GRASSROOTS JOURNALS

Grassroots Journal of Natural Resources, Vol.7 No.2 (August 2024)
ISSN: 2581-6853 | CODEN: GJNRA9 | Published by The Grassroots Institute
Website: https://grassrootsjournals.org/gjnr | Main Indexing: Scopus and WoS

ISSN 2581-6853 | 7(2) Aug 2024

M – 00396 | Analytical Article

FotouniForward: A Tropical Forest Community Restoration and Conservation Initiative

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How to cite this paper: Foyet, M., Nkontcheu, D.B.K., Foyet, L.T., Kamga, T.F. and Fondjo II, F.D. (2024). FotouniForward: A Tropical Forest Community Restoration and Conservation Initiative. *Grassroots Journal of Natural Resources*, 7(2): 1-40. Doi: https://doi.org/10.33002/nr2581.6853.070201

Received: 25 January 2024
Reviewed: 20 February 2024
Provisionally Accepted: 21 February 2024
Revised: 12 May 2024
Finally Accepted: 28 May 2024
Published: 01 August 2024
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Abstract

The FotouniForward Project operates within Fotouni, a kingdom situated in the Haut-Nkam Division, in the West Region of Cameroon. The number of Raffia palm groves in the kingdom has experienced a significant decline over the past 15 years. The various factors contributing to the reduction of the groves include agricultural practices (80%), insufficient regeneration efforts (30%), suboptimal farming techniques (26.67%), occurrences of bushfires (11.67%), and the prevalence of diseases (13.33%). The long-term goal of the FotouniForward Project is to regenerate the kingdom's declining resources (including but not limited to Raffia palm groves), promote the kingdom's biodiversity and empower communities to do this work themselves. Specifically, the project envisions a Fotouni kingdom where (a) the unique cultural and ecological heritage is preserved and protected for future generations, while promoting sustainable development and community well-being; and where (b) the natural environment is protected and restored, and wildlife and people coexist in harmony.

Keywords

Ecological Restoration; Community Empowerment; Cultural Heritage; Tourism; Montane Ecosystem

Introduction

The Fotouni area is part of the Western High Plateau, a luscious region of Cameroon characterized by high relief, cool temperatures, heavy rainfall and varied range of savanna and tropical forest vegetation (Gwanfogbe, 1983). The kingdom is located between 10°11 East longitude and 10°14 North latitude. Being situated near equator has an influence on its climate. Due to its high altitude, Fotouni could have belonged to the equatorial climate. However,

this zonal factor is countered locally by azonal factors (relief, continentality, exposure phenomena, etc.). Fotouni, like all of the western highlands, belongs to the Cameroonian climate of altitude (very humid and hot), and is subject to the effects of the Guinean monsoon. These winds discharge part of their humidity, hence receiving the abundance of precipitation (between 2000 to 4000 mm annually). The altitude ranges from approximately 200 to 1300 meters. The annual rhythm of its tropical climate is composed of a long rainy season (March to November) with the maxima in August (335 mm of rain) and in September (289 mm) in 21 days. This is followed by a short dry season (November to December) and a short rainy season (January to March) with an average of 30 mm of rainfall ranging from 1 to 2 days. The ecosystem includes tropical rainforest vegetation, and natural disturbances may include flooding, landslides, and wind damage. The area is also known for its rich biodiversity, including numerous species of primates, birds, and other wildlife. Lowlands[1], deep valleys and mountains follow one another to give the relief of Fotouni its picturesque aspect in the highlands of West Cameroon, which forges the adage that in Fotouni, one either goes << down, or up >>. Overall, the relief is a succession of mountains whose numerous gradients generally lead to rivers (CVUC, 2020). Although the kingdom is crossed by two major rivers, its hydrography remains largely dependent on its climate. Its soil is categorized under three types: ferralitic soils, hydromorphic soils and lowland swamp soils.

Fotouni's main activity is agriculture, which makes it the granary of the Haut-Nkam Division. The soils of Fotouni have, on the whole, supported continuous cultivation (including the use of chemical fertilizers for the coffee areas without taking into account the specificities of each soil) and population expansion: from 7,140 in 2005 (BUCREP, 2005) to 20,000 (CODEFO, 2020). As a result, the anachronistic exploitation of Fotouni's vegetation exposes it to degradation. It is overstressed by the need for construction wood, firewood and livestock, intensifying not only due to population growth, but also to supply the neighboring cities which are also expanding. On the slopes, the soils are not very fertile; the partial infertility of these soils is due to their degradation by the water erosion which benefits the uneven relief and the strong precipitations on the one hand, and by their exhaustion in fertilizing elements due to the intense use of the soils, on the other hand (Fotouni, 2013). It should also be noted that the crops grown here are mainly along the slope and are not likely to conserve the fertility of the soil.

However, Fotouni's waterlands[2] are known for their relative abundance of Raffia palm groves (Figure 3). The lowland soils are the main receptacles of alluvial deposits removed by the flow of water on the slopes; this is what makes them rich and contributes to the rapid growth of Raffia. The Raffia palm (*Raphia* sp.) grove is of great ecological and economic importance (Kaffo, Djeuta and Elat, 2013; Obahiagbon, 2009). It gradually began occupying a central position in international environmental

[1] These lowlands cover the western and southwestern parts of the Fotouni area, and are depressions towards which the rivers of Fotouni are drained. These depressions have valley heads whose average elevation is around 1300 km (Nkwop), and 1200 km (Tcham).

[2] The representative localities (Bano in the West, Hiéla in the East, Tchikong in the North and Babong in the South) are areas of high mobilisation of agricultural activities, the most prominent being Raphia harvesting. These areas are also representative of the relief of the kingdom. Tchikong is located on the peak of Mount Tchikong, Babong is low zone located in the southern valleys of the kingdom and Bano-Hiéla on the central plateau (Kamta, Foyet and Kenko, 2021).

policies (Sajaloli, 1996), when it got classified as a wetland. Since then, it has gone under the protection of Cameroon's Ministry of Environment, Nature Protection and Sustainable Development (Meutchieye, 2012). Studies highlight that the genus Raphia (Arecaceae/Palmae) is the most economically and culturally significant and diverse genus among tropical African palms. However, considerable taxonomic confusion still persists within the genus (Kamga, Sonké, and Couvreur, 2019). *Raphia vinifera* is one of the first two species described in the genus, but it has been misidentified and confused for several decades. In addition to the over 20 recognized species occurring in Africa and Cameroon's Littoral region, other authors have identified two endemic species in the western highlands of Cameroon: Raphia vinifera and Raphia farinifera (Ndenecho, 2007). Raphia is highly utilized by the local population for construction, animal feed, crafts, food, traditional medicine, and agriculture (Akoègninou, Van der Burg, and Van der Maesen, 2006). The entire parts of Raffia palm are all useful economically and for domestic purposes.

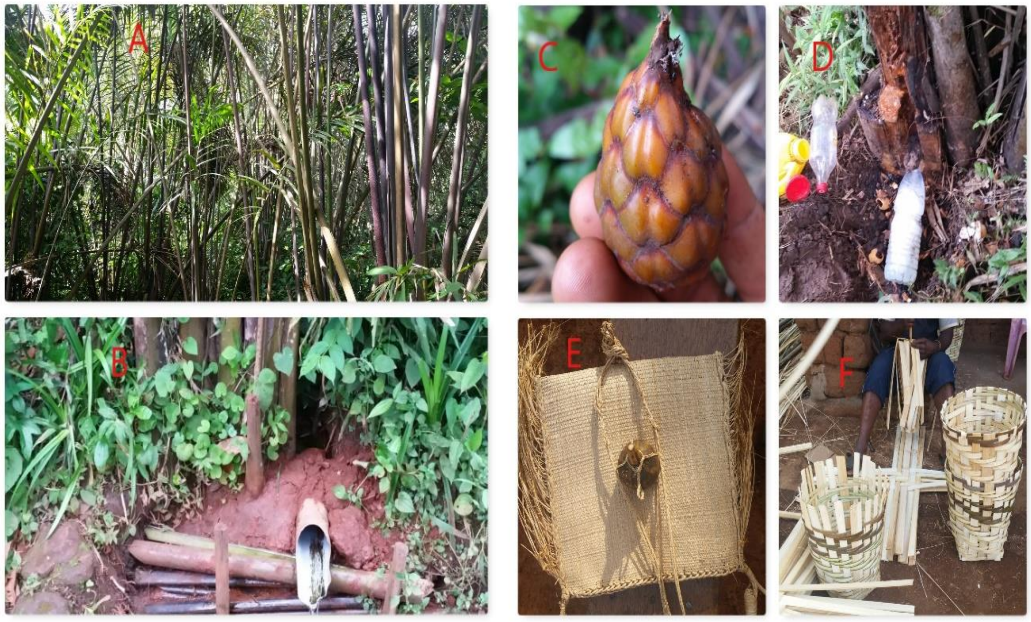

Figure 1: Raphia Palm Grove and its Uses: A: Raphia Palm Grove; B: Water Point in Raphia Palm Grove; C: Raphia Fruit; D: Wine Extraction; E=Bag Made of Raphia, F: Tomato Basket (Source: Kamta, Foyet and Kenko, 2021)

Statement of the Study

The FotouniForward Project is focused on addressing both the ecological decline and tourism potential within the Kingdom of Fotouni, located in the Haut-Nkam region of Cameroon. This initiative is dedicated to restoring the kingdom's depleted natural resources (including reversing the decline of Raffia palm groves) and evaluating the area's suitability for tourism development. This decline is attributed to various factors including agricultural expansion, inadequate regeneration efforts, sub-optimal farming techniques, bushfires, and diseases. This study aspires to enhance the kingdom's biodiversity and empower local communities to sustainably manage and restore their

environmental resources, thereby, ensuring the preservation of their unique cultural and ecological heritage. The first author, an indigenous advocate belonging to Royal Families[3], emphasizes the critical role of integrating traditional knowledge and practices with modern conservation techniques. For the co-authors, this approach not only aims to restore the ecological balance but also to foster community-led initiatives that promote sustainable livelihoods. By leveraging the cultural significance and ecological importance of the Raffia palm groves, the FotouniForward Project seeks to create a model for ecotourism that benefits both the environment and the local population, paving the way for a resilient and thriving kingdom.

Study Objectives

This study aims to understand the multi-faceted causes of environmental degradation in the Kingdom of Fotouni, implement sustainable community-led restoration practices, and promote biodiversity conservation to ensure the long-term resilience and cultural heritage of the region. The following objectives aim to address both the immediate needs for biodiversity preservation and the long-term sustainability of the Fotouni Kingdom's natural and cultural assets:

a. To investigate the factors contributing to the decline of Raffia palm groves and overall biodiversity in Fotouni.
b. To develop and implement community-led restoration and conservation strategies that align with sustainable development goals.
c. To enhance local capacities for natural resource management and promote ecological resilience.

Contextual Parameters

Historical Context

The origin of the populations of Fotouni (Table 1) is part of the great movement of Bamileke migrations (CODEFO, 2020).

