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UFR- Human and Social Sciences

DECODE PROJECT

REPORT

The use of endogenous knowledge in the resilience of fisher-divers facing climate change on the southwestern coast of Côte d'Ivoire: the case of the village of Bliéron

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Project Manager
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GENERAL CONTEXT

- **Geographical and administrative location of the study area**

The study area in the department of Tabou is located approximately 500 km from the city of Abidjan, in the extreme southwestern corner of the **Republic of Côte d'Ivoire**, in the **San-Pédro region**, within the **district of Bas-Sassandra**, in the Cavally region. It forms a border area with Liberia. Bordered by the Atlantic Ocean to the south, the Tabou region is characterized by low-lying, marshy coastal terrain, dense forest, and a humid equatorial climate. Administratively, the department was established in 1969 during the first major administrative reorganization of post-colonial Côte d'Ivoire (Akindès, 2004). It comprises several sub-prefectures, including Tabou, Grabo, Djouroutou, Olodio, and Prollo. The area is populated by the Kroumen people. (See Map No. 1). Much more than just a geographical area, this zone is the living environment of a community (the Kroumen) rooted in a unique history and environment.

- **Brief history of the Kroumen settlement**

We are the Kroumen, one of the main ethnic groups living in the department of Tabou, and belong to the large Krou family, a linguistic and cultural group shared with the Bété, Dida, and Wê peoples. Our history dates back to migrations from what is now Liberia, specifically from the Cape Palmas region. Our ancestors gradually settled along the coast of present-day Côte d'Ivoire from the 17th century onwards in search of fertile agricultural land, to escape inter-ethnic conflicts or because of colonial pressures in Liberia.

The Kroumen and coastal navigation

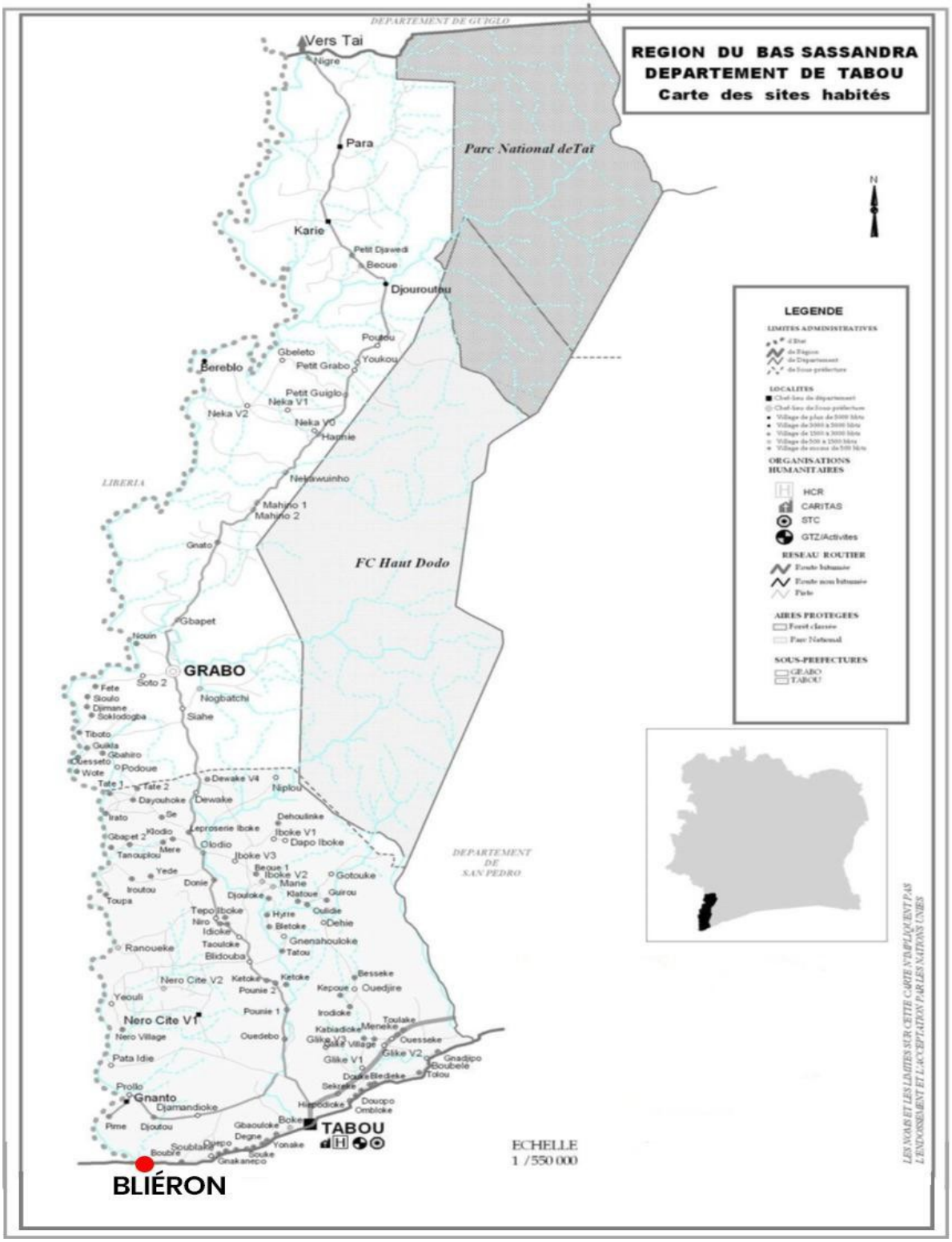
Our history is closely linked to the sea. Our ancestors were renowned seasoned sailors and were taken on board European ships, particularly British and French vessels, from the 18th century onwards. They were sought after for their endurance, their knowledge of the African coastline and their loyalty, and played a crucial role in maritime trade, often serving as intermediaries between Europeans and local populations.

- **Social and cultural organization**

We are structured into patrilineal clans called *"fagnon"* and speak Kroumen Tépo or Kroumen Plapo, depending on the locality. Our social system is based on respect for elders,

initiation rites, and strong community cohesion. The initiation of young people, called *"Guezon,"* is a significant rite of passage in our culture. The village is the fundamental unit, led by a chief assisted by notables.

MAP No. 1: MAP OF BLIERON AND INHABITED SITES



- **Means of subsistence**

Our livelihoods, like those of all Kroumen living in the Tabou department, are closely linked to the coastal and forest environment. They are based on traditional and modern economic activities connected to the land, the Cavally River, the sea, and available natural resources. These include fishing, agriculture, forestry, gathering, trade, and activities related to the migration of some of our brothers to different regions of Côte d'Ivoire and beyond. By category:

Fishing: is one of the main means of subsistence for the Kroumen, due to their location along the Atlantic Ocean and the Cavally River. They are renowned for their ancestral maritime skills. They practice: artisanal fishing in canoes (using nets, traps, lines, etc.), collecting crustaceans and mollusks, and selling fresh or smoked fish in local markets and in other cities in Côte d'Ivoire and elsewhere. According to Zadi, *for the Kroumen, the sea is a source of life, identity, and trade* (Zadi, 1992).

Subsistence and cash crops: The Kroumen practice subsistence agriculture based on slash-and-burn farming. They grow cassava, yams, rice, plantains, corn, and vegetables. They have also turned to cash crops such as cocoa, oil palm, coffee (in decline), and rubber (increasingly introduced by agro-industrial companies). "The Kroumen peasant economy is based on a balance between food crops and cash crops, adapted to the region's climatic cycles" (Akindès, 2004).

Forestry and gathering: due to the dense rainforest that characterizes the region, the Kroumen also derive their livelihood from traditional hunting (small game, rodents, antelopes), gathering wild fruits, honey, and mushrooms, collecting medicinal plants used in traditional medicine, and artisanal woodworking for construction and crafts (sculpture, wooden objects, etc.).

Local crafts: Crafts are a complementary activity. The Kroumen make canoes, nets, and paddles (fishing-related activities), wooden objects (spoons, masks, stools, etc.), mats, baskets, and bags woven from plant fibers.

