup>14</sup>

Most of their catch is sold to either wholesale operators or to private fishing cooperatives in nearby towns, such as Independence or Placencia, depending on the fish species. Finfish, however, is sold to whoever offers the best price. Due to especially low prices this year, one fisher reported barely fishing at all. Since fillet fish and lobsters are high-value products, they are rarely consumed locally and are instead reserved for sale to maximize income.

Policy shifts are also impacting traditional catch. Another fisher pointed to the ban – Statutory Instrument No. 158 of 2020 titled Fisheries Resources (Gill net prohibition) Regulations, 2020<sup>15</sup> – as a reason certain fish, like mackerel, are now harder to catch. Fishers used to consume mackerel, a cheap protein source (around USD 2–2.50 per pound) that could provide 12 slices from just one fish, enough to feed an entire family. Alternative species, like snapper, cost USD 5 per pound or more, putting strain on low-income households.

With fish scarce or expensive, families turn to cheaper, lower-quality foods like instant noodles or pigtail, which negatively impacts nutrition and health. One fisher laments: “When you’re hungry, you will find food – but the type of food changes.” A fisher compared environmental change to plugging in a saw while the light is on: “It pulls current, and the light starts to dim or flicker.” This illustrates how any new element in a system causes imbalance, just as environmental changes disrupt fishing patterns.

Sea level rise and extreme weather events pose further threats by damaging fishing boats and displacing traps. Yet, small-scale fishers often lack access to affordable insurance, making them highly vulnerable to losses. While governments sometimes step in to offer disaster support when private insurers decline coverage, current disaster management remains largely reactive rather than preventative. Additionally, fishers are increasingly forced to travel farther offshore to maintain catches, which may warrant government incentives for fleet expansion.<sup>16</sup>

Women play a key role in the community, contributing through domestic responsibilities as well as active involvement in tourism and fishing. The presence of a primary school, staffed by local community teachers, also reflects local efforts to maintain social cohesion.<sup>17</sup>

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14 International Monetary Fund, *Belize: Selected Issues*, IMF Country Report No. 24/125 (April 24, 2024).

15 Government of Belize Press Office, “Statutory Instrument Signed into Law to Ban Gill Nets from Marine Waters,” November 6, 2020, <https://www.pressoffice.gov.bz/statutory-instrument-signed-into-law-to-ban-gill-nets-from-marine-waters/>.

16 Patrick McConney, Hazel A. Oxenford, and Alasdair Harris, “Impacts of Climate Change on Fisheries in the Coastal and Marine Environments of Caribbean Small Island Developing States (SIDS),” *ResearchGate*, 2017, [https://www.researchgate.net/publication/316929805\\_Impacts\\_of\\_Climate\\_Change\\_on\\_Fisheries\\_in\\_the\\_Coastal\\_and\\_Marine\\_Environments\\_of\\_Caribbean\\_Small\\_Island\\_Developing\\_States\\_SIDS](https://www.researchgate.net/publication/316929805_Impacts_of_Climate_Change_on_Fisheries_in_the_Coastal_and_Marine_Environments_of_Caribbean_Small_Island_Developing_States_SIDS).

17 Sophia Rabliauskas, “Indigenous Resistance and the Roots of Climate Justice,” *Canadian Dimension* 50, no. 1 (2016): 23–26, <https://www.jstor.org/stable/26269713>.

## RIGHT TO TERRITORIES AND RIGHT TO HOUSING

Environmental changes and displacement profoundly impacted the community's well-being. The loss of homes and land disrupts social networks and limits access to essential resources, leading to psychological distress – especially among women, who often carry the responsibilities of caregiving and household management. Studies show a strong correlation between displacement and increased rates of anxiety, depression, and post-traumatic stress disorder (PTSD) in women.<sup>18</sup> One resident described living near an eroding coastline with her disabled mother as a “constant source of fear and uncertainty.” Temporary seawalls have only marginally slowed erosion, and the community continues to call for stringer protective measures to safeguard their homes and livelihoods.

Residents have reported losing large plots of land,<sup>19</sup> with around 15 houses partially or completely washed away. For instance, one 65-year-old resident watched the land beneath her home erode, leaving her and her family frightened and unsure of what to do.<sup>20</sup> The erosion has displaced over a dozen families during the last 10 years, with some residents having to move multiple times due to the erosion.<sup>21</sup> Fisherfolk families who moved to the nearby village of Independence continue to return to Money River to fish, adding travel-related costs to their livelihoods.