Table 1: Overview of Fotouni's History

Time	*Land use history*
11th - 14th Centuries	The Bamileke people, believed to have pharaonic roots, migrated to the Mbam region of the Western High Plateau[4]. They are a Bantu-speaking ethnic group known for their agricultural prowess and entrepreneurial nature (The University of Iowa Museum of Art, 2022).
15th Century	The Bamileke migrations involved multiple stages, with the final stage being the crossing of the Noun River in the 15th century. The Fotouni population's specific wave of migration is difficult to determine as they were not yet a unified geopolitical entity and were

[3] Daughter of Sop Foyet, Grand-Daughter of Nzo'o Tamakouo I, 2nd Great Grand-Daughter of Fondjo I, Descendant of Ngomseu, respectively Prince, Chief Dignitary, 10th and 8th King of Fotouni; and Descendant of Tchoupe, King of the Kingdom of Bandja.

[4] Lying along the Cameroon line, the region consists of mountain ranges and volcanoes made of igneous rock and crystalline.

Time	*Land use history*
	scattered among different groups during that time. However, the founders of Fotouni belong to the 9th wave of Bamileke migrants who settled in the Bagan region of the Bamboutos department after crossing the Noun River.
17th Century	The Bamileke began to expand their territory and settle in the western region of Cameroon, including the Fotouni landscape.
19th Century	From the end of the 19th century, the term Fotouni is formed. Its territory is an old region where migratory currents have come to merge, with inhabitants being mainly hunters. The region is covered by mixed montane forests in the uplands, mixed watersheds and swamp forests in the lowlands, and stands of bamboo and Raffia along riparian areas.[5]
1900-1910	Indigenous settlements in the region depend on hunting and gathering for survival. Although the upland forests are sparsely populated, evidence of human activity along mountain pass pathways suggests the presence of local communities engaged in herding, particularly with native sheep and goats. Local biologists note that Indigenous peoples actively manage bamboo stands for various purposes and have played a role in its expansion.
1910-1960	Colonial arrival introduced new crops[6] for livelihood and taxes. European nations like Germany, England, and France administered Cameroon, implementing land practices like cash crop expansion and timber extraction. Despite rugged terrain challenges, the Bamileke adapted, excelling as farmers and traders. Though development was aided by roads, schools, and churches, access was difficult, and towns remained small and isolated.
1960-1970	Cameroon gained independence from France, and the Bamileke population played a key role in the new government.
1970-1990	After Cameroon gained independence, freedom fighters returned to their hometowns. With coffee and cocoa cultivation emerging as the main crops. The region connected to local and international markets. High demand led to plantation expansion, impacting previously untouched areas and causing a surge in deforestation rates. Urban development in nearby towns further intensified timber extraction, forest clearing, agriculture, and road construction. Older farmers recall a time when now-extinct or endangered species were abundant, and they witnessed the transformation of fertile soils into arid conditions due to the removal of shade. The government implemented policies to protect forests, but enforcement remains a challenge.
1990-2005	As income increases, the population declines due to migration for

[5] According to legend, Kwetchouong, a skilled hunter, arrived in the (once rich in game) Tcham district of Fotouni after failing to succeed his father in Balessing. The chief of the district welcomed him due to his hunting prowess and the sharing of his successful hunts. Kwetchouong settled in Lassié (another district located at the bottom of today's Fotouni) where he built relationships with the locals and became wealthy by selling hunting products. Taking advantage of tensions between the chief and his notables, Kwetchouong orchestrated a traditional coup d'état to seize power.

[6] Sugar cane, coffee, cocoa, banana. The population gradually involved into small scale farming and diversified cultures with vegetables (beans, cabbages, tomatoes, pepper) and tubers (Irish and sweet potatoes, maize, cassava, etc.).

Time	*Land use history*
	academic and economic prospects, both within and outside the country. Farming continues through the support of grandchildren and children who return to the village on weekends and holidays to assist their elders. Additionally, immigrants from northern regions and other areas are employed to provide assistance in farming activities.
2005-2010	Population surges due to citizens being assigned to local government agencies, while successful individuals return to Fotouni to build homes, support family businesses, and contribute to community development. Simultaneously, sustainable land use and forest conservation efforts persist in the region, including community-based forest management initiatives and the implementation of REDD+ programs. The Bamileke population remains integral to the landscape and its rich history.
2010-now	The diaspora plays a growing role in promoting cultural values, festivals, ecosystem services, craftsmanship, etc. However, The region also experiences land grabs by non-locals investing in the area. This has led to fewer youth engaging in farming due to the stigma of it being seen as an occupation for the less fortunate, leading them to prefer urban living.

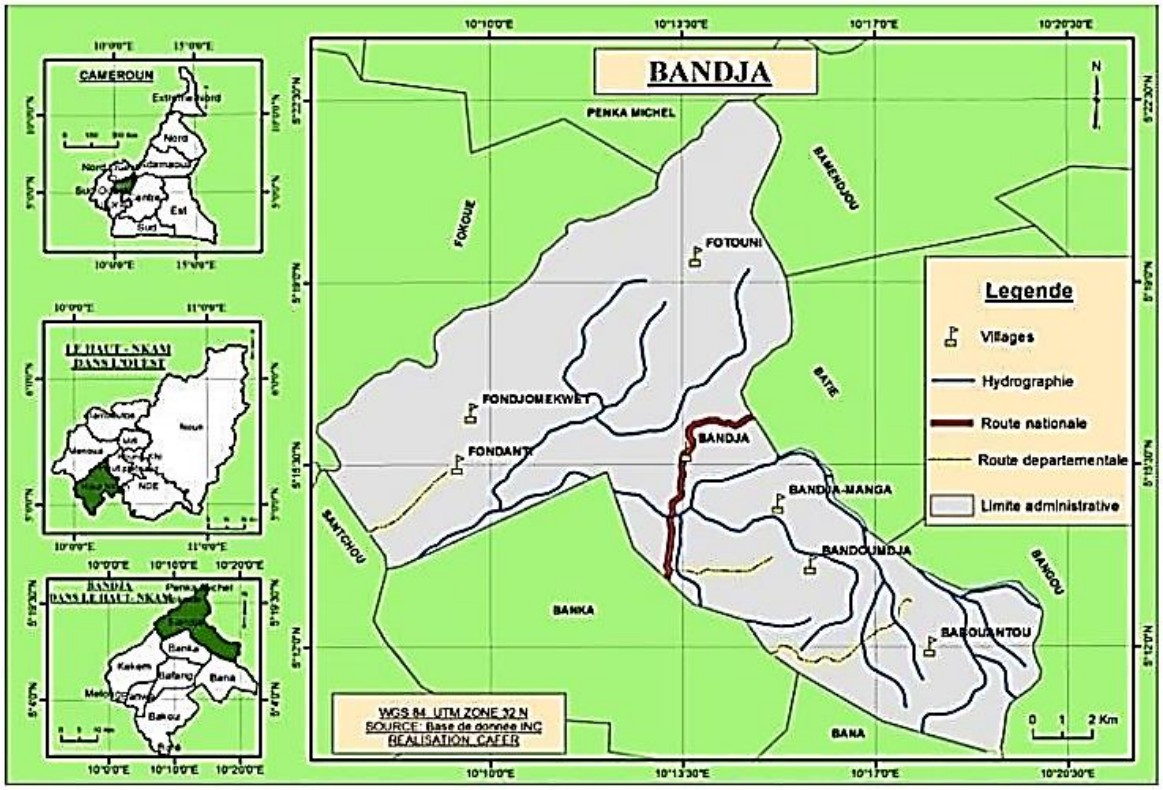

Figure 1: Location of Fotouni (Kamta, Foyet and Kenko, 2021)

Socio-Economic Context

The socio-cultural, political, and economic contexts of the Fotouni Kingdom of Western Cameroon are shaped by its unique history and location within the larger cultural and politico-economic landscape of Cameroon. The inhabitants of the area are known as the Fotouni, with variations of the name including Pe'Touni and PoaTouni. Politically, Fotouni is headed by a traditional ruler, known as the Fo'o or Chief, who holds significant cultural and political influence within the community. Covering about 65 km of land, Fotouni is home to over 20,000 people[7]. It consists of 12 villages[8] (Djeupou, Gwonfet, Lafi, Latchié, Mdjiock, Ndenlak, No'o, Kouotou, Kouotchak, Kwopp, Tcham, Toukong) as well as the large-scale neighbourhoods that have developed around the kingdom: Demaguim, Demkou'o, Famgam, Mbeum, Mving, Nga'akam, Ngueuka Kou'okgwiè, Kouokeng, Tchiékwong, Tchisso, Tchounok (L. Foyet, personal communication, May 10, 2023), each of which has its own chief, who functions as a guardian of his part of the kingdom (ARMT, 2010). Cameroon is a republic with a president and a multi-party system, and the Fotouni Kingdom operates within this larger political framework.

Culturally, the Fotouni Kingdom is part of the Bamileke[9] (Bantu) ethnic group, known for its rich history and notable cultural practices and beliefs. The Fotouni have a deep tradition of festivals and dances, often held to mark important events[10], such as harvest time or the start of the planting season. Moreover, they have a strong musical tradition, with a variety of instruments and styles, and are known for their intricate beadwork and weaving, and to a lesser extent, pottery. All of these, added to its beautiful natural scenery are opportunities that the Fotouni are slowly beginning to capitalize on to promote ecotourism as a source of income (e.g., Nonena Ranch).

The Fotouni have a rich spiritual tradition, including beliefs in ancestor worship and the power of spirits. They believe that spirits play a role in their daily lives and that it is important to respect and honor them. They also place a strong emphasis on respect for elderly people and the passing on of cultural knowledge and traditions from one generation to the next. Overall, these cultural practices and beliefs play a crucial role in shaping the way of life for the Fotouni and help to preserve their cultural heritage for future generations.

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7 The most recent official census the authors know of was conducted in 2005 and provides 20,000 as the number. Population estimates for the Fotouni Kingdom are not readily available, and more research and data collection would be required to determine the current population size.

8 The names of the villages in this text correspond to their local names. Administratively and in accordance with correspondence No. 3666/L:MINATD/SG/DGT of 25 August 2015 from the Minister to the Prefect of Haut-Nkam, the official dominion of the said villages is as follows: Batcham, Bano, Balafi, Bamendjo, Balatchié, Bankwop, Gwofet, Kouotcham, Ndenlak, Bakoutou, Batoukon, Badjeupou.

9 Bamilikes are known to have a strong and natural entrepreneurial mindset. Consequently, they are known to be widespread among the major economic centers of Cameroon. Most Cameroonians refers to the Bamilkes as "the Jews of Cameroon".

10 The Fotouni society gathers for a market just once a week. This market day is not consistent as the day changes with the customary "village days". Market days in the Fotouni community follow their traditional calendar, and do not align with the standard calendar. On these days, trading is a bustling activity where transactions are made both in cash and in kind. People from surrounding towns flock to the market, eager to participate and not miss out. Local farmers dedicate their entire week to preparing for this significant day. For instance, a farmer might spend the whole week producing just a 5kg jug of palm wine or palm oil to sell at the market, although the earnings from such sales might not be substantial.