Local and cross-border trade: the Kroumen, who live not far from the border with Liberia, are involved in trade: selling fish, wood, and food crops to Liberia, purchasing manufactured goods, and small-scale trading in the local markets of Tabou, Grabo, Djouroutou, etc.

Migration and salaried employment: with changing economic structures, some Kroumen leave to work on rubber or cocoa plantations, while others migrate to cities such as San Pedro or Abidjan to work in the service sector, the civil service, or as laborers. Temporary emigration, particularly among young people, is a strategy for economic adaptation, with remittances supporting rural families.

- **Colonization and contact with the colonial administration**

During the colonial period, the French established an administrative post in Tabou in the 1890s to assert their authority over the southwest coast. However, our ancestors, drawing on their mobility and experience in dealing with Europeans, resisted several attempts at subjugation. Our parents' maritime skills often placed them in a position of strength when negotiating with the colonial powers. In this regard, in 1931, Swiss missionary Maurice Leenhardt noted that "although the Kroumen were coastal people, they were not passive in the face of the arrival of the Europeans; they knew how to take advantage of their mastery of navigation." (Leenhardt, 1931).

- **Post-colonial period and contemporary challenges**

Since Côte d'Ivoire gained independence in 1960, the department of Tabou has experienced limited development due to its isolation and distance from the Ivorian economic center. However, its natural resources (forests, fishing, oil palms, etc.) make it an area with great potential.

GENESIS OF THE DECODE PROJECT

This project originated from a significant encounter between science, heritage, and ecological awareness. On September 20, 2024, during an underwater archaeology research mission conducted in the coastal villages of southwestern Côte d'Ivoire, Professor Kiénon-Kaboré, an archaeologist and specialist in endogenous knowledge in sub-Saharan Africa, was emotionally moved by the tangible signs of local environmental vulnerability: coastal erosion, the disappearance of seaside habitats, the village of Bliéron following the tides, amplified by the effects of climate change, the

the gradual disappearance of marine ecosystems, but also the loss of traditional knowledge related to the sea. Beyond the archaeological remains discovered under the water, it was the quiet resilience of the coastal populations that made a deep impression on her. It was therefore in response to the climate emergency, evident in the daily actions of the inhabitants, that she came up with the idea for a project that would integrate endogenous knowledge, its transmission, and the fight against the effects of climate change**.**

The first exchanges with the inhabitants of the village of Bliéron began following the thesis work of doctoral student Grodji Grâce, carried out during the last quarter of 2023. This prospecting mission aimed to document the presence of shipwrecks and submerged remains in the area, especially those in the possession of local residents.

During interviews with local focal points, particularly at the former colonial settlement near the mouth of the sea and the Cavally River, a resident named Sondé spontaneously expressed his concern*: "The sea is advancing rapidly there."* These comments caught the professor's attention, and she immediately requested a visit to the coastline. During this exploration, young Sondé led the team to the ruins of old dwellings, now largely submerged by the sea.

Faced with this worrying situation, Professor Kaboré-Kiénon emphasized the need for a research project focused on analyzing the impacts of climate change, particularly coastal and river erosion, on communities in southwestern Côte d'Ivoire. The village of Bliéron, located between the Cavally River and the Atlantic Ocean, was thus selected as a priority study site. It should be noted that two villages had caught Professor Kiénon-Kaboré's attention in September 2024 during archaeological prospecting. In addition to Bliéron, the coastal village of Tolou, located about 10 km southeast of the town of Tabou, was also identified as a priority study area. This village is home to lobster fishermen and divers. Their traditional techniques for catching lobsters and their resilience in the face of climate change deserve to be documented. However, limited financial resources for this project forced us to focus our research on the village of Bliéron.

In these last villages, at the end of the mission, the professor informed the community of the existence of Law No. 2023-595 of June 7, 2023, particularly Chapter 3 relating to the protection and promotion of underwater cultural heritage. In this context, several inhabitants revealed that they had ancient objects that they had recovered during their fishing activities. These artifacts, which were handed over to the research team, now enrich the permanent collection of the first archaeological museum in Côte d'Ivoire and French-speaking West Africa, located in

Singrobo-Ahouati. These fisher-divers handed over the archaeological remains they had recovered from the water without expecting anything in return from the researchers. Their collaboration, honesty, and interest in preserving their underwater heritage were a catalyst for this project.

The project is designed to be an interdisciplinary, collective, and community-based response to the region's environmental and social challenges. Driven by the ambition to combine scientific research, community engagement, and ecological transition, DECODE is firmly committed to local development that respects the cultural and ecological realities of coastal populations. It was this respect for communities, their knowledge, and their cultures by the DECODE project and its leaders that led the professor to accept this collaboration with his colleagues in Canada.

INTRODUCTION

Faced with the accelerating effects of climate change, coastal populations in West Africa, particularly those who depend on small-scale fishing for their livelihoods, are confronted with the increasing vulnerability of their ecosystems and means of subsistence. In Côte d'Ivoire, the coastline is particularly exposed to climate hazards such as sea level rise, coastal erosion, salinization of land and river waters, changes in fishing cycles, and increased rainfall variability. In this context, the resilience of local communities, especially those in the southwestern villages, particularly the people of Bliéron, caught between the sea to the south and the Cavally River to the northwest, depends largely on their ability to mobilize endogenous knowledge, the result of long experience interacting with their environment. It was with this in mind that a field mission was conducted from July 11 to 18, 2025, in the village of Bliéron, a coastal locality in the sub-prefecture of Tabou, in southwestern Côte d'Ivoire.

This mission is a team of researchers (Dr. Goeti Bi Maxime and doctoral student in underwater archaeology, Ms. Grodji Désirée Raymonde) led by Professor Kaboré-Kienon Timpoko Hélène, as part of a multidisciplinary research program focusing on endogenous knowledge and the resilience of coastal populations. It is a continuation of an existing collaboration between this team from Félix Houphouët Boigny University and the communities living near the coast in the department of Tabou, particularly those in the village of Blieron. The cooperation began during previous underwater archaeology research. From the very first exchanges, the fishermen were able to share their extensive knowledge of the area and indicate sites that were important to them.

heritage and raise awareness of the ecological and cultural issues related to the sea and the Cavally River. This relationship of trust has fostered a rich dialogue, in which the local knowledge of the inhabitants enriches scientific research, in a spirit of sharing and collaboration. They were aware of the importance of their knowledge and were willing to share it with the world, and in particular with us researchers. They were also happy to see our interest in this knowledge. For them, their knowledge had always been known and passed on within their community. They admitted that we were the first to take an interest in it.

The overall objective of this mission was to document, analyze, and promote the traditional knowledge and practices developed by the fishermen of Bliéron to adapt to the ecological changes brought about by climate change. More specifically, the aim was to identify local environmental indicators, adapted fishing techniques, traditional weather forecasting strategies, and forms of community governance implemented to address environmental challenges.

This mission is part of a participatory research approach that listens to local stakeholders and recognizes indigenous knowledge as fundamental elements of a sustainable climate change adaptation strategy. This report outlines the main stages of the mission, describes the methodology used, presents the results obtained, and offers recommendations for combating climate hazards and promoting and sharing the indigenous knowledge gathered.

SURVEY AREA (satellite image taken from the internet)

The survey area, the village of Bliéron, is located at the mouth of the Cavally River where it flows into the Atlantic Ocean. Bliéron is located in the Department of Tabou, in the extreme southwestern part of Côte d'Ivoire, on the coast. It is worth noting that it is the last Ivorian village on the Cavally River, in the extreme southwest of Côte d'Ivoire before Liberia. To the east is a dense, green forest, typical of the tropical rainforest vegetation found in this region. To the west are sandbanks and inland water bodies that are actually dead arms of the estuary. Specifically, it is on this side that the mouth of the Cavally River meets the sea. This phenomenon creates an area of intense sedimentary dynamics (sand accumulation, marine movements, erosion). Along the coast south of the village, a strong swell is visible, indicating significant exposure to waves and tides, factors that aggravate coastal erosion.

The village of Bliéron, where the survey was conducted, appears as a cluster of huts and roughly square structures with modern thatched and tin roofs. It is located between the green forest cover and the immediate edges of the sea and the Cavally River.


