

Maya Communal Lands in Belize: A fit-for-purpose model to support indigenous land rights, climate resilience and legal integration.

Sunil LALLOO, Trinidad and Tobago, Charisse GRIFFITH-CHARLES, Trinidad and Tobago, Leonel FRAZER, Belize

Key words: Fit-for-purpose Land Administration, Maya land tenure, Belize

SUMMARY

Indigenous land rights remain a central concern in global land governance, with the case of the Maya communities in southern Belize offering a particularly important example of legal pluralism in practice. Landmark rulings of the Caribbean Court of Justice confirmed Maya communal tenure, but their implementation has been slow or arguably, non-existent. This tension highlights the need for frameworks that can respect cultural traditions while providing the legal certainty and institutional support necessary for sustainable development, climate resilience, and social equity.

This paper reports on a pilot study conducted in four Maya villages in the Toledo District. A structured questionnaire was used to capture community perspectives on tenure security, government engagement, conflict resolution, and concerns about formalisation. While limited in scope, the pilot provides valuable insights into how customary tenure is perceived and managed at the village level. The empirical findings are complemented by a review of relevant legal frameworks and international land administration approaches, particularly the Fit-for-Purpose Land Administration (FFPLA) guidelines and the Land Administration Domain Model (LADM).

Findings reveal that Maya communities perceive high levels of security under customary systems but remain wary of formalisation due to fears of taxation, government control, and cultural erosion. While most respondents preferred individual ownership, a significant minority supported communal custodianship through village councils. Drawing on FFPLA principles, the study proposes an LADM-based framework that records communal and household-level rights while ensuring accessibility, upgradeability, and interoperability with Belize's cadastral infrastructure. The model provides a replicable pathway for integrating indigenous land rights into national systems without undermining customary practices.

Maya Communal Lands in Belize: A fit-for-purpose model to support indigenous land rights, climate resilience and legal integration.

Sunil LALLOO, Trinidad and Tobago, Charisse GRIFFITH-CHARLES, Trinidad and Tobago, Leonel FRAZER, Belize

1. INTRODUCTION

Communal land is a form of customary tenure, a global phenomenon whereby land is held jointly, oftentimes without formal recognition by the state (Shidiq and Pulungan 2025; Bonte 2024). Societal norms, cultural traditions and unanimously accepted processes of a community group, tribe, clan, family or corporation are what constitute the land governance of customary tenure (Alden Wily 2012; Knight 2010; Cotula and Chauveau 2007; Cousins 2007; Waiganjo and Ngugi 2001).

Belize's Maya communities – primarily of Q'eqchi', Mopan, and related groups – have practised communal land tenure in southern Belize for centuries, predating colonial rule (Kus et al. 2023). However, British colonial and post-independence governments did not formally recognize these customary land rights, instead imposing regimes of individual land titling and resource extraction that marginalized Maya claims (Anaya 1998). Furthermore, Maya people have been historically prevented from land ownership and left with little to no legal recourse to the State infringing on their land rights through subdivision, leasing, and natural resource allocation, without consultation or consent (Bolland 2003; Parks 2011).

During the late 20th century, land governance conflicts intensified as state-led conservation and development projects encroached on Maya ancestral areas (Gahman et al. 2020). For example, the creation of the Cockscomb Basin Wildlife Sanctuary in 1984 excluded Maya participation and access to traditional lands, exacerbating land insecurity and alienation of Maya communities from decision-making processes (Meaghan M. Peuramaki-Brown and Shawn G. Morton 2021).

By the early 21st century, Maya land rights struggles became high-profile legal battles. In 2007 and 2010, Belize's Supreme Court issued landmark rulings (e.g. *Cal et al. v. Attorney General*) that affirmed Maya customary land tenure and the collective property rights of Maya villages (Nettheim 2007; Parks 2011). These victories were later upheld in 2015 by Belize's highest appellate court, the Caribbean Court of Justice (*The Maya Leaders Alliance et al v. Attorney General of Belize* 2015). The CCJ not only reaffirmed that Maya communal land rights are protected by law but also ordered the government to create a fund of BZ\$300,000 as an initial step toward compliance (ELAW 2025). This unprecedented ruling acknowledged the long history of colonial-era dispossession and required the State to take concrete measures to protect Maya land rights (Medina 2016).

Despite these legal precedents, implementation on the ground has lagged (Parks 2011). The Belizean government has been slow to institute the necessary legal and administrative frameworks, resulting in continued unclear land boundaries and governance challenges (Vieira and Azambuja 2020). To date, there is no comprehensive demarcation of Maya village lands, leaving the exact extent of communal territories in limbo (Hyde 2021). Moreover, Maya traditional governance via the Alcalde system – a community-based leadership structure –

operates largely outside the national land administration framework, and this duality has led historically to overlapping jurisdictions and tensions (Hoffmann 2015; Anaya 1998). National enforcement of indigenous land rights remains weak; for instance, although the Inter-American Commission on Human Rights in 2004 urged Belize to delimit and title Maya lands, these recommendations have not been fully carried out (Minority Rights Group 2016). In the absence of clear legal integration, external pressures such as agricultural expansion, tourism development, and conservation initiatives continue to supersede indigenous claims, reinforcing patterns of exclusion and displacement of Maya people from their ancestral land. This historical and legal context sets the stage for the urgent need to address Maya land governance in Belize.