Cultural Practices and Beliefs

The Fotouni people have a rich cultural heritage that is rooted in their traditional practices. Like other Bamileke groups (Joshua Project, 2019), they place great importance on family and community. They have a strong kinship system and are organized into clans or lineages, each with its own chief. Their religion is mainly animistic, with a belief in a supreme being and the veneration of ancestors. They also practice traditional medicine and have various cultural festivals and ceremonies, such as the Lie'la festival, which annually celebrates and promotes Fotouni's rich cultural diversity.

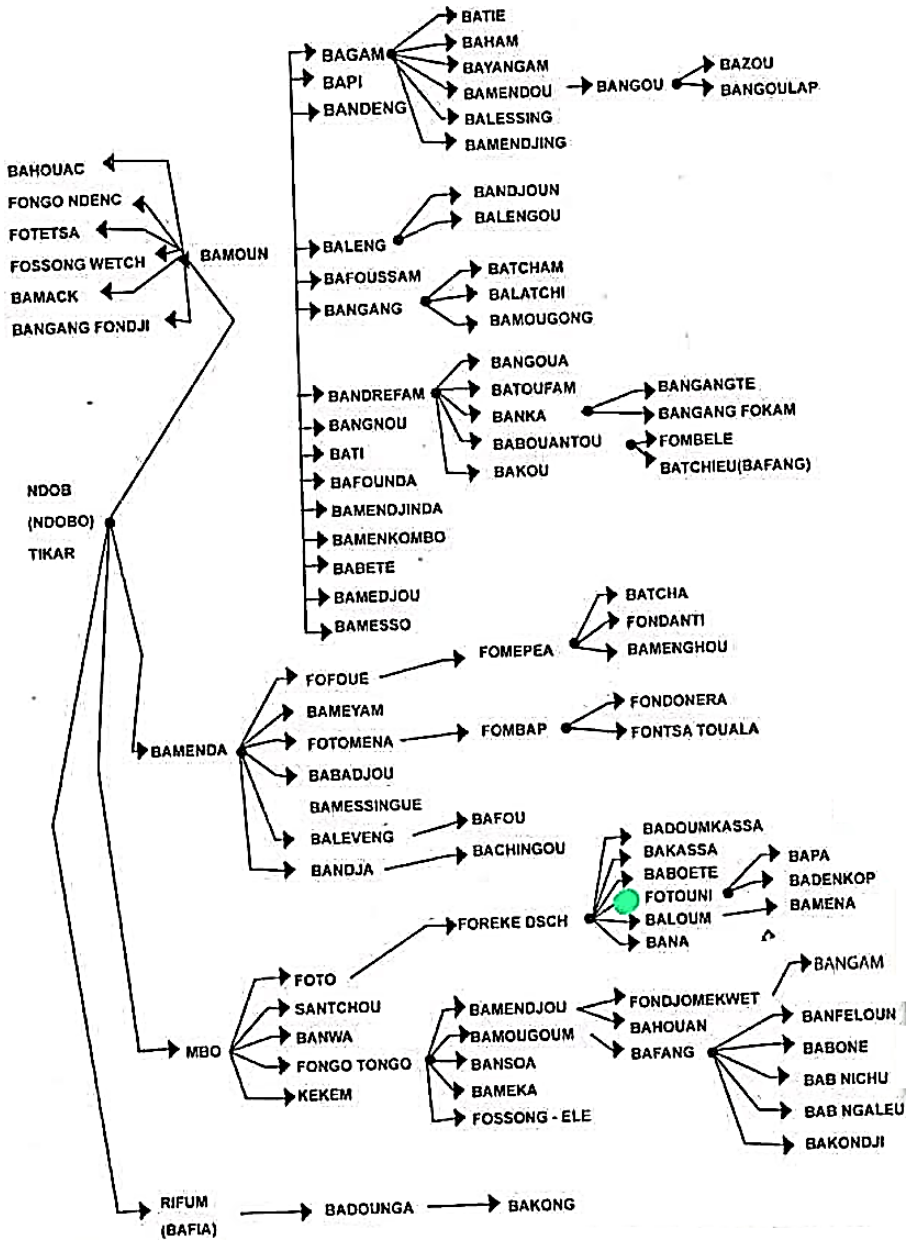

Figure 2: Genealogical tree of the Bamileke Grassfield by Djouteu (2013)

Politico-Legal Context

The Fotouni have a history of resisting colonial rule and later, the post-colonial government of Cameroon. They were active in the independence movement and later in the democratization struggles of the 1990s. In recent years, they have been involved in a movement for greater regional autonomy and the recognition of their traditional authorities. Cameroon is a unitary state with a strong central government, but there are ongoing debates about decentralization and the role of traditional authorities in governance.

Economic Factors and Influences

Agriculture is a central pillar of the economy in the Western Highlands of Cameroon, engaging a substantial portion of the economically active population (Guillermou, 2007). Small-scale farming and livestock rearing are predominant as the main sources of livelihood (Shidiki, Ambede and Awazi, 2020). The region is renowned for its production of cash crops such as coffee, cocoa, and palm oil, vital not only to both the local economy and sustenance (Awazi *et al*., 2020; Guillermou and Kamga, 2004), but also as significant contributor to the nation's GDP and export earnings (Awuh, 2024; De La Paix Bayiha, 2024) . Like other Bamileke groups, the Fotouni have a reputation for entrepreneurship and have played a significant role in the development of commerce and trade in Cameroon. Many Fotouni have migrated to urban areas in search of employment and economic opportunities, and they often maintain strong ties with their rural communities (CODEFO, 2020). Economically, the Fotouni have a strong agricultural tradition, mainly growing cash crops (coffee, cocoa, sugarcane), cereals (maize), fruits (avocado, passion fruit, guava, lemon, banana, plantain, etc.), tubers and root vegetables. Agriculture is a main source of income and is closely tied to their cultural and spiritual beliefs. The harvest is often marked by a ceremony to give thanks to the spirits for a bountiful crop. There are efforts to support sustainable development initiatives, including promoting ecotourism as a source of income. However, the region remains largely rural and underdeveloped, facing various challenges, including poverty and limited access to resources such as education[11] and healthcare.

Findings

Environmental Decline and Restoration Efforts in the Kingdom of Fotouni

Historically, the Fotouni Kingdom has been known for its rich biodiversity and ecosystem services, including the provision of clean water, carbon sequestration, and the maintenance of soil fertility. However, like many other regions in Africa, the area has experienced significant declines in biodiversity due to habitat destruction, overexploitation of natural resources, and climate change. Conservation and restoration priorities in the region must address these threats and work towards the protection and restoration of critical habitats, including rainforests and wetlands. Efforts should also focus on promoting sustainable land use practices, promoting community involvement in conservation efforts, and enhancing ecosystem resilience to climate change impacts.

[11] Access to education in the Fotouni Chiefdom is limited, and many people may have limited or no formal education.

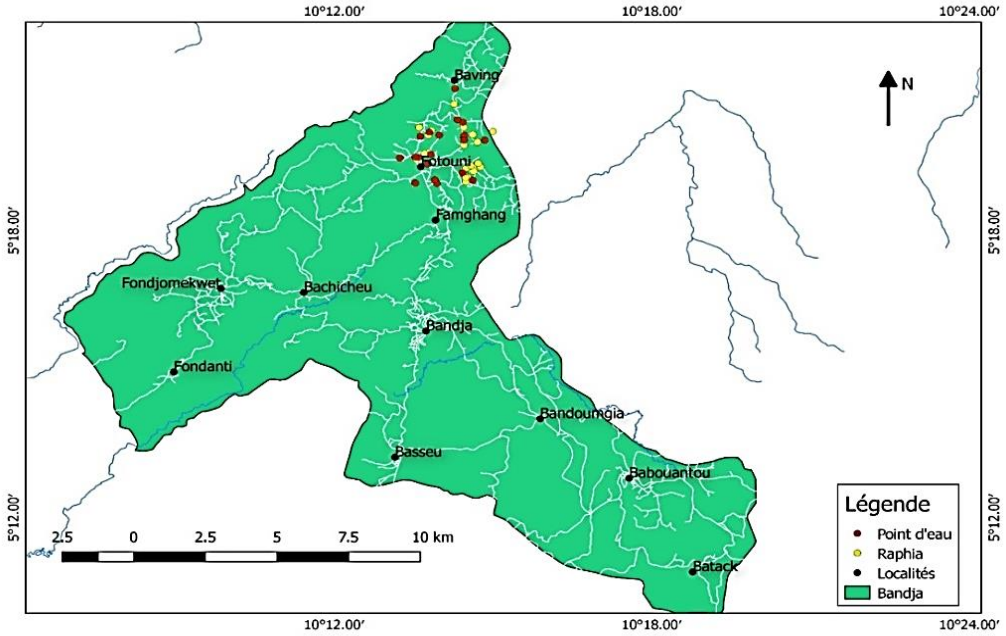

Figure 4: Spatial Relationship Between Raphia Palm Groves and Surface Water Points in Fotouni (*Source:* Kamta, Foyet and Kenko, 2021)

In 2021, the Fotouni recognized that the quantity of Raphia palm groves in the study area has decreased over the last 15 years (Kamta, Foyet and Kenko, 2021). Several causes that could explain this drastic reduction in Raphia palm groves are agriculture (80%), non-regeneration (30%), poor farming techniques (26.67%), bush fires (11.67%) and diseases (13.33%). The degradation of the Raphia palm groves would have inevitable and irreversible consequences on the populations and their environment, either directly or indirectly. According to the same study, the disappearance of the Raphia palm groves will lead to a total drying up of surface water sources (drought), material and economic loss, loss for the local pharmacopoeia, loss of cultural values, and famine and disease. Moreover, other covariates such as pesticide use in agriculture is risky as chemicals contaminate livings organisms inhibiting the wetlands, and also bio-accumulates in Raphia, a phenomenon that may contaminate Raphia wine or fruits consumed by animals and human beings. As an ecosystem, Raphia palm groves are home to a wide range and diversity of meso-fauna, such as rodents, birds and small mammals. They are also a source of fuelwood, constitute a hunting area for small game, provide Raffia wine and help in the regulation of temperature. Failing in restoring the Raffia wetlands might exacerbate the impact of climate change on livelihoods in Fotouni.

The Fotouni Kingdom in western Cameroon has experienced significant degradation of its ecosystems, primarily due to human activities such as deforestation, agriculture, and hunting. The degradation has impacted the ecology of the region, including the loss of endemic species, changes in species distribution, and reduced carbon sequestration, which in turn can impact the livelihoods and well-being of local communities. Continued degradation could lead to further loss of biodiversity and ecosystem services,

exacerbating existing social and ecological issues in the region. Addressing these drivers of degradation through community-led conservation and restoration programs and sustainable land management practices will be critical to protect and restore the ecological and ecosystem services of the Fotouni Kingdom (Meutchieye, 2012).