Photos 1 and 2: Traditional Krou-style huts in the village of Bliéron, July 11, 2025

This proximity between human habitation, forest areas, and marine and river environments demonstrates the local populations' dependence on natural resources for fishing, wood gathering, traditional medicine, and subsistence agriculture. This area is particularly relevant for a study on the resilience of fishermen in the face of climate change. First, it highlights the vulnerability of the populations living there. The village inhabitants are exposed to coastal erosion, marine and river flooding, and hydrological disturbances, effects that are amplified by climate change. Secondly, the lifestyle observed (coastal and riverine settlement, lack of protection against sea encroachment and coastal erosion) shows that fishing is an essential activity. Endogenous knowledge such as reading sea and river currents, understanding nature, building canoes and fish traps, observing the lunar calendar, etc. is crucial to their survival.

Finally, the coexistence of marine, river, and forest environments provides an ideal setting for analyzing the diversity of local adaptive strategies, namely the choice of fishing grounds, fishing seasons, seasonal migration, etc.

METHODOLOGY

The methodology adopted for this field mission is based on a participatory qualitative approach, focused on gathering endogenous knowledge relating to the environmental resilience of fishing communities in the village of Bliéron. This approach aims to highlight lived experiences, life stories, cultural representations, and local practices in natural resource management.

The tools and techniques used during the mission include:

Semi-structured interviews: Conducted with around 100 resource persons (fishermen,

fisherwomen, fish processors, community leaders, elders, young people, and women), these interviews provided detailed accounts of environmental changes, traditional adaptation techniques, and community solidarity in the face of climate risks.

Focus groups: Three group discussion sessions were organized in two villages (Bliérion and Bliéron2, the latter located about 5 km west of Bliéron on the banks of the Cavally River and populated by people settled there by the inhabitants of Bliéron), respectively with elders, notables and male fishermen, female fishermen and fish product processors, and young people from the village. These exchanges encouraged the expression of a collective memory of past and present environmental dynamics. (See photos 3, 4, 5, and 6).

Photos 3, 4, 5, 6: various group discussions

Photos 3 and 4 Group discussion with dignitaries and men from Bliéron, July 13, 2025

Photo 5: Group interview with the women of Bliéron, July 14, 2025

Photo 6: Interview with young people from Bliéron 2, 07/15/25

Direct observation: Observations were made at fishing sites (beaches, estuary mouth, mangroves), processing areas (smoking, drying), and inhabited areas. This approach made it possible to identify visible signs of ecological degradation (erosion, retreating shoreline, disappearance of species) as well as local technical responses. (See photos 7 and 8). In addition, to get a closer look and understand the issues at the village level, a series of guided tours through the village and its immediate surroundings were conducted separately with fishermen, women, young people, and community leaders. This approach, or method of collecting data in the field, allowed for physical immersion in the areas affected by erosion, sacred fishing spots, and processing sites. These commented observations enriched the analysis of spatial dynamics and local perceptions of climate change.

Photos 7 and 8: inhabited areas and visible signs of ecological degradation, 07/11/25

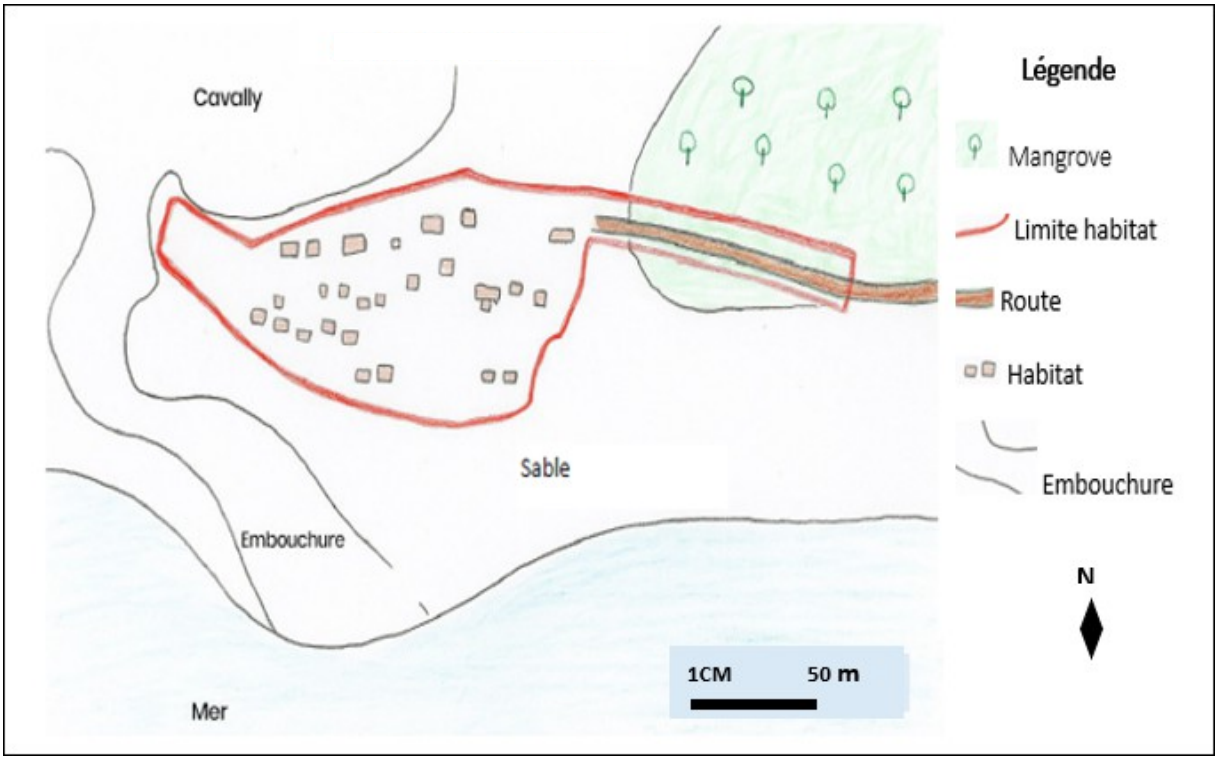
Individual interviews

In addition to field observations and group interviews, we conducted individual discussions with several fishermen, artisans, women, and young people from the village. These exchanges provided us with detailed information about their daily activities and traditional ritual practices. The fishermen shared their techniques, favorable fishing periods, target species, and strategies for dealing with unpredictable weather. The artisans, for their part, provided details on the manufacture of fishing tools and the materials used. Some informants also explained the use of certain plants in fishing and in combating coastal erosion. The women emphasized their fear of the effects of climate change. ***"We are afraid of waking up one day under the sea, engulfed with our families***" Young people placed great emphasis on ritual practices to combat the effects of climate change.

[1] - Conversation with Toto Gnenébé Marthe, 63, housewife, July 13, 2025, Bliéron.

These contributions provided a better understanding of the role of endogenous knowledge in community adaptation.

Participatory mapping: A workshop was conducted to work with residents to create a representation of their territory, including fishing areas, places considered to be threatened, fallback areas used in times of crisis, and markers of environmental change. (Photo drawing 1).



Drawing No. 1: Participatory mapping

Drawing up lists of needs: several requests were made gradually during group discussions, particularly with women and men (focus groups), participatory mapping of the territory, and in-depth individual interviews. These do not appear to have been prepared in advance, but rather co-constructed on the basis of discussion, collective reflection, and feedback. Fieldwork, combined with site reconnaissance, facilitated the free emergence of needs and proposals in a participatory spirit. For example, after discussion, the women expressed a desire for a crusher to facilitate the production of *Canjus*, a local drink made from sugar cane. Requests are often made to the legal representatives of the local administration, but according to the villagers, these are often ignored, which they see as a lack of consideration.

Documentary analysis: Local documents, administrative reports, development plans,

and customary texts related to fishing were consulted to supplement the field data.

All the data collected was processed thematically, through manual coding and cross-referencing of discourse. Particular attention was paid to the diversity and divergence of viewpoints based on gender, age, and status within the community.