## RIGHT TO CULTURE

The erosion has had profound cultural impacts, including the loss of ancestral lands and the destruction of cultural sites. Many villagers have watched the graves of their loved ones be swept away by the river before their eyes. These losses are causing deep emotional distress and a powerful sense of grief within community. „My grandma and my grandfather are now washed out in the sea... You know, their graves are gone. That really hurts.”

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18 United Nations High Commissioner for Refugees (UNHCR), *Official Website*, <https://www.unhcr.org/>.

19 Some say two rows of lots of land and beach have been washed way. In one interview, an elder man said a mile of land has been gone.

20 “Coastal Erosion Threatens Homes in Monkey River,” *Channel 5 Belize*, June 8, 2023, <https://archive.channel5belize.com/archives/252726>.

21 “Beachfront Erosion in Monkey River,” *Ambergris Caye Belize Message Board*, <https://ambergriscaye.com/forum/ubbthreads.php/topics/523478/beachfront-erosion-in-monkey-river.html>.

The Government of Belize has several climate and environmental laws, programs, and policies which aim to address climate change impacts. This includes the 2023 National Climate Change Policy, Strategy and Action Plan (NCCPSAP), the National Adaptation Plan, and its commitments under the Paris Agreement through its Nationally Determined Contribution (NDC).<sup>22 23 24 25</sup> These frameworks identify the coastal zone, fisheries, and settlements as priorities for adaptation and resilience measures, calling for integrated watershed management, restoration of natural barriers like mangroves, and robust coastal zone managements.

However, the experience of the Monkey River fishing community demonstrates significant gaps in implementation and enforcement. In 1990, the Government of Belize responded to the escalating crisis of coastal erosion by constructing a temporary breakwater structure with wooden poles and tires to protect the village from waves and subsequent erosion. Aside from installing physical protection against erosion, government action has been limited. While the villagers attempted to negotiate water usage with the agricultural firm, the government appeared reluctant to intervene in support of the villagers due to the economic contribution of large-scale agriculture.<sup>26</sup>

This period coincided with Belize's early conservation efforts, which led to the establishment of its first marine protected area (MPA) – Hol Chan Marine Reserve – in 1987. One of the MPAs near the Monkey River Village is the Port Honduras Marine Reserve (PHMR). Established in 2000, PHMR is a semi-estuarine system covering Monkey River and Rio Grande, a neighbouring town, extending approximately 8 kilometers out to sea.<sup>27</sup> A fisher from Southern Belize argued that the creation of PHMR contributed to the displacement of people in Punta Negra, a nearby village, illustrating how conservation can erase „human

22 Government of Belize, *Climate Change and Carbon Market Initiatives Bill*, 2023, National Assembly of Belize, October 2023, <https://www.nationalassembly.gov.bz/wp-content/uploads/2023/10/Climate-Change-and-Carbon-Market-Initiatives-Bill-2023.pdf>.

23 "Belize: Climate Change and Law," *Climate Change Laws of the World*, Grantham Research Institute on Climate Change and the Environment, accessed July 22, 2025, [https://www.climate-laws.org/rails/active\\_storage/blobs/eyJfcmFpbHMiOnsibWVzc2FnZSI6IkJBaHBBbWtNlwiZXhwIjpuZDVsLCJwdXkiOiJibG9iX2lkIn19---a35ec7efb94800ffc45a3ef8ab4aee2064d87729/blz169290.pdf](https://www.climate-laws.org/rails/active_storage/blobs/eyJfcmFpbHMiOnsibWVzc2FnZSI6IkJBaHBBbWtNlwiZXhwIjpuZDVsLCJwdXkiOiJibG9iX2lkIn19---a35ec7efb94800ffc45a3ef8ab4aee2064d87729/blz169290.pdf).

24 National Integrated Water Resources Authority (NIWRA), *Water Sector Adaptation Strategy and Action Plan for Belize*, [https://wimp.nms.gov.bz/WIMPv2.0/file\\_uploader/files/niwra/Water\\_Sector\\_Adaptation\\_Strategy\\_Action\\_Plan\\_Belize.pdf](https://wimp.nms.gov.bz/WIMPv2.0/file_uploader/files/niwra/Water_Sector_Adaptation_Strategy_Action_Plan_Belize.pdf).