Regeneration Potential of Fotouni's Ecology

The natural regeneration potential of Fotouni depends on the extent of disturbance and the ability of the ecosystem to recover. While natural disturbances such as wildfires, landslides, and flooding can stimulate natural regeneration by creating opportunities for new growth, the impact of human activities such as deforestation, agriculture, and hunting can severely limit the ability of the ecosystem to recover naturally. In general, the natural regeneration potential of tropical rainforests can be high due to their high species diversity and capacity for natural regeneration. However, if the disturbance has been severe, such as in the case of large-scale deforestation or overhunting, the natural regeneration potential may be limited.

Ashton's four restoration pathways - seed rain, seed banks, vegetative regeneration, and advance regeneration - all have the potential to contribute to the natural regeneration of Fotouni. Seed rain involves dispersal from nearby vegetation onto the forest floor, introducing new species that aid ecosystem recovery. Seed banks preserve diverse plant seeds in the soil, which germinate under favourable conditions, enhancing plant diversity. Vegetative regeneration allows plants to regrow from parts like roots, helping recover from damage. Lastly, advanced regeneration involves new growth from pre-existing seedlings or saplings, providing a vital seed source for recovery after disturbances. In the case of Fotouni, the restoration pathways that may be most effective will depend on the specific types of disturbance that have occurred and the condition of the surrounding landscape. For example, if the disturbance has been caused by logging or wildfire, seed rain and seed banks may be particularly effective in restoring vegetation cover. Vegetative regeneration may be more effective in areas with less severe disturbance, such as areas where hunting has been a primary issue. Advance regeneration may be particularly useful in areas with existing seedlings or saplings that can be used to establish new individuals.

Overall, a combination of restoration pathways may be necessary to support the natural regeneration of Fotouni, particularly in areas where disturbance has been severe. Community-led conservation and restoration efforts can play a critical role in identifying the most effective approaches and promoting the recovery of the ecosystem. The potential for natural regeneration in Fotouni depends on the extent and severity of disturbance, as well as the ability of the ecosystem to recover through natural regeneration pathways. However, in cases where natural regeneration is limited or not feasible, active restoration efforts may be necessary to help promote ecosystem recovery and preserve biodiversity and ecosystem services. Of the four restoration pathways, seed banks and vegetative regenerations would better contribute to the natural regeneration of the site. Seed banks will allow for cultivating different varieties year-round and for seed modification for adaptation to climate change; while vegetative regeneration is the main traditional technique used to maintain the Raffia palm groves. As Raphia plants require very little agricultural inputs for their

development, maintenance consists essentially of removing dead parts in the Raphia tufts, clearing the Raphia palm groves and drainage to reduce the amount of water in the Raphia palm groves. Maintenance is carried out seasonally by the head of the household using a cutlass. Finally, artificial regeneration could also be considered. It consists of letting the raffia palm groves grow, produce seeds and let these seeds germinate to create new clumps. It repopulates the raffia palm groves with plants harvested on the site or elsewhere by the owner himself.

Key Stakeholders

Key stakeholders in the Fotouni Kingdom can be grouped into five categories. Each of these groups may have a different perspective and level of influence, depending on the specific context and issues at hand. They are:

- **The community members** within the Fotouni Kingdom, including farmers, artisans, small-scale traders, small game hunters, and people involved in other forms of income generation (sawing, braiding, etc.). They have a direct interest in the sustainable development of the kingdom and are often directly impacted by decisions related to land use, resource management, and environmental protection.
- **Traditional leaders and elders**, such as the King, the Chiefs and the Council of Dignitaries or Elders, play an important role in the Fotouni Kingdom, both as cultural and political leaders and as mediators in disputes. They hold significant cultural and spiritual authority, and play a central role in decision-making processes. As key stakeholders, they have an important role to play in shaping the future of the kingdom and promoting sustainable development.
- **Civil society groups**, including NGOs, women's groups, youth groups, environmental groups, and other civil society organizations. They work to promote social and economic development, and may advocate for the rights and interests of marginalized groups. For example, environmental groups may work to promote environmental protection and sustainability, and raise awareness of environmental issues and how they impact local communities: women's groups may work on promoting gender equality and advocating for women's rights; and youth groups may be focused on education, employment, and civic engagement.
- **Businesses,** including those involved in tourism, agriculture, and natural resource extraction, are also key stakeholders in the Fotouni Kingdom. The quality of their interest in the kingdom's resources will determine how positive or negative their operations can impact the Touni and their environment.
- **The Cameroonian government**, through its various agencies, is also a key stakeholder in the Fotouni Kingdom. Government agencies are responsible for implementing policies and regulations related to land use, resource management, and environmental protection, and for working with local communities and other stakeholders to promote sustainable development. Government representatives may be responsible for providing basic services and infrastructure, enforcing laws and regulations, and responding to community needs and concerns.

Religious leaders are not included among the kingdom's key stakeholders, as their influence in shaping moral and ethical norms of the inhabitants of Fotouni is not significant. As stated above, the community's religion is mainly animistic. Also, despite the presence of few Christian missions in the community, they do not provide important support to community members. Overall, the key stakeholder groups in the Fotouni Kingdom are diverse, and include local communities, traditional leaders, environmental groups, businesses, and government agencies. Each of these groups has an important role to play in shaping the future of the kingdom and promoting sustainable development.

Governance: External Factors

With regards to who makes decisions (such as creating laws, policies, norms, requirements) that may influence the project, the legal context of the Fotouni Kingdom is shaped by a combination of Cameroonian law, customary law, and traditional systems of justice. These laws and systems are used to govern the behavior of individuals and communities within the kingdom, and help maintain social order and promote sustainable development. On one hand, the Fotouni Kingdom is subject to the laws and regulations of the Cameroonian government, including laws on property rights, land use, and environmental protection. On the other hand, the kingdom also operates under customary law, which is based on traditional systems of justice and community values. Customary law is often used to resolve disputes between individuals and communities within the kingdom.

The Fotouni have a rich tradition of resolving disputes through traditional systems of justice, which can include the use of local leaders, elders, and other community members to mediate disputes. These systems of justice help maintain social order and promote harmony within the community. In parallel, traditional leaders hold significant authority and are responsible for making decisions related to local governance and management of natural resources. They may be guided by customary law and traditional norms and may have the power to create and enforce rules and regulations within the community. Local NGOs may also play an important role in decision-making processes, particularly in advocating for the rights and interests of marginalized groups and promoting community participation and consultation. Government representatives may be responsible for enforcing national laws and regulations related to conservation and natural resource management, but their level of involvement and influence may vary depending on the specific context and issue at hand.

In terms of accountability, the responsibility for making and implementing decisions may be shared among multiple stakeholders, and the mechanisms for ensuring accountability may also vary widely. Traditional leaders may be accountable to their communities and to customary law, while government representatives may be accountable to national laws and regulations. Local NGOs may be accountable to their donors and to the communities they serve. In general, effective stakeholder engagement and participation, transparency, and communication are crucial for ensuring accountability and promoting sustainable and equitable outcomes in conservation projects. Decisions about governance factors that enable or constrain what the project is able to do will be made by the project's implementers on the

ground, in collaboration with the funders, the Touni and their leadership, and with consideration for what the national law allows. The Fotouni across the national territory and of the diaspora may be asked to contribute in order to reduce dependency on the funders. The implementing team will be held accountable for the implementation of these decisions.

Property Rights

In the Kingdom of Fotouni, property rights and access to land and resources are often based on a combination of customary and formal legal systems. Customary systems are often rooted in traditional practices and beliefs, and may involve complex social relationships and power dynamics. Formal legal systems, on the other hand, are based on colonial-era laws and regulations, as well as more recent national laws related to natural resource management and land tenure. In many cases, there may be significant gaps or inconsistencies between customary and formal legal systems, which can create confusion and conflict over property rights and access to land and resources. Historical land and resource rights may also be important to consider, as they may influence current property rights and access. In the case of projects involving natural resource management or conservation activities, it is important to consider how it may affect local people's rights or access to land and resources. For example, conservation activities that restrict access to traditional use areas or reduce local people's control over natural resources may be perceived as a threat to their livelihoods and cultural identity. To avoid local people's loss of rights or access to resources, it is important to engage with local communities and stakeholders throughout the project design and implementation process. This may involve conducting participatory assessments and consultations to understand local people's priorities and needs, and working collaboratively with them to design and implement project activities that align with their interests and values.

Stakeholder Assessment

The stakeholder assessment (Tables 2 and 3) is a crucial component in the successful implementation of the FotouniForward Project, ensuring that all relevant parties are identified, understood, and engaged appropriately. This process involves recognizing the various groups and individuals who have an interest or stake in the project, understanding their interests, and strategizing on how best to involve them in the project activities. Effective stakeholder engagement can lead to better project outcomes by fostering cooperation, reducing conflicts, and enhancing the sustainability of the conservation and development initiatives within the Fotouni Kingdom. By acknowledging the diverse perspectives and influence of each stakeholder group, the project aims to build strong, collaborative relationships that support the overarching goals of ecological restoration and community empowerment in Fotouni.

The Stakeholder Identification Table below categorizes the key stakeholders involved in the FotouniForward Project into five distinct groups based on their interactions with land and resources. Each group of stakeholders has distinct roles and interests, which influence their engagement and impact on the project's outcomes. By identifying these potential actors, the FotouniForward Project aims to develop targeted engagement

strategies to foster collaboration, address conflicts, and enhance the overall effectiveness of conservation and development efforts in the Fotouni Kingdom.

Table 2: Stakeholder Identification

Those with land/resource rights	Traditional leaders/elders	Community members	Elite	Diaspora
Resource managers, jurisdiction	National government agencies			
Resources users	Community members			
Resource traders & consumers	Private sector	Diaspora	Elite	Community members
NGO actors	CSOs	Development agencies		

- The first category, "Those with land/resource rights", indicates direct ownership or customary rights. It includes traditional leaders and elders, who hold cultural and traditional authority over land and resource use, making them crucial for the project's acceptance and implementation. Community members, or local residents, directly use and depend on the land and resources for their livelihoods. The elite, influential individuals within the community, may have significant land holdings and economic power. Additionally, the diaspora, members of the Fotouni community living outside the region or country, may have land rights and a vested interest in the conservation of their homeland.
- The second category, "Resource managers, jurisdiction", highlights the national government agencies, emphasizing their regulatory and jurisdictional authority over land and resource management.
- The third category, "Resources users," solely lists community members, underscoring their direct utilization of the land and resources for their livelihoods.
- The fourth category, "Resource traders & consumers", includes the private sector, businesses involved in the trade and consumption of natural resources, which can impact the project's economic and environmental aspects. The diaspora, non-resident community members, may invest in or consume resources from Fotouni, influencing the local economy. The elite, local influential individuals who engage in the trade and consumption of resources, can also impact the project's dynamics. Community members, residents who not only use resources but also participate in trading and consuming them, affect the local market.
- Lastly but not the least, the fifth category, "NGO actors", include Civil Society Organizations (CSOs), which advocate for social, environmental, and economic issues, supporting the project's goals through advocacy and capacity

building, and development agencies, which provide funding, technical assistance, and support for sustainable development initiatives.