The identification of the main themes addressed in this report (environmental perceptions, fishing techniques, regulatory rituals, local plants, knowledge transfer) is the result of a collective process carried out during focus groups and participatory mapping workshops. The discussions brought to light the major concerns of the inhabitants, taking into account the diversity of viewpoints (men, women, young people, community leaders, elders). This collaborative work provided a solid basis for structuring the analysis, in line with the priorities expressed by the fishermen and inhabitants of Bliéron.

Overall, the data collected reveals a remarkable wealth of endogenous knowledge mobilized by the fishermen and residents of Bliéron in the face of increasing climate disruption.

1. PERCEPTION OF ENVIRONMENTAL CHANGE

Our village, Bliéron, is caught in a vice at the mouth of the Cavally. It is here that the signs of environmental vulnerability are most palpable. Every day, we see the sea advancing and causing a great deal of damage. Among other things, we can cite:

- The destruction of the habitats of riverside dwellers,
- The gradual decline in fish catches, both in quantity and diversity;
- The observable retreat of the coastline, the destruction of traditional buildings and coastal coconut groves by erosion and tidal waves, which have become very strong in recent years;
- Increased salinity of freshwater aquifers used for consumption and irrigation;
- Changes in fish breeding seasons, making traditional fishing cycles less reliable.

2. TRADITIONAL KNOWLEDGE FOR ADAPTATION

To cope with the upheavals we are facing, we are mobilizing various

knowledge and practices to carry out fishing.

First, we use appropriate fishing gear to catch species that have become rare. To this end, **we practice** different types of fishing, namely: line fishing, net fishing, cast net fishing, trap fishing, shrimp pot fishing, catfish pot fishing[2], wire pot fishing[3] , night spearfishing, bamboo fishing in mangroves to catch Djisrôh (Arius latiscutatus or Arius heudelotii (Family: Ariidae) , Kôssrôgbô fishing[4] (Pachymelania aurita (Müller, 1774, photos 9 and 10), and trolling, which is done at sea and in the Cavally River[5] . The bamboo on the right, stuck in the mud up to its tip, is the fish trap.

Photos 9 and 10: Djissrôh fishing tool and trap, July 15, 2025

[2] - Interview with Kla Tahé Emil, 51, fisherman and farmer, July 15, 2025, in Bliéron.
[3] - Interview with Nimlin Kouebo Veronique, 45, housewife. July 13, 2025, in Bliéron.
[4] - Interview with Ouya Kolaté Jean-Pierre, fisherman, president of the village human rights committee, identification officer, and village tour guide, July 16, 2025.
[5] - Interview with Koulaté Jean-Pierre, 53, fisherman and fishing guide in the village, July 16, 2025, in Bliéron.



Photos 11, 12, and 13: Fishing spear, various baits, and fishing lines tied to bait, July 13, 2025

Photo 14: illustration of cast net fishing in the Cavally River, 07/13/2025

Next, we adopt techniques for identifying currents and fish-rich areas by observing the sky, bird behavior, or changes in water color[6]. **We also organize seasonal rotations in fishing areas** to avoid overfishing.

We also use traditional fishing regulation rituals, including closed seasons decided by the elders[7].

At this level, there are ritual sacrifices to the rocks at the mouth of the Cavally River and

[6] - Interview with Kla Sondé Jean-Michel, 55, fisherman-warrior mask dancer, July 15, 2025, in Bliéron.
[7] - Interview with Nimlin Blagnon Benjamin, 37, fisherman-farmer, July 11, 2025, in Bliéron.

along its course. It must be said that the sacred rocks are spiritual entities for the inhabitants of Bliéron. These sacrifices help to stem the rise of the sea and river waters, which engulf a large part of the dwellings and prevent fishing and farming activities in the fields[8].

We also perform ritual sacrifices at the four branches of the Cavally River, which plays a regulatory role in the economic (fishing, farming, etc.), social, and cultural life of the village.

Finally, there is the sacred ritual of lighting a fire every evening in the north of the village, facing the Cavally River, to prevent the rise of the sea and river waters. According to Mr. SONDE (fisherman, warrior, mask dancer), this ritual is performed by a man chosen by the village entities through a ritual[9].

All these ritual sacrifices require animals such as chickens, goats, or sheep when financial means do not allow for a cow. In fact, the animal required is a cow, but the lack of financial means, revealed religions, and the disappearance of the elders work against this ritual, which is important for the village in modern times. We are all (leaders and farmers) unanimous that the sacrifice slows the rise of the waters and promotes a good ecological environment for fishing and farming activities.

Photos 15: the sacred rock in the Cavally River, 07/14/2025

[8] - Interview with Gnepa Tolèh Elisabeth, 80, housewife, July 13, 2025.
[9] - Interview with Kla Sondé Jean-Michel, 55, fisherman-warrior mask dancer, July 15, 2025, in Bliéron.
[10] - Interview with Toh Cédé Jean-Claude, 49, supreme chief and farmer, July 12, 2025, in Bliéron.

Photo 16: Sacred fire ritual lit every evening north of the village facing the Cavally River to prevent the rise of sea levels and the Cavally River, July 14, 2025.

3. VALUES OF THE KNOWLEDGE SYSTEM

As fishermen, we attach great importance to a set of values that form the basis of fishing practices. These include ethical and moral values, social values, cultural and symbolic values, and practical and technical values.

Ethical and moral values occupy a central place. Through rituals and prohibitions, we ensure respect for both bodies of water (the sea and the Cavally), fishery resources, and the environment, and thus consider the preservation of ecosystems to be an essential duty.

Social values are also important to us. When fishing, a spirit of solidarity among fishermen is strongly encouraged. Thus, the intergenerational sharing of knowledge and cooperation during fishing campaigns ensure the continuity of practices and strengthen community cohesion.

Furthermore, cultural and symbolic values are manifested in our community through fishing rituals, taboos, and beliefs concerning the tides or certain fishing areas, reflecting the cultural identity of our community.

Finally, practical and technical values such as caution, efficiency, adaptation to

local conditions, and protecting fishing tools and methods, underscore the importance we place on competence and sustainable practices.

However, there is a certain degree of negligence on the part of our current village authorities in the implementation of certain ritual practices related to fishing and our resilience in the face of rising water levels. To this end, certain patriarchs such as Gnepo Tolèh Elisabettan, as the oldest woman in the village, are putting pressure on our village leaders by calling emergency meetings to discuss the implementation of rituals formerly practiced by our parents to cope with climatic hazards and also to ensure successful fishing[11].

4. SOME FISHING PRODUCTS

We catch various types of fish, such as crabs (*Ucides cordatus*) and several species of fish (*Plectorhincus macrolepis, Parakuhlia macrophthalmus, Pomadasys perotaei, Sarotherodon melanotheron, Hemichromus fasciatus, etc.*).

Photos 17 and 18: crabs (Ucides cordatus) and various species of fish regularly caught *(Plectorhincus macrolepis, Parakuhlia macrophthalmus, Pomadasys perotaei, Sarotherodon melanotheron, Hemichromus fasciatus, Channichthys rhinoceratus, etc.), July 15, 2025*

5. COMMUNITY OPINION ON THE IMPORTANCE OF ENVIRONMENTAL KNOWLEDGE

[11] - Interview with Gnepo Tolèh Elisabetta, 80, the oldest housewife among the women of Bliéron, 07/13/2025.

We are fully aware of the importance of their endogenous knowledge in the regeneration of their environment. The rituals and traditional practices we perform, particularly sacrifices made to river and marine entities (Cavally, river mouths, sacred rocks), guarantee abundant fish stocks and stable ecosystems[12]. However, most women share the supreme chief's concern in that they directly associate the depletion of fishery resources with the younger generations' abandonment of these rituals and also with the effects of climate change.

The link between ancestral practices and ecological balance is strongly internalized in this sense.

6. THE DISTRIBUTION OF KNOWLEDGE

The distribution of knowledge about fishing techniques according to gender (between women and men) is not equal in our community. It is based on social roles and areas of activity. We grew up with our parents, and it has always been the men who fish on the high seas and navigate, even though this activity is rarely practiced nowadays. They build and maintain the canoes, read the currents, make weather observations, and give directions [13]. In addition to fishing at sea and in the Cavally River using canoes, the men in our community also fish with nets, lines, and seines. They are also skilled in techniques for identifying fishing areas according to the seasons, using complex equipment, and organizing expeditions [14].