2. RATIONALE AND SIGNIFICANCE OF THE STUDY

The conflicts over Maya lands in Belize illustrate the urgent need for the implementation of land administration systems that would harmonise the legal frameworks with indigenous land practices. While the numerous judgments may appear to be a win for the Maya people, the absence of a coherent mechanism for recording and recognising rights, interests, and management practices has prevented them from realising the intended benefits (Medina 2016). This study proposes an integrated approach using the Fit-for-Purpose Land Administration to address this gap. Such a system can offer Belize a cost-effective path to support Maya tenure without undermining traditional governance structures, aligning with the Caribbean Court of Justice's 2015 mandate for a recognition framework.

The study contributes technical and policy insights by demonstrating how a Fit-for-Purpose Land Administration system can be adapted for indigenous communal ownership. The results and recommendations of this study are also beneficial towards broader goal of inclusive and climate-responsive land management.

3. THEORETICAL FRAMEWORK

This study captures governance information from experiences in indigenous lands in Belize and postulates that these de facto mechanisms can be recorded and managed through a Fit-For-Purpose Land Administration (FFPLA) System. It further hypothesizes that the technological inputs from such a system help to create a model that would support the customary land rights in Maya lands in a way that is adaptive and climate resilient. The following sections highlight the literature on Maya Lands in Belize and positions this research into the broader theoretical framework of FFPLA.

3.1. Customary vs. Statutory Tenure Systems

3.1.1. The global experience

Customary tenure is a global phenomenon and, in most cases, exist alongside formally recognised land titling and registration schemes (Alden Wily 2017; 2012). Instead of discrete systems of land tenure, a common reality is the existence of a continuum of land rights within

a single jurisdiction (Lemmen et al. 2015). In some countries, most notably in Sub-Saharan Africa, communal-based tenure systems have been formally recognised in law and exist alongside other legal systems, blending and mixing, with occasional conflict at intersection points (Rachael S. Knight 2010; Edwin et al. 2020; Mushinge and Mulenga 2016). This nexus of overlapping legal systems is referred to as “Legal Pluralism” and, in the context of land tenure, is defined as “*..the different sets of rights and obligations concerning land and property, as these reside within multiple social fields or normative orders*” (Unruh 2003, 355). Knight (2010) posits that the protection and enforcement of land claims under customary systems is best achieved by legislative reform that codify such practices into the national legal framework. Mushinge and Mulenga (2016) on the other hand, note that even in cases where customary tenure has received statutory protection, rights supported by private title deeds often take precedence over social legitimacy. A similar experience is reported in Vanuatu, where newly passed legislation to support customary laws amounts to deep legal pluralism or just a shallow veneer (Farran and Corrin 2017).

Problems arise when one system (usually the received laws of private land titles) does not recognise the other as valid, causing widespread tenure insecurity (Rachael S. Knight 2010). When rights to land are incompatible, the confusion causes conflict and jeopardizes a peaceful process (Unruh 2003). Insecure tenure systems do not promote land/credit markets and deprives the poor of protection of their basic rights (Mushinge and Mulenga 2016; Rachael S. Knight 2010; Barnes and Enemark 2020).

3.1.2. Belize

In terms of the formal system, most of the English-Speaking Caribbean, including Belize, inherited their land titling/registration system from received English law (Owusu and Simmons 2021). Belize operates a dual land registration regime through two legislative instruments – the Registered Land Act (Cap. 194) and the Law of Property Act (Cap. 190). Additionally, the General Registry Act (Cap. 372) facilitates the registration and handling of various land transactions. The Registered Land Act created a Torrens-title registration system whereby the government can designate certain areas ‘compulsory registration areas’ in which all dispositions in land must be registered and titles may be granted either absolute or provisional (Registered Land Act 2020; Hyde 1991). Land not in declared areas is transacted by deeds and recorded under the General Registry regime (Law of Property Act 2000).

In Southern Belize, particularly in the villages of Santa Cruz and Conejo, there exists Maya customary land tenure (Nettheim 2007). The Maya have historically asserted their land and resource rights through customary land tenure practices that extend well beyond territorial boundaries (Anaya 1998). With respect to the Toledo Maya, these customary rights encompass both individual and collective rights (Parks 2011), and they live in over 30 villages throughout the district or in close proximity to the lands over which logging concessions have been granted (Anaya 1998). In addition to examples provided earlier, the Belizean government has independently established national parks on Maya territory (such as the Sarstoon-Temash National Park) without considering or consulting with the Toledo Maya (Parks 2011). Furthermore, the policies of the State to grant leaseholds, often overlooked customary cultivation rights and the assumption of eminent domain had the effect of marginalising the Maya communities (Clark 2000).