The following (Table 3) outlines the interests, justifications, and engagement strategies for the stakeholders identified above. Engagement strategies include meaningful consultations, involvement in project stages, relationship-building, outreach programs, and partnerships to align interests and ensure project success.

Table 3: Stakeholder Assessment Worksheet

Stakeholder	*Stakeholder´s interest*	*Justification*	*A*	*I*	*C*	*Engagement strategy*
Traditional Leaders / Elders	Maintaining their way of life, preserving the cultural heritage and traditional knowledge of the community, maintaining the ecological balance of the land and ensuring that Fotouni's way of life is sustained and that the community and its members benefit from the project.	Their knowledge and experience can help to ensure the conservation project respects and preserves the community's cultural and natural heritage.	2	3	3	Engage in meaningful consultation and collaboration with traditional leaders and elders, incorporating their cultural knowledge and practices into the project. Respect their authority and decision-making processes, and ensure they are included in project planning and implementation.
Community Members	Accessing economic opportunities that come with the conservation project, such as education, employment, eco-tourism or sustainable resource use.	They are directly impacted by the project and have a stake in its success. Their input can help to identify important areas for conservation and sustainable development. Including them also ensures sustainability by creating ownership and involvement in decision-making process and implementation.	0	1	1	Involve community members in all stages of the project, from planning to implementation and monitoring. Provide training and capacity building opportunities, and ensure they are fairly compensated for their participation. Address their concerns and prioritize their needs to build trust and commitment.
Elite of Fotouni	Gaining political power and economic benefits from the conservation	They may have the power to influence the community's response to the	1	1	1	Build relationships with the elite of the indigenous community, acknowledging their

Stakeholder	*Stakeholder´s interest*	*Justification*	*A*	*I*	*C*	*Engagement strategy*
	project; and maintaining their position within the community.	project. Their support can help to ensure the project is accepted and implemented effectively, while their opposition may cause challenges.				power and influence. Work with them to understand their interests and priorities and identify areas of mutual benefit. Address any potential conflicts of interest in a transparent and respectful manner.
Diaspora of Fotouni	Maintaining a connection to their ancestral land and culture and supporting the conservation project financially or through advocacy.	They may have a strong emotional attachment to the area and can provide valuable insights into the cultural and ecological significance of the project.	2	1	2	Engage with Fotouni's diaspora through outreach and education programs, creating opportunities for them to contribute to the project's success. Use social media and other communication tools to keep them informed and involved.
National Government Agencies	Using the conservation project as a way to (i) build positive relationships with indigenous communities and gain political support; and (ii) meet environmental targets and comply with international agreements.	They have the authority and resources to support the project at the national level. Their involvement can help to ensure the project aligns with national environmental policies and regulations.	1	2	3	Build relationships with national government agencies, seeking their support and involvement in the project. Demonstrate how the project aligns with national environmental policies and regulations, and seek funding and technical assistance where appropriate.
Development Agencies	Promoting sustainable development and poverty reduction and the conservation project as a way to support indigenous rights and promote cultural diversity.	They can provide funding and technical assistance to support the implementation of the project. Their involvement can help to ensure the project is sustainable and has a lasting impact.		1	2	Build partnerships with development agencies, seeking funding and technical assistance to support the project. Work with them to align project goals with their development priorities and build capacity within the local community.

Stakeholder	*Stakeholder´s interest*	*Justification*	*A*	*I*	*C*	*Engagement strategy*
Civil Society Groups	Promoting social justice and environmental protection and advocating for the rights of indigenous communities and supporting community-led conservation initiatives.	They can provide advocacy and support for the rights of indigenous peoples and help to ensure the project is socially just and equitable.	2	1	2	Engage with civil society groups through outreach and education programs, seeking their support and advocacy for the project. Build partnerships and collaborate with them to promote social justice and equity in the project.
Private Sector	Fulfilling corporate social responsibility, accessing natural resources located within the community's land and promoting eco-tourism or sustainable resource use as a way to generate profit.	They can provide financial resources and technical expertise to support the implementation of the project. However, their involvement must be balanced with the conservation goals and the needs and interests of the local community.	0	1	2	Engage with the private sector through outreach and education programs, highlighting the benefits of sustainable business practices and corporate social responsibility. Identify opportunities for private sector involvement in the project that align with conservation goals and the needs of the local community.

Stakeholder Marginalization

Marginalized stakeholder groups in Fotouni primarily include women, youth, and the disabled, as well as any other group that has traditionally been excluded from decision-making processes and marginalized in terms of access to resources and opportunities. Conservation projects in Fotouni, or any other Indigenous community, should aim to benefit the community as a whole, including marginalized stakeholder groups. This may involve providing access to new income-generating activities or resources, supporting education and capacity-building initiatives, or providing opportunities for meaningful participation in decision-making processes (Figure 5) related to natural resource management and conservation.

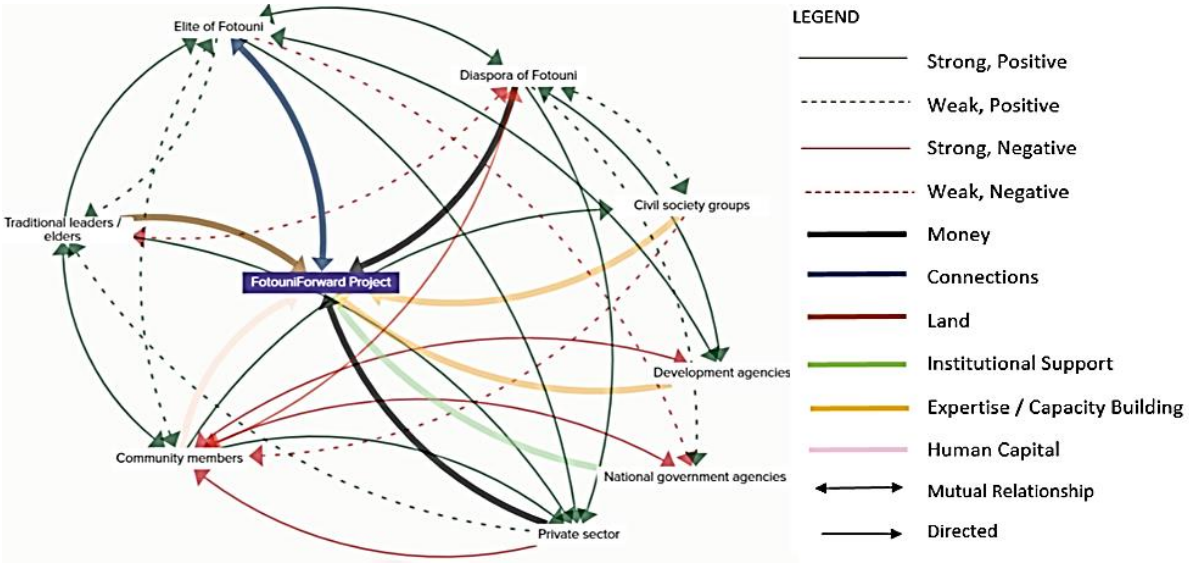

Figure 5: FotouniForward's Social Network Diagram

Table 4: Explication of the Figure 5

Description	*Comments*
Mutual strong positive relationship between community members and traditional leaders	
Strong positive relationship between traditional leaders and the elite	Traditional leaders always solicitate the elite;
Weak positive relationship between the elite and traditional leaders	Elite sometimes interested in participating in local affairs;
Mutual weak negative relationship between traditional leaders and diaspora	Data about community members in the diaspora is not well known; Diaspora is either not located / contacted or are sometimes not interested in participating in local affairs when contacted;
Mutual weak positive relationship between traditional leaders and national government agencies	Little investment in the community by the government; Networking strategy of traditional leaders is either weak or they are not interested in solicitation government;
Mutual strong negative relationship between community members and national government agencies	Low representation of community members in the public function; Little or no investment of national government agencies in community members of Fotouni;
Strong negative relationship between private sector and community members	No investment in the community by the private sector;

Strong positive relationship between community members and private sector	Significant amount of community members exercising in the private industry;
Mutual strong negative relationship between community members and development agencies	Little impact of development agencies on community members; Little activity from development agencies in the community/ low interest of development agencies in the community;
Strong positive relationship between community members and civil society organizations	Community members are significantly involved in CSOs either as volunteers or staff;
Weak negative relationship between CSOs and community members	CSOs not doing sufficiently for community members of Fotouni or insufficient actions geared towards improving the lives of community members; Are community members powerless? Low positioning of community members in CSOs (lower staff)? Are community members disinterested in contributing to their community's development or are they just in CSOs for salary instead of impact?
Mutual strong positive relationship between diaspora and development agencies	Significant number of community members in the diaspora are in development agencies;
Mutual strong negative relationship between diaspora and community members	Diaspora has not invested back into the community or even at the family level; Existence of resent from expecting family members; Existence of disdain from diaspora members not approving of entitlement of or expectation from family members
Strong positive relationship between diaspora and private sector	
Weak positive relationship between diaspora and national government agencies	
Mutual weak positive relationship between diaspora and CSOs	
Mutual weak positive relationship between community members and elite	Some initiatives from the elite towards community; Low or insignificant interaction between elite and community members;
Mutual strong positive relationship between elite and diaspora	Significant number of elite (including relatives) are also members of the diaspora; Factors: education level, financial capacity, and exposure;
Mutual strong positive relationship between elite and development agencies	Factors: education level, and exposure;
Mutual weak negative	Historical antecedent (role of the Bamileke in

relationship between elite and national government agencies	political revolution, freedom fighters);
Strong positive relationship between traditional leaders and private sector	Significant portion of traditional leaders are engaged in the private sector either as owner/founder/CEO or as other staff;
Weak positive relationship between private sector and traditional leaders	Businesses of community members either not interested in the development of the community or rather reinvest in the family in particulars instead of the community in general.

To minimize potential negative impacts to at-risk groups, conservation projects should be shaped to ensure that they do not reinforce existing power dynamics or exacerbate inequalities. This may involve taking steps to recognize and protect the rights of marginalized groups, such as women or ethnic minorities, and ensuring that they have a voice in decision-making processes related to natural resource management and conservation. In addition, conservation projects should be designed with a participatory approach that involves meaningful engagement and consultation with all stakeholder groups, particularly marginalized groups. This may involve conducting participatory assessments to understand local people's needs and priorities, and working collaboratively with them to design and implement project activities that align with their interests and values, and that ensure that the benefits of development and conservation efforts are shared fairly and equitably. Moreover, it is important to ensure that local people's rights to access and use land and resources are respected and protected throughout the project lifecycle. This may involve (a) establishing clear and transparent agreements or bio-protocols for resource use and management; (b) providing support for local people to participate in decision-making processes related to natural resource management and conservation; and (c) adopt domestic resource mobilization or other alternative funding models to limit dependency (Wagacha et al., 2019).