Our women specialize in coastal fishing along the banks of the Cavally River and other rivers, gathering shellfish, and processing and selling fish. They are skilled in preservation techniques, assessing the quality of species, and maintaining commercial networks.

However, certain knowledge, such as lunar cycles, tides, and weather forecasting, is shared.

Overall, it must be said that the men and women of the village form a complementary chain that guarantees the subsistence and economy of the Kroumen fishing community.

7. SYSTEMATIZATION OF KNOWLEDGE BY THE COMMUNITY

[12] - Interview with Toh Cédé Jean-Claude, 49, Supreme Chief – farmer, July 12, 2025, in Bliéron.
[13] - Interview with Djouropo Maté Lazar, 54, Chief of the village of Bliéron, July 12, 2025, in Bliéron.
[14] - Interview with Win Wané Souzane, 60, housewife, July 13, 2025, in Bliéron.

The systematization of knowledge related to fishing responds to several key issues. Here in Bliéron, we are increasingly turning to the cultivation of cash crops such as rubber, oil palm, cocoa, etc. Fishing is no longer our only activity. Thus, one of the main reasons is to preserve this knowledge at risk of disappearing.

We are aware of the threat to our community posed by the gradual advance of the waters. For this reason, identifying our knowledge could be one of the channels of external support that would enable us to meet our needs for resilience in the face of climate challenges[15].

In terms of systematizing knowledge, our community is open to collaborating with researchers and organizations. With their help, we will be able to inventory, organize, and classify their knowledge, as well as document it, in order to disseminate it through appropriate media and educational activities[16].

8. POLICY-MAKING VOICE

The coastal area of southwestern Côte d'Ivoire, particularly in the department of Tabou, is mainly inhabited by populations whose main activity is fishing. Fish production is both an essential source of subsistence and a means of income for our communities. However, we feel excluded from the political decision-making processes that affect us. We are not affiliated with any professional organization or NGO representing fishermen, which limits our capacity for institutional representation.

This marginalization was particularly felt when a nationwide closed season for fishing was introduced along the entire coastline. This decision was taken without any financial compensation for our various local communities, reinforcing our perception of abandonment by the administrative authorities and a lack of recognition and dialogue.

In addition, our fishing activities in the Cavally River are now severely disrupted by gold mining by a company located about 400 meters from the river and about 270 kilometers from our village of Bliéron. This is a gold mining company operating on the Cavally River in Côte d'Ivoire, namely the Ity gold mine, which is majority-owned by the Canadian group.

[15] - Interview with Ouya Kolaté Pierre, 49, fisherman - president of the village human rights committee - identification officer and tourist guide for the village of Bliéron, Op.cit.
[16] - Interview with Djouropo Maté Lazar, 54, Chief of the village of Bliéron, Op.cit.

Endeavour Mining (85%), alongside the Ivorian government (10%). The activities of this company caused us a major incident in 2024. In June 2024, an industrial accident occurred.
: A cyanide leak (~3,000 liters of contaminated sludge) from the mine's processing plant reached a diversion canal and then flowed into the Cavally River, causing massive fish deaths and poisoning approximately 185 local residents (diarrhea, vomiting, headaches). However, the company Endeavour disputes accusations of massive pollution, while acknowledging a minor leak, and claims to have taken preventive measures and tested water quality. The residues from this activity contaminate the river, clouding the water and significantly reducing visibility and fish catches. However, no institution has come to meet with us to find out about the environmental impacts of this incident resulting from gold mining on our activities, which are often linked to the river.

Finally, a large part of our activities depend on access to the Cavally River. However, our village has only one motorized canoe for transporting people and goods, which is currently out of order. When it is used by a small group, the other inhabitants are unable to travel, which hinders our economic and social activities. In this context, we express the urgent need to acquire a second motorized canoe in order to meet the growing need for mobility on the river.

9. COMMUNITY RESILIENCE STRATEGIES

Beyond individual techniques, there are collective forms of adaptation in our community.

To cope with the enormous losses caused by climate change, we are organizing ourselves into mutual aid societies.

We have also set up a community fund financed by an informal tax on sales, which is used to repair damaged canoes and provide assistance to victims.

Finally, we have developed a customary code prohibiting certain practices deemed harmful (fishing with chemicals, cutting mangroves, etc.).

10. WAYS OF VALORIZING KNOWLEDGE

We are aware of the importance of our knowledge for the protection and regeneration

the environment and promote this knowledge through intergenerational transmission (observing parental actions, learning techniques, respecting prohibitions).

Therefore, recognizing the cultural potential of our village, a group of individuals has made it their mission to promote it beyond the local area. A social media account has been created to highlight our cultural values. Through this channel, one can discover tourist sites, beaches, dances, and seafood products, all complemented by a variety of cuisine.

In addition, our expertise is also openly shared with researchers, as evidenced by our collaboration with your team on this project.

However, we regret that NGOs and authorities often come to observe without involving us in decision-making or concrete development actions. We would like to see greater institutional recognition of our knowledge, particularly in terms of environmental resilience.

11. REQUESTS ALREADY EXPRESSED BY THE POPULATION AND RESPONSES

We had already made several requests, particularly to local authorities and NGOs, namely:

- clay (which they extract from the islands and mainland areas along the river and transport by canoe on the river) to rebuild their homes after the destruction caused by the strong tide in 2022;
- a well for drinking water, as the water tables are salty,
- sand dump trucks to reshape the effects of the 2022 tide and push back the sea;
- motorized canoes to move around during periods of flooding.

However, to date, we have not received any concrete response, which has left us feeling somewhat frustrated by these broken promises. The same applies to external funding. We have not yet received any external funding, which is why we are so grateful and enthusiastic about the financial contribution we received during your visit as part of the DECODE project [17] . The need for tangible results has become a priority for them, as evidenced by the remark made by GNEPA Piadi Marie: ***"People come and there is no follow-up, we***

[17] - Interview with DOUROPO Marté Lazar, Op.cit.

fed up[18] ."

12. SOME PLANT SPECIES TRADITIONALLY USED IN FISHING AND COASTAL EROSION CONTROL

Our ancestors passed down their knowledge of plants that are essential for coastal stability. Several plant species play a role in both cultural practices and ecological resilience among us Kroumen living in coastal areas. These include Glofio, Gnanhin, Wehi, and the raffia palm. These species are used endogenously for fishing, food, crafts, and coastal protection, demonstrating a detailed knowledge of the environment and its resources.

Glofio: a versatile plant used for ritual and fishing purposes

Glofio (Kroumen name) or *Dracaena liberica (syn. Sansevieria liberica)* of the *Asparagaceae* family *(formerly Liliaceae)* is a herbaceous plant that grows mainly along the coast, along rivers, streams, and in wetlands. Its leaves are thick, succulent, upright, lanceolate, often marbled, and its roots are fleshy with a highly developed horizontal rhizome. It grows well in sandy soil, in full sun, and is often used in semi-arid or coastal areas. Thanks to its underground rhizome, this plant effectively stabilizes sandy soils, including in coastal areas. It is used in the restoration of coastal dunes and in traditional African medicine to treat headaches (as a decoction), certain skin infections, purging or deworming (roots), and fever or asthma (leaf juice). The fibers from the leaves can be extracted and used to make ropes, strong ties, and baskets or mats (in some local cultures). It is also an ornamental plant and is often used in landscaping, particularly for natural boundaries, low hedges, or dry areas by the sea. In our Kroumen country, Glofio is used as bait during fishing, to attract fish into nets or traps. In addition to its fishing function, this plant also has symbolic and punitive value in the local culture: its sap causes severe itching when it comes into contact with the skin, which is why it is used to punish individuals guilty of theft or lying[19]. This dual functionality illustrates how natural resources are integrated into social regulation systems and subsistence strategies. Coastal erosion, storms, rising sea levels, and human pressure are weakening coastal ecosystems. It is becoming essential

[18] - Interview with GNEPA Piadi Marie, Op.cit.
[19] - Interview with Kla Sondé, Op. Cit.

adopt nature-based solutions to protect coastlines sustainably. Among the plants adapted to these environments, Chrysobalanus icaco is a strategic species, combining ecological resilience, landscape value, and socio-economic utility.