Notwithstanding these oppressive measures, the Maya has had success in the recognition of their rights by international bodies and the judiciary (mentioned earlier). The Inter-American Commission on Human Rights, for example, asserted that the communal property rights of the Maya arose out of long-standing occupation that pre-dated European colonisation (Nettheim 2007). A considered view of Maya self-determination in southern Belize illustrate how communities organize around land rights, which are vital for their political and cultural preservation (Parks 2011). The Maya Leaders Alliance has been an active advocate championing the goal of tenure security as it is crucial to maintaining the Maya identity, culture, and livelihood in southern Belize (Maya Leaders Alliance 2018).

3.2. The Maya Alcalde System of Belize

The Maya Alcalde system in Belize is a multidimensional governance institution that originated during colonial rule, based on Spanish-Maya precedents (Moberg 1992). While having its genesis in colonial legacies, the governance system is deeply rooted in indigenous history and culture (Ekern 2011; Moberg 1992). Similar indigenous systems of governance are also seen in Guatemala (Ekern 2011; Sieder and Witchell 2001) and Mexico (Herrera 2011), although parallels can be drawn across all of Latin America (Schulman 1957; Anaya 1998). Kus et. al (2023) postulates that the system predates European imperialism in the Caribbean, functions in accordance with customary Maya laws and, despite influence and even subjugation from colonial forces, the communities continue to defend it and retain its indigenous legacies.

The principal political figure in each Maya village is the alcalde, an individual who is given the authority to oversee community affairs, while coordinating and consulting with other leadership figures and village councils (Anaya 1998). According to Wainwright (2022), *“In the customary sense, the alcalde sits below the community as its organizing center, acting as its voice and servant. As a judge in the colonial legal system, the alcalde was raised above the community”*. The Toledo Alcaldes Association (TAA) is the highest arbiter and custodian for the Maya people in Belize. It consists of 78 leaders from 41 Maya communities in the Toledo District. These Alcaldes are tasked with fostering harmony in their communities, resolving disputes and engaging residents on matters related to development projects (Kus et al. 2023). The Alcalde system exists within the network of communities and functions alongside other Maya political and social institutions, which, according to *Professor Richard Wilk*, a leading authority on the Maya of Southern Belize, demonstrates the perseverance and continuity of indigenous Maya society in the district (Anaya 1998).

The autonomy of the Alcaldes was not, however, unchecked. As far as the colonial government was concerned, an Alcalde was a judicial and administrative authority selected by the community, but ultimately answerable to the British (Moberg 1992). A 1913 Ordinance expressly excluded Alcaldes from having the power to adjudicate over land disputes (Clark 2000).

Figure 1 shows the overlap of the statutory tenure regimes and the Maya Alcalde system in Belize. The jurisdictional conflicts that arise include land transactions (conveyances), grant fiats, protected areas (such as national parks), logging concessions, and boundary demarcations (Frazer 2025).

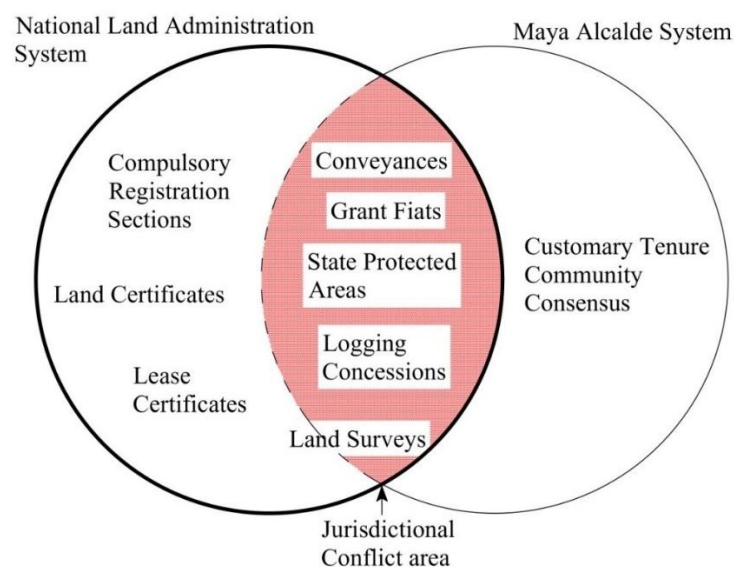


Figure 1. Dual land governance and conflict in Belize. Source Frazer (2025, 57)