25 Government of Belize, *Updated Nationally Determined Contribution (NDC)*, submitted to the United Nations Framework Convention on Climate Change (UNFCCC), June 2022, <https://unfccc.int/sites/default/files/NDC/2022-06/Belize%20Updated%20NDC.pdf>.

26 Marianne Karlsson and Ingrid Öborn, "Local Collective Action: Adaptation to Coastal Erosion in the Monkey River Village, Belize," in *Global Environmental Change and Human Security*, ed. Matthew Osman (Oslo: Global Environmental Change Project, 2009), 103, [https://www.researchgate.net/profile/Marianne-Karlsson-4/publication/274736767\\_Local\\_collective\\_action\\_Adaptation\\_to\\_coastal\\_erosion\\_in\\_the\\_Monkey\\_River\\_Village\\_Belize/links/5a09a027458515afc7b019d5/Local-collective-action-Adaptation-to-coastal-erosion-in-the-Monkey-River-Village-Belize.pdf](https://www.researchgate.net/profile/Marianne-Karlsson-4/publication/274736767_Local_collective_action_Adaptation_to_coastal_erosion_in_the_Monkey_River_Village_Belize/links/5a09a027458515afc7b019d5/Local-collective-action-Adaptation-to-coastal-erosion-in-the-Monkey-River-Village-Belize.pdf)

27 Belize Fisheries Department, *Port Honduras Marine Reserve*, accessed July 22, 2025, <https://fisheries.gov.bz/phmr/>.

habitats” in pursuit of protecting nature. These dynamics are now amplified under the Blue Bonds for Ocean Conservation initiative, which has become a global model for financing marine conservation but has also attracted criticism as a “debt-for-nature swap” that prioritizes global conservation metrics. Under its Fourth Milestone, Belize expanded its biodiversity protection zones by an additional 4.9% to meet the Blue Bond’s 25% ocean protection target by November 2024.

In August 2024, the government held several public consultations (primarily with conservation NGOs, tour companies, and some fishers) to receive feedback on the zones proposed for expanded biodiversity protections. Critics argue that the consultations were hurried and lacked both transparency and adequate participation by fishers. Fishers, including those from Monkey River Village, emphasize that this rushed effort to meet conservation targets will further threaten their livelihoods. It remains to be seen how these expanded conservation areas will further impact fishers’ access to traditional fishing waters and their ability to maintain sustainable livelihoods.<sup>28</sup>

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<sup>28</sup> Noreen Welch, “Rushed Conservation: Is Belize’s Blue Bonds Deal Sacrificing Fishermen for Global Praise?” *Earth Journalism Network*, October 4, 2023, <https://earthjournalism.net/stories/rushed-conservation-is-belizes-blue-bonds-deal-sacrificing-fishermen-for-global-praise>.

The fishing community of Monkey River Village experienced accelerating coastal erosion that initially prompted individual household-level adaptations. Residents implemented informal protective measures, including constructing makeshift rock barriers, relocating vulnerable assets, and reinforcing structures with available materials. However, these individual responses proved insufficient as erosion rates intensified. The community's approach shifted dramatically when critical infrastructure became threatened. The erosion of homes and cemetery served as catalytic events that galvanized collective action, pushing the government to install temporary coastal defenses in 2009. While the construction had technical limitations, it represented a significant policy response directly attributable to community advocacy efforts. Building on this success, the community established the Monkey River Watershed Association (MRWA) in 2018. Through MRWA, the villagers partnered with the United Nations Development Programme to install "geotubes" in front of the most threatened properties.<sup>29</sup> Despite this, these measures remain deeply inadequate. The Monkey River Village fishing community continues to bear the brunt of climate impacts and urgently calls on the government to take decisive, human rights-based actions – both immediate and long-term – to address coastal erosion and associated impacts.

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<sup>29</sup> United Nations Belize, "Saving a Belize Village from Man-Made Erosion," *UN Belize*, accessed July 22, 2025, <https://belize.un.org/en/238073-saving-belize-village-man-made-erosion>.



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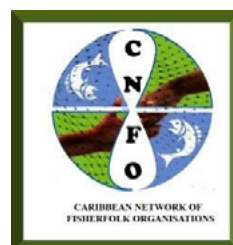
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