Photos 19 and 20: ***Glofio (Kroumen name) or Dracaena liberica (syn. Sansevieria liberica) of the Asparagaceae family (formerly Liliaceae), 07/15/2025***

Gnanhin: an edible species that protects the coastline

Gnanhin (in Kromen) or *Hyphaene thebaica (Arecaceae*) is a species of dwarf palm or doum palm, known for its bushy growth and presence in sandy areas, often coastal or semi-arid. (Photo 21). It is a sacred plant in some African cultures. The trunk of this palm species is traditionally used as light construction wood or fuel, and its leaves are used for basketry (baskets, hats, mats). In our country, Kroumen, the tip of its stem, considered to be its heart, and its fruits are edible, as in certain regions[20]. As mentioned above, this species of palm tree grows in humid environments, mainly along the coast, and plays an essential ecological role in combating coastal erosion. Thanks to its dense and extensive root system, the doum palm stabilizes coastal dunes and loose soils. It limits the movement of sand under the effect of wind or rain, which is essential in coastal areas. Its rigid leaves and bushy shape create a physical barrier that reduces the impact of salty winds, thus limiting the degradation of the surrounding coastal vegetation.

Its presence stabilizes the soil and protects inhabited land from the advance of seawater, thereby contributing to the resilience of populations in the face of the effects of climate change.

[20] - Interview with Nimlin Blagnon Benjamin, 37, fisherman-farmer, July 15, 2025, in Bliéron.

Photo 21: *Gnanhin* (in Kromen) or *Hyphaene thebaica (Arecaceae*), July 15, 2025 Wehi

(in Kroumen): a species with edible fruits

Wehi, Ipomoea pes-caprae (family: *Convolvulaceae*) is a creeping plant that forms a dense carpet on the sand. Its leaves are shaped like goat's feet (hence the name "pes-caprae"). Highly resistant to salty winds, heat, and drought, it is typically found on coastal dunes or tropical beaches.

Thanks to its creeping stems and root system, it stabilizes coastal sands and reduces wind-blown sand displacement. It is one of the first species to colonize bare beaches, creating a favorable environment for other species because it slows runoff and protects the coast from marine regression.

Wehi is important for stabilizing coastal dunes and is sometimes used in traditional medicine in certain cultures. Its fruits are edible and widely consumed in our country, Kroumen. This plant species also grows along coastlines and around bodies of water and helps stabilize the coastline by limiting erosion.

Photo 22: Wehi, Ipomoea pes-caprae (family: Convolvulaceae) in a climbing view, 07/15/2025

Photo 23: Fruited branches of *Wehi* or *Ipomoea pes-caprae (Convolvulaceae)*, 07/15/2025

According to a local legend, these plants were created by God to prevent coastal erosion, but this knowledge was concealed from humanity. The turtle, by revealing this secret to humans, was punished by God and forced to lay its eggs in the sand, thus at the mercy of mankind. This mythical tale reflects a form of ecological awareness that is integrated into cultural representations.

Raffia: a craft resource

Finally, in addition to the above species, the *Raphia hookeri* palm tree *(Arecaceae*) also grows along the coast and in wetlands. We use the bark from its trunks to make traps for traditional fishing. Raffia is also known in other forest regions, such as those occupied by the Dida and Godié peoples, for its use in making traditional fabrics, basketry, and traditional thatched roofs, as well as for extracting raffia wine. This resource therefore constitutes a link between the environment, craftsmanship, and cultural identity.

Raphia hookeri is widely used in Côte d'Ivoire, Benin, Cameroon, and Nigeria. Its other uses in the country include making rugs, baskets, and mats.

Photos 24 and 25: Raphia hookeri (Arecaceae), July 15, 2025

Beyond their practical value, these different plant species reveal the close relationship that coastal communities have with their environment.

Our knowledge and management of these plants reflect a wealth of indigenous knowledge that should be leveraged in strategies for sustainable development and combating the effects of climate change.

13. INTERACTION WITH ACADEMIC KNOWLEDGE

Speaking of interaction with academic knowledge, some academics from the natural sciences departments at Nangui Abrogoua University and the Institute of Tropical Geography at Félix Houphouët Boigny University have identified our Bliéron as a research target. Their work was related to the study of botanical species in coastal areas, coastal geography, and seaside tourism. It should be noted that the southwestern coast of Côte d'Ivoire is an area that is still relatively unexploited but is beginning to be investigated by researchers and private partners.

The empowering aspects of our interactions with previous researchers and organizations can be seen in the case of an NGO focused on green energy, which offered to help women by giving them cassava stems and nurseries for several vegetable crops in order to contribute to their empowerment. However, these crops were not successful due to a lack of knowledge about the soil. A more concrete aspect that empowers our interactions with organizations is the only motorized canoe we currently own, which was granted to us by another organization.

In terms of non-empowering impact, we have the publication of certain research findings, the best known of which is Mr. Gnépa Bathélemy's book on the history and socio-anthropology of the Kroumen. This book is unique in that, after B. Holas' work on the Kroumen published decades ago, it is the most detailed account of our culture.

In terms of the dynamics of interaction in the research process, our participation in this research with academics was limited to the oral survey phase. We were not included in the other stages of the research, which is different from the current DECODE project, which is participatory.

14. TRANSMISSION OF KNOWLEDGE AND OWNERSHIP OF KNOWLEDGE

- **Knowledge transmission**

Our endogenous knowledge is mainly transmitted orally, within families or through informal learning. However, we can see that the mechanisms of transmission are becoming weaker due to the migration of young people, growing disinterest in traditional knowledge, and a lack of institutional support for its promotion.

We attach strategic importance to our traditional knowledge, which we perceive not only as a means of subsistence, but also as an essential lever for the preservation and regeneration of our ecosystem. Aware of the heritage and ecological value of this knowledge, we are genuinely committed to passing it on, particularly through scientific collaborations.

- **Ownership of knowledge**

Discussions on knowledge ownership were conducted in a manner that respected both our rights as knowledge holders and the requirements of the project. These discussions were always held before the start of the surveys with the various groups. This fostered trust and our willingness to participate in the interviews.

This willingness to share our expertise is reflected in our active involvement in this research project. However, we regret the lack of institutional recognition we receive, both from public authorities and non-governmental organizations, which intervene in our village without any real consultation.

The lack of recognition of local knowledge creates a growing sense of marginalization and reinforces the desire to participate in decision-making processes at both the local and national levels. Through their demands, fishermen are calling for formal recognition of their expertise, particularly in the field of environmental resilience, where their endogenous contribution represents a major asset for sustainability and climate change adaptation policies.

15. DISCUSSIONS ON BENEFIT SHARING

Discussions on sharing the benefits of new knowledge gained from the systematization of traditional fishing knowledge generally take place in our country

in a community setting and under the authority of customary structures. Group discussions are often initiated by fishing leaders and elders recognized for their experience and role as guardians of collective memory. They convene assemblies attended by representatives of different lineages, young fishermen, and even those who are still learning[21]. The principle behind these exchanges is to promote transparency and consensus.

Discussions focus on identifying expected benefits, defining criteria for equitable distribution among different groups or actors, and preserving certain sensitive or sacred knowledge that cannot be freely shared.

Those who support systematization, often members who are open to innovation or collaboration with outside actors, play a leading role. They explain the opportunities available, while committing to defending the principles of protecting intangible heritage and ensuring that the benefits go first and foremost to the members of the group.

Finally, all decisions are formalized orally according to customary rules, sometimes accompanied by a symbolic ritual, which gives the agreement binding force. Thus, the process combines participatory consultation, traditional validation, and collective accountability to ensure that the systematization of knowledge benefits all members of our community.

There are no power dynamics during these discussions. Each participant in the discussion speaks freely. Those who are still active provide more information than others. However, they do not have a monopoly on speaking.

Nevertheless, the exchanges take place with strict respect for our traditional authorities.