3.3. Fit-For-Purpose Land Administration

The term Fit-For-Purpose Land Administration (FFPLA) refers to the guiding principles for establishing the spatial, legal, and institutional frameworks to support land information management in a flexible and participatory manner, responsive to a unique country context (Musinguzi et al. 2021). Originating from the seminal work of Stig Enemark and others in a partnership between the International Federation of Surveyors (FIG) and the World Bank (WB), the concept introduces an approach to land administration that is flexible and focused on serving the purpose for which the systems were created rather than detailing technical solutions and high accuracy surveys (Enemark 2015). Mekking et al. (2021, 1) adds that “From a quality perspective, this meant a shift in priorities from ‘*good but slow*’ to ‘*good enough and fast*’”. Figure 2 below shows the conceptual model of FFPLA, incorporating the spatial, legal, and institutional frameworks. A very useful account of the history, evolution, and core methodological contributors to the FFPLA can be found in Enemark et al. (2021).

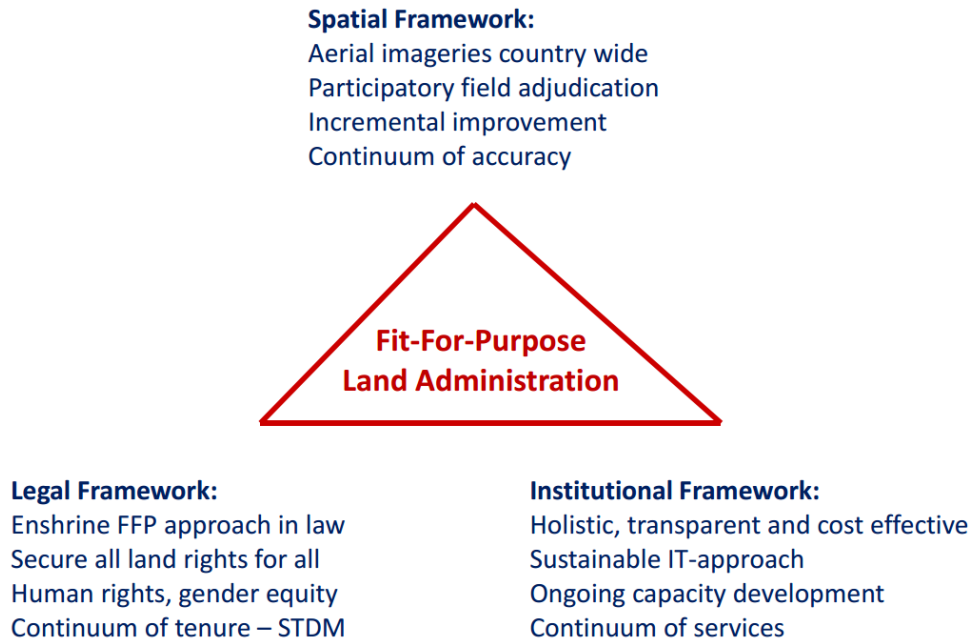


Figure 2. The Fit-for-Purpose Concept. Source (Enemark 2015, 10)

In many developing countries, legal frameworks that guide the adjudication process lack sensitivity to customary tenures and are often restricted to individual/private parcel-based statutory forms (Lengoiboni et al. 2021). Customary land tenures involve complex arrangements with overlapping, complementary, and contesting land rights that can only be preserved if they are codified in formal rules (Delville 2014; Fonmanu et al. 2003; Lengoiboni et al. 2021). Adopting a FFP approach can help to solve these issues of complexity in a way that is efficient and cost effective (Musinguzi et al. 2021; Mekking et al. 2021).

FFPLA can provide solutions by increasing the number of households with secure land tenure, which in turn, improves resilience outcomes as the settlement grows. Securing and safeguarding land rights, and the planning and control of land use are two governance mechanisms that, if streamlined, can improve climate change adaptation and disaster risk reduction (Mitchell et al. 2021).

In the Caribbean context, Griffith-Charles (2021) notes that FFPLA offers clear advantages for Caribbean countries, where conventional titling, while preferred, is constrained by limited resources, climate vulnerability, and widespread informal occupation. While some jurisdictions, such as Saint Lucia and Anguilla, achieved near-complete registration through systematic adjudication, others - including Jamaica, Belize, and Trinidad and Tobago - remain reliant on slow, voluntary deed or Torrens systems. Legislative reform has been piecemeal, with Jamaica recently adopting more flexible provisions, but broader application of FFPLA principles such as aerial imagery, recognition of family land, and integration of deed and fiscal cadastres remains underutilised.

4. METHODOLOGY

This paper details the results of a pilot study conducted in the Toledo District that forms part of a broader mixed-methods investigation that is currently ongoing. The primary purpose of the pilot was not to generate statistically representative findings, but rather to test the reliability and clarity of the survey instrument and provide baseline descriptive data to complement the qualitative analysis. The decision to conduct a pilot study first was taken due to the practical challenges of conducting fieldwork. The demarcation issue is currently a very contentious one and a more cautious approach was required to mitigate issues of access, trust, and logistical constraints. The broader study will utilise an Explanatory Sequential Design as outlined in Creswell (2022), in which quantitative data is first collected and analysed and the results are strengthened and explained in more detail with qualitative research.