Stakeholders' Relative Strengths

The radar diagram (Figure 5) illustrates the relative strengths of various stakeholder groups involved in the FotouniForward Project across four key dimensions: power, capacity, motivation, and mandate. Traditional leaders and elders (blue line) exhibit high power and mandate, reflecting their significant influence and authoritative role in the community. Community members, including the elite and diaspora (orange line), also show substantial power and mandate, underscoring their collective impact and vested interests in the project's success. National government agencies (gray line) are characterized by high power and capacity, indicating their regulatory authority and resources to support the project. Development agencies (yellow dashed line) display notable capacity and mandate, highlighting their ability to provide technical assistance and align with project goals. Civil society groups (red dashed line) demonstrate strong motivation and a moderate mandate, emphasizing their commitment to advocacy and community engagement despite potentially limited power and capacity. This comprehensive view aids in understanding the diverse roles and influences of each stakeholder group, facilitating strategic engagement and collaboration for the project's effective implementation.

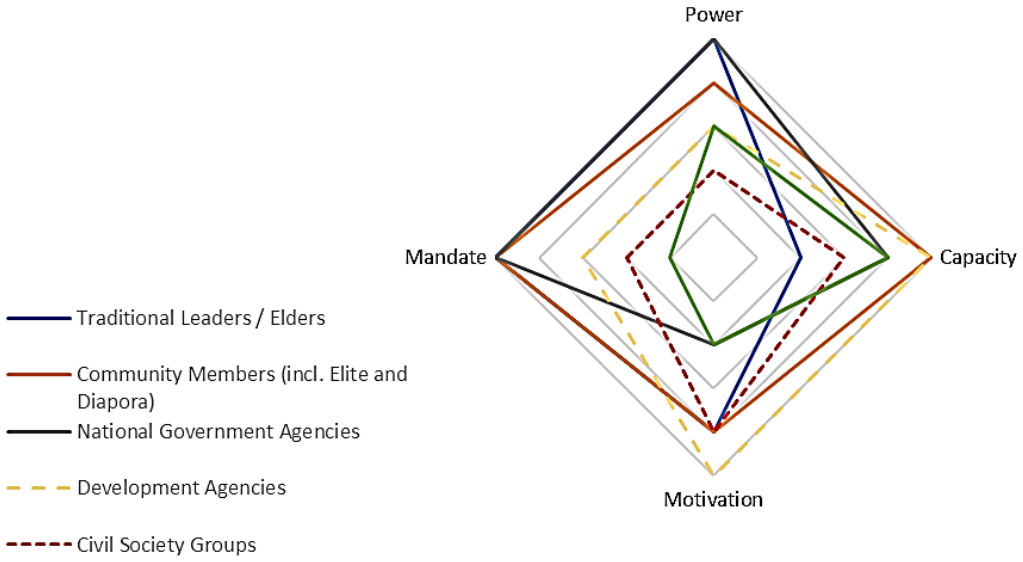

Figure 6: Radargram of Stakeholders' Relative Strengths

Table 5: Linkages Between Key Stakeholders and Type of Influence on the Success of the FotouniForward Project

		Relationship between Stakeholders								
		++		+		--		-		
	Stakeholders	1	2	3	4	5	6	7	8	*Influence on Conservation Project*
1	Traditional leaders / elders	X								Land
2	Community members		X							Human Capital
3	Elite of Fotouni			X						Connections
4	Diaspora of Fotouni				X					
5	National gov. agencies					X				Institutional Support
6	Development agencies						X			In Kind Support
7	Civil society groups							X		Expertise, Capacity Building
8	Private sector								X	

The table 5 presents an evaluation of the stakeholders' potential impact on the project's success, categorized by their resources and the strength of their contributions. This helps in prioritizing engagement efforts and tailoring strategies to involve these stakeholders effectively. They are assessed across different types of resources: Land, Human Capital, Connections, Institutional Support, In Kind Support, and Expertise/Capacity Building. By using a color-coded system to indicate the strength of each stakeholder's contribution, the table allows project planners and managers to

quickly identify where the most significant support and potential challenges lie. Each cell in the table indicates the degree of influence or contribution using a color-coded system: dark green (strongly positive), light green (positive), orange (negative), and light orange (strongly negative).

This holistic view helps in strategic planning, ensuring that all vital resources are mobilized effectively and that potential gaps are addressed. This visual representation of stakeholder influence also facilitates better communication, collaboration, and decision-making, ultimately contributing to the project's success and sustainability.

1. *Efficient Resource Allocation:* Traditional leaders and elders have a significant positive impact on land, human capital, and connections, highlighting their importance in providing cultural and land-related insights. Community members contribute positively to human capital and connections, essential for grassroots engagement. The elite, diaspora, and private sector also show strong contributions in various categories, such as institutional support and financial resources. Development agencies and civil society groups primarily offer positive support through expertise, capacity building, and institutional backing. National government agencies are critical for institutional support, while the private sector contributes mainly through financial and technical resources.
2. *Strengths and Weaknesses:* Understanding the diverse roles and contributions ensures that the project can harness the strengths of each group while addressing any gaps or challenges that may arise or require additional support or resources.
3. *Building Partnerships:* The table facilitates the identification of potential partnerships and collaborations. By knowing which stakeholders provide complementary resources, project leaders can form alliances that enhance overall project outcomes.

A successful conservation project in Fotouni, or any Indigenous community, should prioritize equitable benefits and minimize potential negative impacts to at-risk groups by taking into account the specific social, cultural, and political context of the community, and ensuring that all stakeholder groups have a voice and are actively engaged throughout the project lifecycle. This table serves as a crucial tool for project management, stakeholder engagement, and resource optimization, ensuring that all relevant parties are effectively integrated into the project for successful implementation and sustainability.

Challenges and Threats in Fotouni: Conservation, Wildlife, Health, and Education

Challenges Confronted in the Conservation or Restoration of Fotouni's Resources

The conservation and restoration of natural resources in Fotouni face several significant challenges. Deforestation, driven by illegal logging and the conversion of forests to agricultural land, has severely impacted the Fotouni Kingdom. Additionally, unsustainable land use practices, such as overgrazing and unsustainable agriculture, have led to soil erosion and land degradation. Compounding these issues is climate

change, which further threatens the area's natural resources, affecting water availability, biodiversity, and ecosystem services.

Is Wildlife in Fotouni Exposed to Threats?

Wildlife in Fotouni is exposed to several threats, including poaching for bushmeat, habitat loss due to deforestation and land use changes, and climate change. Endangered species in the area include the drill monkey, the Nigeria-Cameroon chimpanzee, and the Preuss's red colobus monkey. Some species, such as the drill monkey, are endangered and require conservation efforts to ensure their survival. Agriculture with the use of synthetic pesticides has also been reported among the main threats to wildlife (Kenko and Kamta, 2021).

State of Health and Education in the Kingdom

The state of health and education in Fotouni is relatively poor. The kingdom lacks adequate health facilities and trained personnel. It is possible that there may also be issues related to water and sanitation, malnutrition, and infectious diseases. Also, there is need for educational infrastructure to improve the quality of life for the local population who lacks access to basic education and healthcare services.

Information Gaps

Agencies such as the UNDP, and the CODEFO (Fotouni's development committee) have provided support for conservation and sustainable development initiatives in the region in the past, including supporting traditional agriculture and promoting ecotourism as a source of income for the local communities. However, it will be helpful to conduct research summarizing all the initiatives the kingdom has benefited from to date, the implementing agencies, the funders, and evaluation of the outcome of those initiatives today. This will help better inform the project's resource mobilization strategy.

Tourism Potential Offered by Fotouni's Natural Resources

Located in a montane ecosystem, Fotouni is rich in natural resources (Tables 5 and 6) that can be leveraged to promote nature-based tourism, cultural tourism, and adventure tourism in the kingdom, including:

a. a rich forest ecosystem with diverse flora and fauna, including rare and endemic species that can attract tourists interested in ecotourism and wildlife viewing.
b. waterfalls and rivers that offer opportunities for activities such as swimming, rafting, and fishing.
c. mountains and hiking trails that offer scenic views and adventure tourism opportunities.
d. cultural sites and attractions, including traditional dance and music, locally made crafts, and cultural festivals.

Table 6: SWOT Analysis of Fotouni's Tourism Potential

Strength	*Weakness*	*Opportunity*	*Threat*
• easy access to land interest of community members • availability of human capital from the community with expertise in conservation • dedication of Fotouni's leaders to work towards its development • availability of mentors • absence or low existence of human wildlife conflict	• training volunteers • funds mobilization • little scientific research available • need more awareness and study on the Fotouni's community	• eucalyptus oil • eucalyptus honey production • eco product certifications • public concern over wetlands (erosion, Raffia) • community engagement • support of the elders • opportunity to expand research and conservation work in Fotouni • documented research for future reference • infrastructural development/partnership with community's elite and government officials • partnerships with universities & organizations	• urbanization • expecting room for aversion towards change • traditional beliefs • limited funding

Soil and Wetlands Products that can be Capitalized on for Positive Development and Tourism in the Kingdom

Fotouni has fertile soil and several wetlands that can be capitalized on for positive development and tourism, including:

- *Bamboo:* Presence of extensive bamboo forests that can be used to produce bamboo crafts, furniture, and other products that can be consumed locally, sold to tourists and/or exported.
- *Medicinal plants/naturopathy:* Availability of several medicinal plants that are used by local communities for treating various ailments, and which can be developed for the production of herbal medicines and natural health products.
- *Avitourism (birdwatching and more):* The area is known for its diverse birdlife, with over 300 species recorded in the region.
- *Fishing and fish farming:* The rivers and wetlands in Fotouni support several fish species that can be used for food and sold to tourists.
- *Organic vegetable farming:* Community members are traditionally known for farming tomato, Cameroonian pepper, and red and white cabbages.
- *Beekeeping:* Widely recognized for its pollination effect in the agricultural value chain.
- *Residency programs:* It is for artist (writers, painters, etc.).
- Professional and family retreats
- *Ecotourism:* Activities such as nature walks, wetland safaris water sports and more can also be developed.

Potential of Food and Raffia Products for the Development of Fotouni

Fotouni has the potential to develop food and raffia products for local consumption and for export. Aside growing maize, groundnut and beans, the kingdom has suitable climatic conditions for growing crops such as cocoa, coffee, tomato, banana, cassava, plantain, pumpkin, passion fruit and guava. Raffia palm, which is abundant in the area, can be used to produce crafts (i.e., baskets, mats) and utilities that can be promoted.

Endemic Plants and Animal Species in the Kingdom

Fotouni is home to various plant and animal species that are endemic to the region. Some of the plant species include the *Coffea canephora* and *Coffea arabica*, and some of the animal species, as detailed in Table 6, include the Goliath frog, the Preuss's monkey, and the Bannerman's turaco (*Tauraco bannermani*), a bird species that is found only in the Bamenda Highlands. Conservation efforts are needed to protect these species and their habitats. Other endemic species include the Bamenda rock frog (*Phrynobatrachus orophilus*) and the yellow-footed flycatcher (*Melaenornis ardesiacus*).