Finally, speaking of the advantages, it must be said that we are unanimous on sharing and more focused on common needs.

16. VALIDATION OF KNOWLEDGE

Knowledge validation was designed as a continuous process at all stages of the investigation, involving knowledge holders. Prior to data collection, initial meetings were held

[21] -Toto Gnenébé Marthe, 63, housewife, 07/13/2025 in Bliéron

with community leaders were organized to present the objectives, methods, and types of knowledge to be documented. The leaders gave their verbal approval of the collection methods, property rights, and benefit sharing.

During the collection process, data is validated on an ongoing basis. First, immediate verification is carried out after each interview or observation, and a summary is presented to the knowledge holders to confirm that the information has been correctly understood. Several knowledge holders are brought together to compare points of view and identify any discrepancies. Next, the information is checked for consistency with the customs, rituals, or techniques actually observed.

After the data was collected, individual meetings were organized to present the provisional data to certain individuals who had distinguished themselves in the group discussions for corrections, additions, or clarifications.

It should be noted that no external academic scientists were involved in this validation process.
Overall, data validation was an ongoing dialogue between the researchers and us, from planning to the end of data collection, in order to ensure the accuracy, respect, and legitimacy of the knowledge collected.

17. IMPACT ANALYSIS

The impact of this project on the community is reflected in the preservation, transformation, and transmission of our traditional knowledge.

- **Preservation and documentation**

Fishing, navigation, and marine environment interpretation techniques, now threatened by modernization and environmental pressures, would be systematically documented and promoted. Intergenerational memory could be consolidated by presenting the project's results in accessible and appropriate formats, such as illustrated guides, audiovisual materials, or community workshops.

- **Strengthening resilience**

Local knowledge would be integrated into adaptation strategies to address major environmental challenges, such as coastal erosion, rising sea levels, and changes in

. Certain traditional practices that respect ecological balances could thus be revitalized in order to support the sustainability of fishery resources.

- **Evolution of practices**

Interaction with new scientific or technical knowledge could lead to the adaptation of certain fishing methods (e.g., net size or fishing seasons) to meet current environmental standards. Traditional knowledge could also be combined with contemporary innovations, leading to a transformation of practices while preserving their cultural essence.

- **Issues of control and ownership**

Inadequate management of intellectual property could lead to feelings of dispossession or cultural spoliation. Conversely, establishing a clear framework for equitable benefit sharing would allow the community to benefit directly from the project's spin-offs, whether in terms of income, equipment, or legal recognition.

Impact on partners involved in the project

For institutional partners, including universities, NGOs, and government agencies, the impact is strategic, scientific, and institutional.

- **Scientific and institutional enhancement**

The project would strengthen their position as actors committed to cultural and environmental preservation. It could also serve as a replicable model for other initiatives to safeguard endogenous knowledge.

- **Access to new data**

The knowledge gathered would enrich research on artisanal fishing, ethnoecology, and coastal resilience, while providing a better understanding of the socio-environmental dynamics specific to the Cavally–ocean zone.

- **Strengthening relationships with communities**

Successful collaboration would establish a climate of trust conducive to future joint initiatives. However, poorly conducted negotiations on ownership and benefit sharing could generate mistrust and tensions in the long term.

- **Ethical and political challenges**

Partners will have to balance environmental conservation imperatives with the socio-economic needs of fishermen. They may also need to promote more inclusive and participatory maritime management policies.

Ultimately, the expected impacts of the project on endogenous knowledge, particularly in the Kroumen community, concern intergenerational transmission, the sustainability of practices, their appropriation by the community, their adaptation to new challenges, and the strengthening of links between the community and institutional partners.

18. CONTRIBUTION TO THE DECODE OBJECTIVE

This project, entitled "The use of endogenous knowledge in the resilience of fisher-divers to climate change in the southwestern coastal region of Côte d'Ivoire: the case of the village of Bliéron," is fully in line with the three strategic objectives of the DECODE Knowledge program.

- **Systematization of existing participatory research practices**

This project undertakes the documentation and structured analysis of the endogenous knowledge of fisher-divers, particularly in terms of reading currents, managing fishing areas, diving techniques, and resource conservation. The approach adopted is based on participatory research, in which the community is not only a producer of information but also an actor in identifying issues and validating results. This process highlights the values (respect for the sea, solidarity), principles (resource sharing, sustainable management), ethics (respect for maritime taboos, preservation of sacred areas), and methods (manual fishing, observation of natural signs) that support community resilience in the face of climate change.

- **Facilitating peer learning**

The results and lessons learned from the Bliéron experience can be transferred to other contexts, particularly to Ivorian coastal villages facing erosion and declining fishery resources, to civil society organizations working for climate resilience, and to researchers engaged in safeguarding local knowledge. The project also serves as an educational tool for training young researchers, students, and

community leaders, offering them a concrete example of the link between social sciences, ecology, and traditional knowledge, with a view to influencing maritime management policies.

- **Creation of an open digital platform dedicated to knowledge democracy**

The data, stories, maps, and visual materials produced as part of the project (testimonials, videos, photographs, diagrams of fishing techniques) can be integrated into an open digital platform, ensuring the visibility of Bliéron's knowledge on a national and international scale. This approach contributes to knowledge democracy by ensuring free and equitable access to this knowledge, while respecting the community's rights regarding the conditions of its dissemination.

In summary, this project provides a concrete illustration of the implementation of DECODE Knowledge's objectives. It structures and promotes community research practices, encourages exchange and learning between communities and development actors, and feeds into a global platform dedicated to community and indigenous knowledge, thereby contributing to the recognition and protection of intangible heritage in the face of climate challenges.

19. THE EXPECTATIONS OF THE POPULATION

Given the salinity of the fresh water and the lack of drinking water in our village, we are asking for help to obtain drinking water, as we have to travel 7 km by canoe on the Cavally River to transport drinking water. This is a real ordeal for us.
We would also like to have a motorized canoe to transport our fish for sale, as there is only one canoe in the village for transporting people and goods. This exacerbates the effects of climate change because, in addition to declining yields, we suffer from a lack of transportation, which weakens our economic power.

We are also requesting a motorized canoe for the residents of Site 2 to enable them to travel when the Cavally River rises. When the river rises, the water reaches the middle of the village and prevents them from carrying out their activities.

Their wives are also requesting a sugar cane mill for their traditional beverage production activities, Canjus, which is their main activity outside of agriculture and traditional fishing.

In light of the experience gained during the mission carried out from July 11 to 18, 2025, in the village of Bliéron, several methodological and organizational adjustments could be considered to optimize the effectiveness, ownership, and impact of the project on the promotion of endogenous knowledge related to Kroumen fishing and navigation.

20. RECOMMENDATIONS FOR THE FUTURE

If we are to continue this work, the following actions will be taken: strengthening the preparatory phase, deepening community participation, adapting and diversifying data collection tools, and adapting data reporting and dissemination.

- **Strengthening the preparatory phase**

From the outset of the project, broader and earlier involvement of all members of the community—elders, young people, women, fishing leaders, and traditional authorities—would enable the joint definition of objectives, priorities, and methods. Even if this aspect has already been addressed, strengthening this initial dialogue could also clarify the terms and conditions for managing intellectual property and sharing benefits, in order to avoid any misunderstandings.

- **Deepening community participation**

Although the mission included direct exchanges with knowledge holders, enhanced training for local community researchers would encourage active participation at all stages: data collection, analysis, and validation. Particular attention would be paid to including groups whose voices are often less heard, such as young fishermen and women.

- **Adaptation and diversification of collection tools**

The introduction of participatory monitoring, spread over several months, would make it possible to observe changes in practices and their adaptation to environmental changes.

- **Adapted reporting and dissemination**

The results would benefit from being presented in a variety of formats. This could be done in the form of illustrated guides in the local language, public screenings, practical workshops, and audiovisual clips. Organizing inter-community meetings with other

coastal villages facing the same challenges would enhance mutual learning and experience sharing.

- **Strengthening cooperation with partners**

More regular coordination meetings between the community, researchers, NGOs, and public institutions would ensure consistent monitoring of activities and a shared vision of objectives. The implementation of feedback sessions at the end of the mission would make it possible to capitalize on what has been learned and prepare for future interventions.