4.1. Pilot study design

For this study four Maya villages in the Toledo District were selected to examine how village size and existing documentation within the national land administration system influence attitudes toward communal tenure and state recognition. The selection includes two larger villages (San Antonio and Big Falls), and two smaller ones (Laguana and Santa Cruz)

The larger villages - San Antonio and Big Falls - have, over time, incorporated more parcels into the titling system through purchase, government grants, inheritance, or regularisation. In these areas, more households already possess state-recognised title documents, which are sometimes used as collateral for credit. This tends to reinforce a perception of tenure security under the national system. It was anticipated that these villages would show a greater degree of tenure security as formal land titles can increase both the collateral value of land and the likelihood of accessing formal credit, although these effects are shaped by local conditions (Field and Torero 2006).

The smaller villages - Laguna and Santa Cruz - report fewer parcels documented within the national system and show stronger reliance on community-based governance. In these contexts, formal recognition of communal land is often viewed as a way to convert long-standing social legitimacy into legal certainty. This approach aligns with international guidance on recognising customary tenure and delivering land administration that is fit for purpose in areas with limited formal documentation (FAO 2012). The split across village sizes was therefore intended to capture variation in both documentation status and the expected benefits or risks associated with communal tenure systems.

Purposive sampling was then used to select respondents who reflect a balanced cross-section by age group, gender and household role. The goal was to capture how perceptions of land security and legitimacy vary across different demographic groups. A total of 52 interviews were conducted, with 15 in each village, with the exception of Laguna in which 7 samples were taken. Figure 3 below shows the case study area in the Toledo district.

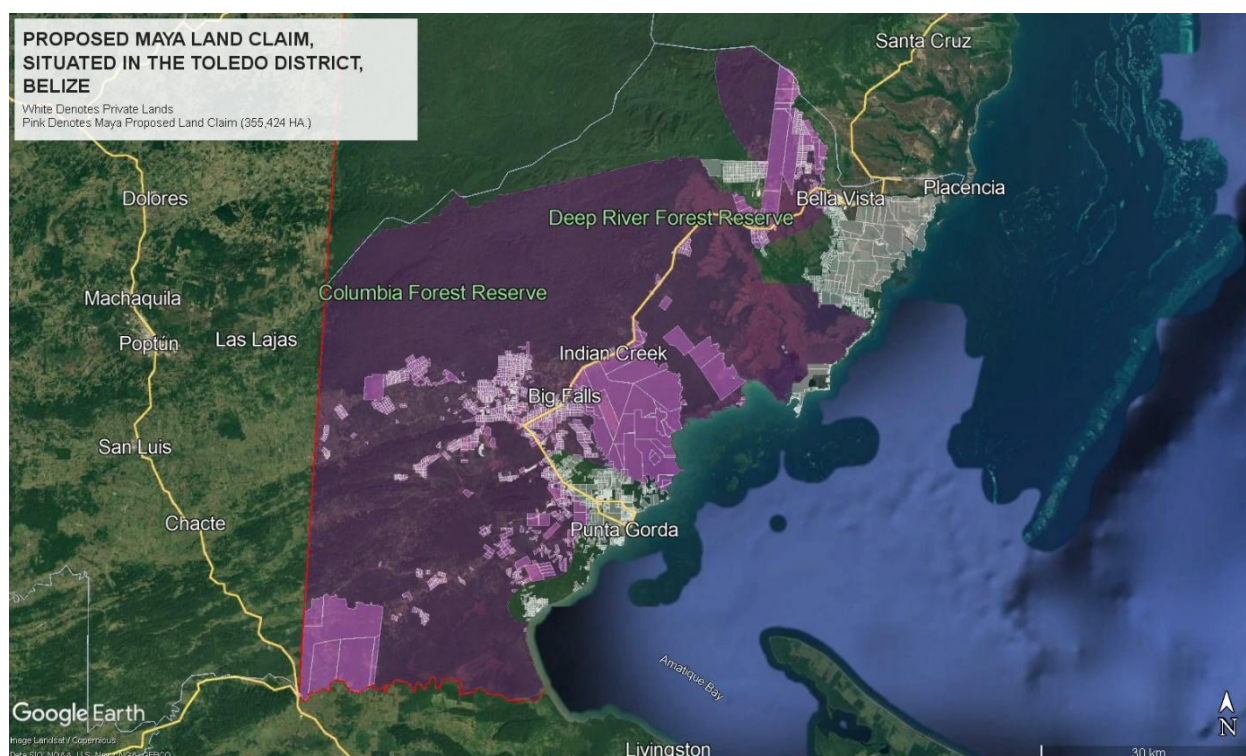


Figure 3. Case study area shown in purple. (Source: Land Information Centre, Ministry of Natural Resources, Government of Belize)