Table 7: Endemic Plants and Species in Fotouni

Focal species			
rare, vulnerable, in decline	*Raffia vinifera* and *Raffia farinifera* Raphia fruits White Raphia caterpillars (*Rhynohophorous phoenicis)*	Wild pineapple *(Myrianthus arboreus*)	African butter pear *(Dacryodes edulis)* | Mpreu Sweet cherry Spritual plants such as : Fruit of peace *(Dimdim)* *Ntchinthiè, Thutchuock, Keukam*
unique	Cameroon dwarf sheep and dwarf goat	The Bannerman's turaco (*Tauraco bannermani*)	Wild yam (good for fertility)
keystone/ecosystemic role	Goliath frog (*Conraua goliath*)	the Preuss's monkey (*Allochrocebus preussi*)	Insects (termites)
Surrogate species (umbrella, indicator) for:			
biodiversity			
community / ecosystem	*Purple granadilla*		

landscape	Variety of *Pinosipda*	Cypress trees *(Cupressus* sp.*)*	Fir, pines, etc.[12]
threats	Pteridophytes (often clear-cut)		
flagship	*Coffea canephora* and *Coffea arabica*	Insectivorous pitcher plant (*Nepenthes distillatoria*)	
Community/ ecosystem			
species-rich	Eucalyptus	Pteridophyte forests	
hotspot (endemic & threatened)	*Cola suboppositifolia* (monkey cola)	*Oxanthus montanus*	*Draceana bueana*
rep. scale?	Local breed pork	Agrosilvopastoral	Small ruminants and rodents (rats, squirrels, mice), birds (partridges, crows), herps and domestic animals (goats, sheep, pigs, and the poultry farmyard).
threatened/rare	Drill monkey *(Mandrillus leucophaeus)*		
climate importance, connection	High altitude wetlands and marshes		
Human well-being			
ecosystem services	Bamboo, rattan	High water quality in mountain streams for drinking, agriculture, and therapy	Birdwatching, fishing, nature walks, wetland safari, residency programs for artist (writers, painters)
livelihoods	Income from tourism e.g.: -Nonena Ranch - Chief's Palace	Medicinal herbs collection from forests, fish farming	High value certified[13] forest products and plantation goods

[12] Excellent windbreaks ready to withstand any gust. Also resistant to disease and pollution. From an aesthetic point of view, it is very beautiful when planted in isolation or, better, to delimit a long driveway.

[13] Strengths: easy access to land, availability of human capital, Opportunity: eucalyptus oil, eucalyptus honey production, eco product certifications, public concern over wetlands (erosion, raffia), support of the elders Weaknesses: training need for volunteers involved, funds mobilization Threats: Urbanization, aversion towards change, traditional beliefs.

	Demkouo Yeumadom Mt Koutouo'o		(sugar cane, vegetables, etc.)

Overall, Fotouni has significant potential for tourism development, with its natural resources and cultural attractions. However, conservation and restoration efforts need to be implemented to protect these resources from threats such as deforestation, climate change and poaching. Developing ecotourism activities and promoting sustainable agriculture and green entrepreneurship can help support the local economy while protecting the area's natural resources. The conservation of wildlife species and the promotion of healthcare and education are also essential for the well-being of the local population.

FotouniForward

Vision

The overall vision is to create a thriving ecosystem in the Fotouni Kingdom that protects the natural heritage and supports biodiversity while ensuring that the needs of local communities are met in a sustainable manner. Specifically, we envision a Fotouni Kingdom where:

- Fotouni's unique cultural and ecological heritage is preserved and protected for future generations, while promoting sustainable development and community well-being.
- The natural environment is protected and restored, and wildlife and people coexist in harmony.

Vision 1: Fotouni's unique cultural and ecological heritage is preserved and protected for future generations, while promoting sustainable development and community well-being[14].
Vision 2: The natural environment is protected and restored, and wildlife and people coexist in harmony.

To achieve this vision, a SWOT analysis (Table 7) is crucial. It helps identify the internal strengths and weaknesses of the conservation and restoration efforts, as well as the external opportunities and threats that could impact these initiatives. By understanding the strengths, such as promoting community involvement and increasing awareness, we can leverage these to enhance the project's effectiveness. Recognizing weaknesses, like potential resistance from community members and the need for significant resources, allows us to address and mitigate these challenges. Identifying opportunities, such as increased tourism and partnerships with local businesses and government agencies, enables us to capitalize on these for the project's benefit. Being aware of threats, such as political instability and environmental factors like climate change, helps us develop strategies to counteract them. This comprehensive analysis ensures that the conservation

[14] Developing strong local & national support over the long term: Roadside stopover (trading outpost, service station, restaurant / market: refreshments, deli products, plants, arts and craft / history museum); accommodation (campsites, self-catering chalets, resort lodges); Activities (guided and self-guided): educational and adventure, day visitors (recreation, picnic, swimming pools, kiddies' playground), site seeing, game viewing, hiking, horse riding, camping, abseiling), environmental education, practical science, conservation training and research (climate regulation, biodiversity, soil research, water purification, nutrient cycling).

and restoration efforts are well-informed and strategically planned, aligning with the overall vision of a sustainable and thriving Fotouni Kingdom.

Strategies

Furthermore, the insights gained from the SWOT analysis inform our engagement strategies (Table 8). For example, leveraging strengths like community involvement can be amplified by organizing local workshops and educational programs to increase conservation awareness. Addressing weaknesses might involve securing funding and technical support from international organizations. Opportunities can be maximized by forming partnerships with local businesses to boost eco-tourism and sustainable development. Meanwhile, understanding threats allows us to prepare contingency plans and build resilience within the community. Thus, integrating the findings of the SWOT analysis into our engagement strategies ensures a holistic and effective approach to achieving the vision for Fotouni.

Table 8: SWOT Analysis of Fotouni's Tourism Potential – II

S.No.	*Strength*	*Weakness*	*Opportunity*	*Threat*
1.	• Promotes community involvement in conservation and restoration efforts. • Increases awareness of cultural and ecological heritage among local residents. • Creates a sense of community pride and identity, which can strengthen social cohesion and local support for conservation efforts. • Can lead to increased economic opportunities and sustainable development, i.e. through ecotourism.	• May face resistance from some members of the community who are not interested in conservation efforts. • Requires significant resources, including funding and expertise, to establish and maintain the program. • May require overcoming cultural barriers and traditional practices that may be harmful to the environment.	• Increased tourism and economic development in the region as a result of successful conservation and restoration efforts. • Partnerships with local businesses and organizations to support the program. • Potential for collaboration with government agencies and international organizations to secure funding and technical support.	• Political instability or changes in government could impact the continuity of the program. • Conflicting interests and priorities within the community and with external stakeholders can undermine the effectiveness of the program. • Environmental factors such as climate change or natural disasters may undermine conservation efforts.
2.	• Builds capacity within the	• May be difficult to sustain the	• Development of a skilled workforce	• Conflicting interests and

S.No.	*Strength*	*Weakness*	*Opportunity*	*Threat*
	community for the preservation of cultural and ecological heritage. • Increases awareness and appreciation of cultural and ecological heritage among community members and improves knowledge of best practices for heritage preservation. • Provides opportunities for skill development and employment.	program over time due to limited resources or interest. • Requires qualified trainers with expertise in cultural and ecological heritage preservation. • May not be accessible to all members of the community due to geographic or socio-economic barriers.	with expertise in heritage preservation. • Partnerships with government agencies and international organizations to secure funding and technical support. • Successful implementation can serve as a model for other communities and regions, leading to widespread adoption of education and training programs for cultural and ecological heritage preservation.	priorities within the community and with external stakeholders can lead to disagreement and conflict. • Changes in the political or economic environment may lead to reduced funding or support for education and training programs. • Limited community participation and engagement may limit the impact of the program.
3.	• Enables better planning and decision-making for the conservation and management of heritage sites. • Can serve as a valuable educational resource for the community and external stakeholders. • Can lead to increased awareness and understanding of the importance of cultural and ecological heritage preservation within the community.	• Establishing and maintaining a comprehensive database can be time-consuming and resource-intensive. • May face challenges in obtaining accurate and up-to-date information on all heritage sites in the region. • May not be accessible to all members of the community due to limited technological infrastructure.	• Comprehensive record of cultural and natural heritage sites in the region. • Improved management and conservation of heritage sites in the region. • Increased knowledge and understanding of heritage sites can lead to increased innovation and new approaches to conservation and restoration.	• Political instability or changes in government could impact the continuity of the database. • Limited resources may make it difficult to maintain the database over time. • Competition with other priorities or interests within the community could undermine the success of the database.

Table 9: Engagement Strategy

Stakeholder	*Engagement strategy*
Traditional Leaders / Elders	Engage in meaningful consultation and collaboration with traditional leaders and elders, incorporating their cultural knowledge and practices into the project. Respect their authority and decision-making processes, and ensure they are included in project planning and implementation.
Community Members	Involve community members in all stages of the project, from planning to implementation and monitoring. Provide training and capacity building opportunities, and ensure they are fairly compensated for their participation. Address their concerns and prioritize their needs to build trust and commitment.
Elite of Fotouni	Build relationships with the elite of the indigenous community, acknowledging their power and influence. Work with them to understand their interests and priorities and identify areas of mutual benefit. Address any potential conflicts of interest in a transparent and respectful manner.
Diaspora of Fotouni	Engage with Fotouni's diaspora through outreach and education programs, creating opportunities for them to contribute to the project's success. Use social media and other communication tools to keep them informed and involved.
National Government Agencies	Build relationships with national government agencies, seeking their support and involvement in the project. Demonstrate how the project aligns with national environmental policies and regulations, and seek funding and technical assistance where appropriate.
Development Agencies	Build partnerships with development agencies, seeking funding and technical assistance to support the project. Work with them to align project goals with their development priorities and build capacity within the local community.
Civil Society Groups	Engage with civil society groups through outreach and education programs, seeking their support and advocacy for the project. Build partnerships and collaborate with them to promote social justice and equity in the project.
Private Sector	Engage with the private sector through outreach and education programs, highlighting the benefits of sustainable business practices and corporate social responsibility. Identify opportunities for private sector involvement in the project that align with conservation goals and the needs of the local community.