These adjustments would help to strengthen both the transmission of Kroumen knowledge and the resilience of communities in the face of climatic and socio-economic challenges.

21. RECOMMENDATIONS

In light of the results obtained, we can make the following recommendations:

1- Recognition and promotion of endogenous knowledge

Integrate local knowledge into public environmental management systems and climate change adaptation plans.

Organize community forums for the sharing and recognition of indigenous knowledge by institutional actors (local authorities, NGOs, government technical services).

Produce and distribute educational materials (booklets, videos, exhibitions) on local ecological knowledge for young people.

2- Strengthening transmission mechanisms

Support the establishment of community schools of local knowledge led by village elders and wise men.

Create intergenerational spaces that promote dialogue between elders, young people, and children on fishing practices, resilience techniques, and stories of ecological memory.

3- Support for community adaptation initiatives

Support local fishing organizations through training, appropriate equipment, and

resilience funds.

Promote pilot projects for community eco-management of fishing areas, including ecosystem regeneration measures (planting mangroves, plants that combat coastal erosion, creation of biological rest areas).

4- Documentation and research

Fund participatory research to further analyze endogenous knowledge in the southwestern coastal region.

Develop a local database of traditional knowledge on resilience, accessible to researchers, decision-makers, and the communities themselves.

5- Dialogue between traditional knowledge and modern science

Promote partnerships between universities, research institutes, and local communities to jointly develop sustainable solutions that integrate both types of knowledge.

Develop community ecology training programs for village youth, combining local knowledge and scientific approaches.

CONCLUSION

The field mission carried out in the village of Bliéron highlighted the strategic importance of endogenous knowledge in the resilience of fishing communities to the effects of climate change. Far from being mere traditional practices, this knowledge constitutes a dynamic system of knowledge, forged by experience, adapted to the local environment, and continually enriched by observation and intergenerational transmission.

The results reveal a keen awareness within the community of the ongoing transformations in their ecosystem (coastal erosion, salinization, depletion of fishery resources, etc.), as well as an ability to adapt based on technical practices, local ecological knowledge, social norms, and community solidarity mechanisms.

It should be noted that these populations came into contact with settlers at a very early stage. The transmission

fishing techniques from outside (settlers) did not lead to the disappearance of endogenous techniques. On the contrary, these new techniques adopted by local communities have enriched traditional fishing equipment and methods.

However, this knowledge is now facing multiple challenges: fragility of its transmission, lack of institutional recognition, insufficient frameworks for consultation with public policy makers, and accelerating environmental change. It therefore appears necessary to implement concrete actions to promote, document, and integrate this knowledge into local policies for sustainable resource management and combating the effects of climate change.

LIST OF RESOURCE PERSONS/COMMUNITY RESEARCHERS

First and Last Names	Age	Profession/Position	Contact
Djouropo Maté Lazar	54	Head of the village of Bliéron	+33 (0)7 79 22 68 16
Kla Tahé Emil	51	Fisherman/Farmer	+33 (0)7 47 24 40 08
Ouya Kolaté Jean-Pierre	55	Fisherman-Tourist guide-Protection and identification officer	07 59 67 42 99
Nimlin Blagnon Benjamin	40	Focal point	07 97 59 43 09
Gnepo Piadi Marie	60	Housewife/President of the women's association	//
Nemelin Kouebo Veronique	45	Housewife	//
Gnepo Yougboyou Josephine	42	Housewife	//
Iyrè Sekéni Henriette	48	Housekeeper	//
Téké Joelle	37	Housewife/focal point	//
Kla Sondé	55	Guardian of traditions/warrior/fisherman.	

ORAL SOURCES AND BIBLIOGRAPHICAL REFERENCES

- **Oral sources / Participants in various interviews**

FULL NAME	AGE	PROFESSION/FUNCTION	CONTACTS
GROUP INTERVIEW WITH THE MEN OF BLIERON ON 12/07/2025			
Toh Cédé Jean-Claude	49	Supreme leader - farmer	+33 (0)7 79 22 68 16
Djouropo Maté Lazar	54	Head of the village of Bliéron	//
Kla Tahé Emil	51 years old	Fisherman - Farmer	+33 (0)7 47 24 40 08
Kahé Dagnon Paul	79	Land manager – fisherman-farmer	//
Hié Dagbé Joseph	48		07 07 91 44 23

Dougbo Kla Alphonse	37	Fisherman-Agent of health Community	07 78 19 63 00
Kolaté Totoh	52	Fisherman-farmer	07 14 67 91 64
Ouya Kolaté Pierre	49	Fisherman - President of the Village Human Protection Committee - Agent Identification and Tourist guide for the village	07 59 67 42 99
GROUP INTERVIEW WITH THE WOMEN OF BLIERON ON 07/13/2025			
Gnepo Piadi Marie	60	Housewife/Chairwoman of the women's association	
Kahé Pauline	40	Housewife	
Téhé Joelle	37	Housewife	
Iyrè Sekéni Henriette	48	Housewife	
Gnepo yougboyou Josephine	42	Housewife	
Klèbè Marie	50	Housewife	
Djaphi Cécile	35	Housewife	
Toto Gnenébé Marthe	63	Housewife	
Win Wané Souzane	60	Housewife	
Ihé Clarice	36	Housewife	
Nemelin Kouebo Veronique	45	Housewife	
Iyrika Gbatchi Nadège	22	Housewife, spokesperson during the the interview	
Gnepo Tolèh Elisabetta	80	Housewife oldest of age of women	
MIXED GROUP INTERVIEW (MEN AND WOMEN) IN THE VILLAGE OF BLIERON 2 ON 07/14/2025			
KLA ISSA Nicolas	48	Head of the village of Bliéron2 / fisherman-Farmer	+33 (0)1 73 09 02 87
KLA Jinus	50	Fisherman-farmer	//
DAGBE Monday Alain	39	Spokesperson for the President of Young People / Fisherman-farmer	
DAGBE OWAH Pierre	31	Fisherman and youth president	//

SIRE KLA Emmanuel	25	Fisherman	//
OUYA Hiedi Cécile	31	Shopkeeper	//
OUYA WEADI Viviane	45	Fisherman - farmer	//
YAGBA Toho Augustine	58	Fisherman - farmer	//
KLA DOUE Alphonse	45	Fisherman - farmer	//
ADOYO Isaac Jacob	35	Fisherman - farmer	01 51 61 10 46
NEMLIN JUNIOR	42	Fisherman - farmer	//
GOLY Gnopo Innocent	41	Fisherman - farmer	+33 (0)7 92 01 15 02
KLATE TOHE Thomas	32	Fisherman - farmer	//
SIE Wahe Emmanuel	19	Student	01 50 22 73 37
KLA KRA Thierry	37	Fisherman - farmer	01 70 02 92 22
BLAGNON Thomas	//	Fisherman - farmer	//
TOTO Toho Edouard	37	Fisherman - farmer	//
KLA ISSA Victorine	//	Shopkeeper	//
NIEBRE Caroline	//	Retailer	//
INDIVIDUAL INTERVIEWS from July 11 to 16, 2025			
Toh Cédé Jean-Claude	49	Supreme leader – fisherman – farmer July 11, 2025	+33 (0)7 79 22 68 16
Nimlin Blagnon Benjamin	37	Fisherman-farmer 07/11/2025	07 97 59 43 09
Dablé Dah Prosper	61	Fisherman-Farmer 11/07/2025	//
Kla Sondé	55	Fisherman-Warrior Mask Dancer 07/15/2025 /07/2025	
Kla Tahé Emil	51	Fisherman-Farmer 07/15/2025	07 47 24 40 08
Ouya Kolaté Jean-Pierre	49	Fisherman-chairman of the village human rights committee-Identification officer and tourist guide for the village 07/16/2025	07 59 67 42 99
Koulaté Jean-Pierre	53	Fisherman- Fishing guide for the village July 16, 2025	Can be reached at 07 59 67 42 99
Surveyed Alain Paul	//	Young fisherman	//

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