4.2. Survey instrument details

A systematic questionnaire was designed to capture the demographic, legal, and sociopolitical aspects of Maya land tenure in Belize for this pilot study. There were six sections on the instrument. Demographic data, such as gender, age, Maya ethnicity, household role, and generational links to land, were covered first, followed by perceptions on legal recognition, documentation, protection, economic usage, cultural practice, and intergenerational transfer of rights. These were used to gauge subjective tenure security. The final sections covered land governance within the alcalde system and details pertaining to land conflicts and dispute resolution. The respondents were also asked about their future aspirations, such as priorities for reform, collaboration with government, and support for the creation of a Maya Land Authority.

5. RESULTS AND ANALYSIS

The findings presented in this section derive from the pilot quantitative survey described earlier. As a pilot study, the results are interpreted as indicative rather than representative of the wider Maya population. In the following sections, preliminary descriptive insights are presented from the findings of the survey.

5.1. Demographic profile

Of the 52 respondents, 23 were male and 29 were female. While the count is skewed towards female participants, it is felt that women's land tenure perceptions are particularly noteworthy, and this spread can still achieve a balanced view. In terms of ethnicity, the majority were *Mopan* (31) or *Q'eqchi'* (16), while 4 were of mixed-Maya descent and 1 was Hispanic. Figure 4 below shows the age range of respondents, with the majority being between 26-55 years old.

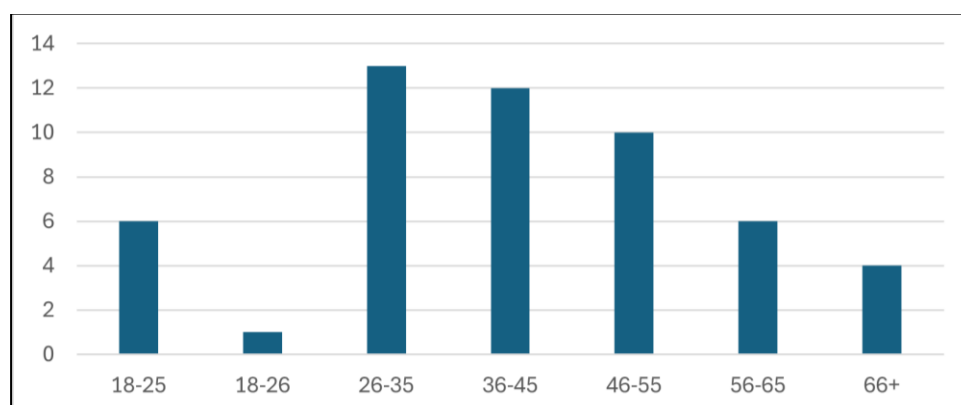


Figure 4. Age of Respondent

In terms of position in household, 29 (56%) were the Head of the household, while 18 (35%) were the spouse of the Head; the others (5) were adult children.

5.2. Land tenure

5.2.1. Current tenure arrangements

As duration of occupation is a significant contributor to subjective tenure security, respondents were asked how long they have lived on the land. Table 1 below shows the spread of data, disaggregated based on the position of the respondent in the household. The majority (circa 63%) have lived on the land for over 31 years, and 60% of them were the Head of the household. This factor is significant as it demonstrates the reliability of the responses received as they were predominantly from authoritative household heads who lived on the land for many years.

Table 1. Number of years the respondent lived on the land

	Duration on Land				
	0-5	16-30	6-15	Over 31	Total
Position in household					
Adult Child		3		1	4
Head	2	6	1	20	29
Spouse	1	1	4	12	18
Other	1				1
Total	4 (8%)	10 (20%)	5 (9%)	33 (63%)	52

Respondents were asked how they acquired an interest in land, and their responses are summarised in Figure 5 below. The data shows that 37% of the respondents inherited their lands while 29% occupied by virtue of communal ownership. A small, but important finding is that 4 of the respondents indicated that the land was allocated to them by the village council.