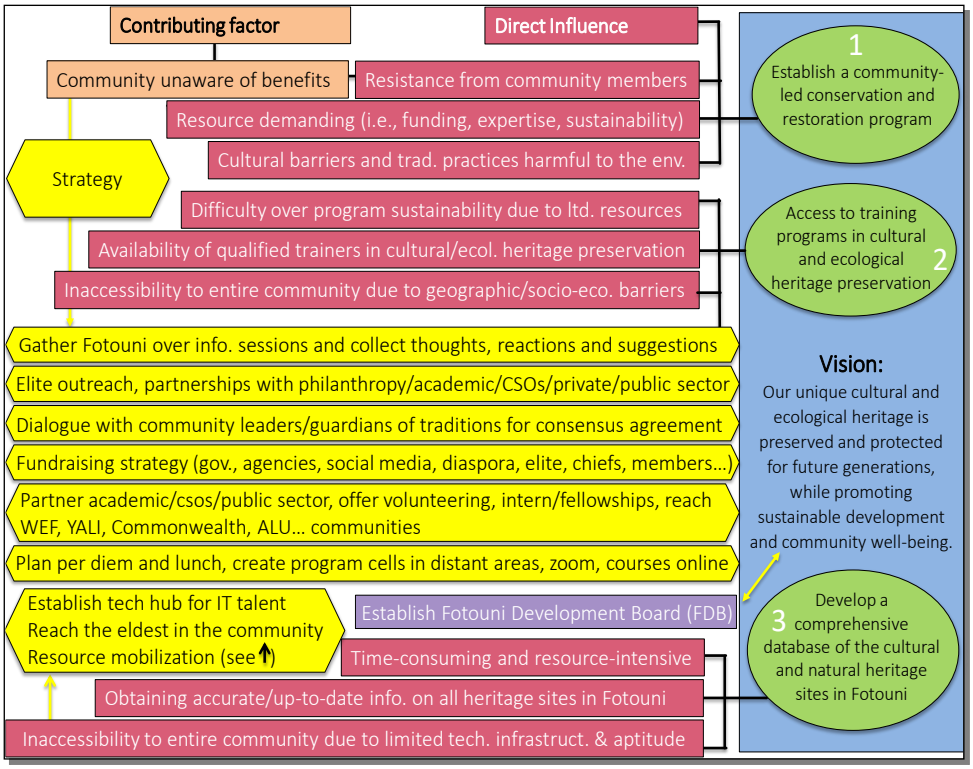

Figure 7: Fotouni Forward Conceptual Model - I

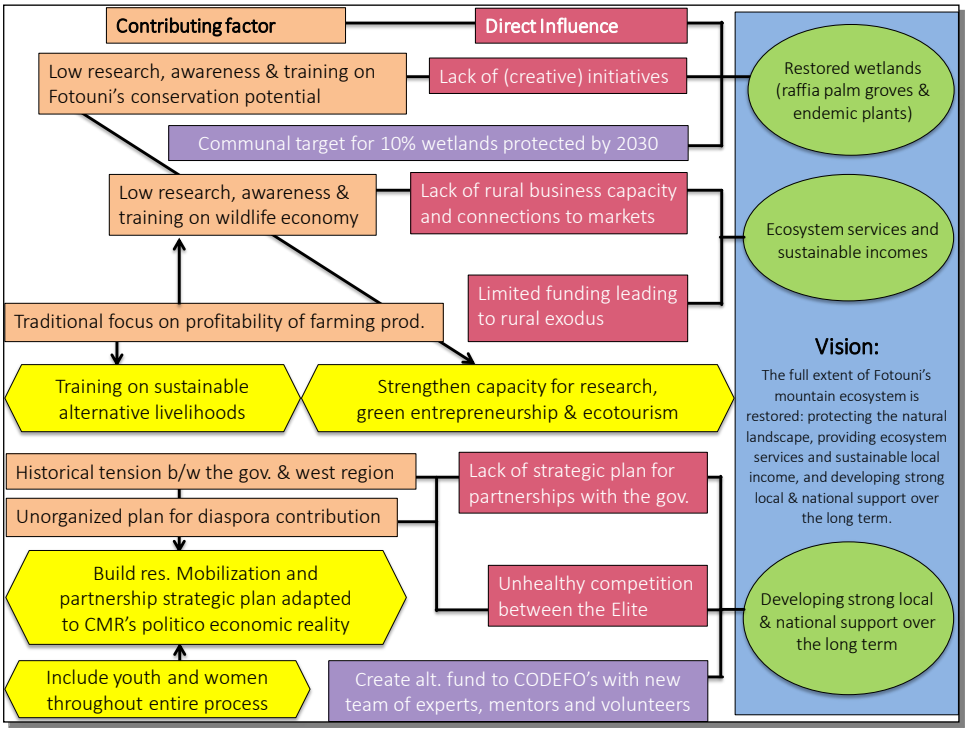

Figure 8: Fotouni Forward Conceptual Model - II

The following conceptual models (Figure 7 & 8) illustrates how to translate the SWOT analysis into concrete actions and strategies to establish a successful community-led conservation and restoration program in Fotouni. It highlights contributing factors such as community unawareness of benefits, resource demands, and cultural barriers that directly influence the success of the initiative. To counter these challenges, the model outlines strategic actions including gathering Fotouni-specific information, elite outreach, community leader dialogues, involvement of youth and women, educational programs, infrastructure development and forming partnerships. For example, strengthening research and implementing fundraising strategies address weaknesses and threats identified in the SWOT analysis. Meanwhile, leveraging community involvement and forming partnerships maximize strengths and opportunities. This approach ensures that the conservation and restoration efforts are not only well-informed but also effectively implemented, aligning with the vision of preserving Fotouni's cultural and ecological heritage and fostering sustainable development. The model also outlines actionable steps like creating program cells in distant areas, establishing a tech hub for IT talent, and forming the Fotouni Development Board (FDB). These efforts aim to address issues such as limited access to training and the need for accurate information on heritage sites.

Conclusion

The Fotouni Kingdom, nestled in rural western Cameroon, is a community primarily driven by a subsistence-based economy significantly vulnerable to the impacts of climate change. Shifts in precipitation patterns and temperatures have already taken a toll on crop yields and food security, precipitating economic setbacks for local communities. This fragility is compounded by limited access to essential services like education and healthcare, which not only curtails economic opportunities for residents but also escalates healthcare costs and diminishes overall productivity. In response, the project team is prioritizing capacity building as a vital metric for development. Given Fotouni's rich agricultural traditions and burgeoning potential in ecotourism, coupled with the challenges posed by climate change and limited resources, there exists a unique opportunity to foster both local economic growth and sustainable development through strategic initiatives.

Fotouni boasts a wealth of natural resources. Its lush environment and cultural vibrancy present untapped potential for tourism, which could be leveraged through the development of eco-tourism, adventure tourism, and cultural tourism activities. The kingdom's scenic mountains provide an ideal backdrop for ecotourism ventures. By developing initiatives such as bamboo production and beekeeping, along with promoting its diverse and endemic flora and fauna, waterfalls, rivers, and cultural festivals, Fotouni could transform into a vibrant tourism hub. Other initiatives could include promoting sustainable agricultural practices and green entrepreneurship, tapping into the region’s fertile soils for organic farming, and exploring Avitourism, among others. Despite these opportunities, significant challenges like deforestation, land degradation, the ongoing threat of climate change, and a lack of conservation awareness pose threats to both the natural environment and local wildlife, necessitating robust conservation efforts. By (a) improving the standard of and enhancing local infrastructure for health and education, (b) restoring local wildlife and habitats, and (c)

protecting endangered species like the Drill monkey and the Preuss's red colobus monkey, and endemic species like the *Coffea canephora* and *Coffea arabica* and the Bannerman's turaco, Fotouni can transform into a thriving destination that not only attracts tourists but also preserves its unique ecological and cultural landscape for future generations. This holistic approach, integrating community-led conservation and sustainable tourism, holds the key to Fotouni's future as a model of sustainable development and ecological stewardship in the region.

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Authors' Declarations and Essential Ethical Compliances

Authors' Contributions (in accordance with ICMJE criteria for authorship)

Contribution	*Author 1*	*Author 2*	*Author 3*	*Author 4*	*Author 5*
Conceived and designed the research or analysis	Yes	No	No	No	No
Collected the data	Yes	No	Yes	No	No
Contributed to data analysis & interpretation	Yes	Yes	Yes	Yes	Yes
Wrote the article/paper	Yes	No	No	No	No
Critical revision of the article/paper	Yes	Yes	Yes	No	No
Editing of the article/paper	Yes	Yes	No	No	No
Supervision	Yes	Yes	No	No	No
Project Administration	Yes	No	No	No	No
Funding Acquisition	No	No	No	No	No
Overall Contribution Proportion (%)	40	25	15	10	10

Funding
No financial support was received for the research and writing of this article.

Research involving human bodies or organs or tissues (Helsinki Declaration)
The author(s) solemnly declare(s) that this research has not involved any human subject (body or organs) for experimentation. It was not a clinical research. The contexts of human population/participation were only indirectly covered through literature review. Therefore, an Ethical Clearance (from a Committee or Authority) or ethical obligation of Helsinki Declaration does not apply in cases of this study or written work.

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of the Convention on Biological Diversity and the Convention on the Trade in Endangered Species of Wild Fauna and Flora.

Research Involving Local Community Participants (Non-Indigenous) or Children
The author(s) solemnly declare(s) that this research has not directly involved any local community participants or respondents belonging to non-Indigenous peoples. Neither this study involved any child in any form directly. The contexts of different humans, people, populations, men/women/children and ethnic people were only indirectly covered through literature review. Therefore, an Ethical Clearance (from a Committee or Authority) or prior informed consent (PIC) of the respondents or Self-Declaration in this regard does not apply in cases of this study or written work.

(Optional) PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)
The author(s) has/have NOT complied with PRISMA standards. It is not relevant in case of this study or written work.

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To see original copy of these declarations signed by Corresponding/First Author (on behalf of other co-authors too), please download associated zip folder [Declarations] from the published Abstract page accessible through and linked with the DOI: https://doi.org/10.33002/nr2581.6853.070201.

SELF-DECLARATION FORM

Research on Indigenous Peoples and/or Traditional Knowledge

1. Conditions of the Research

1.1 Was or will the research (be) conducted on (an) Indigenous land, including reserve, settlement, and land governed under a self-government rule/agreement or?

Yes

1.2 Did/does any of the criteria for participation include membership in an Indigenous community, group of communities, or organization, including urban Indigenous populations?

No

1.3 Did/does the research seek inputs from participants (members of the Indigenous community) regarding a community's cultural heritage, artifacts, traditional knowledge, biocultural or biological resources or unique characteristics/practices?

Yes

1.4 Did/will Aboriginal identity or membership in an Indigenous community used or be used as a variable for the purposes of analysis?

No

2. Community Engagement

2.1 If you answered "Yes" to questions 1.1, 1.2, 1.3 or 1.4, have you initiated or do you intend to initiate an engagement process with the Indigenous collective, community or communities for this study?

Yes

2.2 If you answered "Yes" to question 2.1, describe the process that you have followed or will follow with to community engagement. Include any documentation of consultations (*i.e., formal research agreement, letter of approval, PIC, email communications, etc*.) and the role or position of those consulted, including their names if appropriate:

Some of the co-authors are the highest authorities in the community under study and that is precisely why they have been contacted to be informed about the study. It is only after their consent and interest in contributing to the research that they were associated to the paper.

3. No Community Consultation or Engagement

If you answered "No" to question 2.1, briefly describe why community engagement will not be sought and how you can conduct a study that respects Aboriginal/ Indigenous communities and participants in the absence of community engagement.

Not Applicable

- Name of Principal Researcher: Metolo Foyet
- Affiliation of Principal Researcher: University of Florida, Turlington Hall, 3141, 330 Newell Dr, Gainesville, FL 32611, USA.

Signature:

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