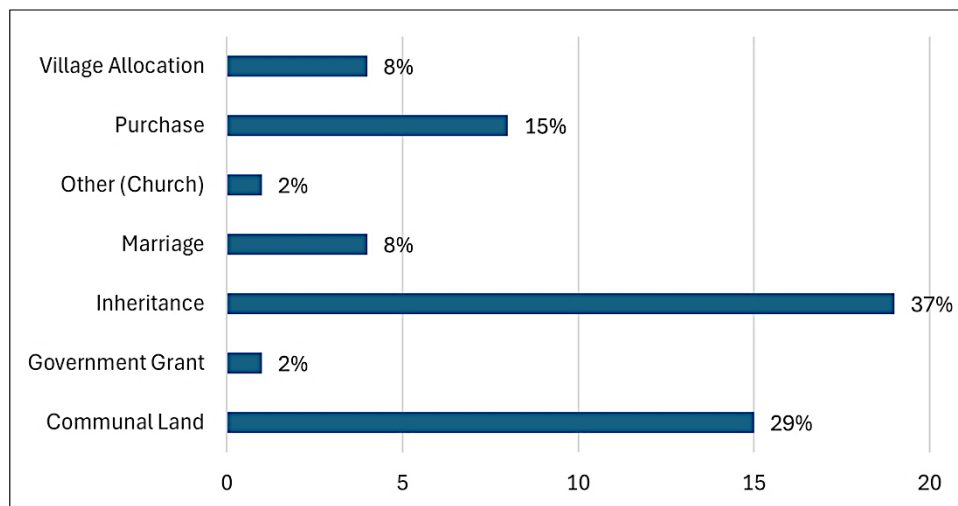


Figure 5. Origin of land rights

5.2.2. Perceptions of tenure security

A Likert scale was used to evaluate perceptions of tenure security, and the results are summarised in Table 2 below.

Table 2 - Perceptions of tenure security

Perception	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My land rights are legally recognized by the government	0 (0.0%)	0 (0.0%)	3 (5.8%)	13 (25.0%)	36 (69.2%)
I have adequate documentation	1 (1.9%)	22 (42.3%)	3 (5.8%)	4 (7.7%)	22 (42.3%)
Officials respect my claims	0 (0.0%)	1 (1.9%)	3 (5.8%)	20 (38.5%)	28 (53.8%)
Court rulings protect my land	0 (0.0%)	1 (1.9%)	6 (11.5%)	20 (38.5%)	25 (48.1%)
My fellow villagers support my claims	0 (0.0%)	0 (0.0%)	1 (1.9%)	15 (28.8%)	36 (69.2%)
No one can evict me from my land	0 (0.0%)	1 (2.0%)	1 (2.0%)	0 (0.0%)	49 (96.1%)
I can use land as collateral for a loan	2 (3.8%)	26 (50.0%)	5 (9.6%)	2 (3.8%)	17 (32.7%)
I get income from my land	1 (1.9%)	24 (46.2%)	7 (13.5%)	12 (23.1%)	8 (15.4%)
I can practice my spiritual and cultural practices on my land	0 (0.0%)	0 (0.0%)	0 (0.0%)	9 (17.3%)	43 (82.7%)
The land will remain in my family, and my children will inherit	1 (1.9%)	0 (0.0%)	1 (1.9%)	1 (1.9%)	49 (94.2%)
Any conflict is likely to be resolved in the near future	1 (2.0%)	1 (2.0%)	0 (0.0%)	13 (25.5%)	36 (70.6%)

The responses show variation across the different indicators of tenure security, but some consistent patterns emerge. Firstly, most respondents had high faith in inheritance and community assistance. Most of them agreed or strongly agreed that their family will continue to own the property for many generations to come and that their other villagers respect their claims. This supports research showing that, rather than formal documentation, high social legitimacy and intergenerational continuity frequently serve as the foundation for customary tenure systems (Cousins 2007; Mushinge and Mulenga 2016; Sunil Laloo and Charisse Griffith-Charles 2014).

In contrast, perceptions regarding legal and state-sanctioned occupation showed more diversity. While a subset of respondents perceived their rights as being recognised and safeguarded by judicial entities, a notable portion articulated neutrality or dissent on these matters. The comparatively low levels of consensus concerning the possession of documents to support title and the capacity to utilize land as collateral imply that objective mechanisms of tenure security are not yet extensively accessible or regarded with trust within these communities. This observation is consistent with previous scholarly inquiries that highlight the limited reach of the national land administration framework, which impedes households' capacity to utilize land for credit purposes or to obtain protection via state institutions (Deininger and Goyal 2023; Rachael S. Knight 2010).

It is noteworthy that a substantial proportion of respondents (over 90%) disagreed with the proposition that they can be ejected from the land. This assertion may be indicative of both historical contentions with governmental land policies and current conflicts. The fact that the occupants remain on the land despite aggressive and somewhat acrimonious actions by the State, gives them confidence that their land rights may be sacrosanct. Concurrently, the findings reveal a more pronounced consensus regarding the capacity to engage in cultural and spiritual practices on their land, implying that land continues to embody its identity as a cultural and spiritual asset, notwithstanding the potential lack of legal safeguards.

Regarding conflict within the customary system, more than 95% of respondents expressed agreement or strong agreement that they expect any conflict to be resolved in the near future. This finding challenges the typical beliefs that indigenous or customary systems face difficulties in providing certainty in conflict resolution. Rather, the results highlight the strength and perceived validity of local mechanisms.

Collectively, these trends underscore a dual reality. On one side, traditional legitimacy and communal acknowledgment continue to serve as robust foundations of tenure security, instilling in households a sense of assurance regarding inheritance, utilisation, and societal acceptance of their land rights. Conversely, state acknowledgment and documentation remain tenuous and contentious, thereby constraining the degree to which land may be leveraged as a financial or legal asset.

5.2.3. Governance, decision making, and conflict resolution

The results of this segment of the study emphasised the strong legitimacy of communal decision-making within the customary system. The majority of respondents (63.5%) indicated that land allocation authority is shared between the Alcalde and the Village Council, while 30.8% identified the Village Council alone. This finding is an interesting one as the Alcalde is

recognised by the State as a singular authority, yet most respondents felt that the Village Councils hold the ultimate power either inter se or alongside the Alcalde. Perceptions of the effectiveness of the Alcalde system in managing land issues are notably divided and shown in Figure 6 below.

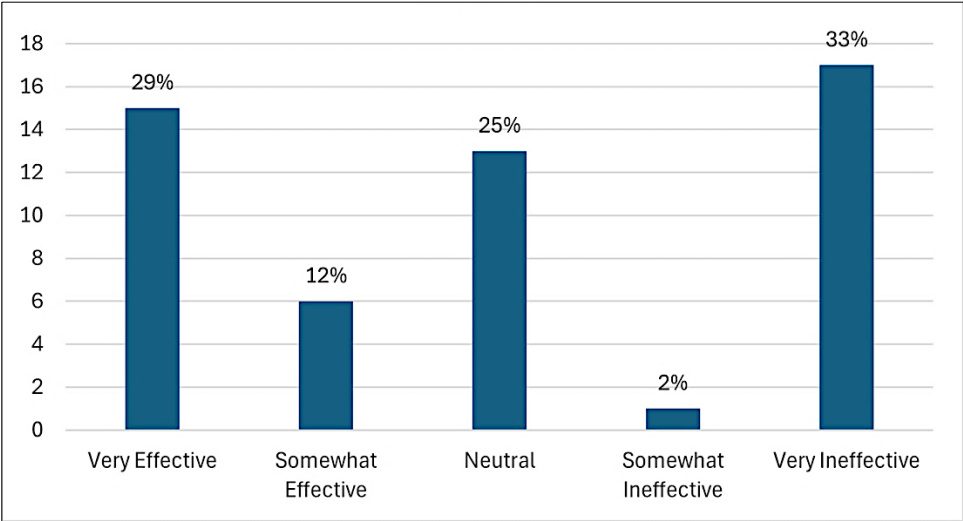


Figure 6. Perceptions of the effectiveness of the Alcalde system

While 40.3% of respondents rated the system as very or somewhat effective, as much as 34.6% considered it either somewhat or very ineffective. The sizeable neutral group (25.0%) suggests ambivalence or possibly differing experiences across communities. This polarization may reflect tensions between customary governance and external pressures, including state interventions and land disputes.

Support for the official acknowledgment of the Alcalde system within national legislation is noteworthy. Approximately 73.1% of those surveyed showed support (either strongly or somewhat), with half expressing strong endorsement for recognition. This indicates a clear intention to formalize customary governance and ensure its integration within the national legal system, aligning with requests in the Maya Leaders Alliance litigation for state recognition of communal land rights.

Results on decision-making mechanisms further validate the importance of collective governance. A significant 94% indicated that key land decisions are made during community gatherings, emphasising the importance of communal discussion and agreement. A mere handful of respondents indicated dependence on the Alcalde alone (2%) or on government mandates (4%). This underscores that Maya land tenure is rooted in participatory governance, where authority is derived from the community rather than from a centralised power.

State engagement with Maya villages on land governance has been limited. Most respondents (61.5%) indicated that the government had not visited their village in the past five years to address land registration, while an even larger share (82.7%) reported no involvement in land demarcation. This suggests that land adjudication and registration schemes for securing tenure remain largely absent, reinforcing the continued reliance on customary practices. Interestingly, perceptions of government action toward Maya rights implementation were divided almost equally, with 48.1% acknowledging some initiatives and 51.9% indicating none.

Of all respondents surveyed, only 3 indicated that they experienced conflicts within the last 10 years and each of them had a different mechanism for dispute resolution (Court, family mediation, alcalde mediation). Even though this may appear to suggest that disputes are rare, it is possible and likely that respondents may have felt anxious about sharing information pertaining to land disputes. This pilot study may therefore not be sufficient to draw conclusions on this point.

5.2.4. Formalisation and future aspirations

When asked who should hold title should a regularisation process be completed, a slight majority (55.8%) favoured individual (private) ownership, while 40.4% preferred village council control. This could be indicative of a desire to benefit from individualised holdings that can be vested or held as loan collateral.

Respondents were asked about any concerns they may have if the government were to systematically formalise their lands into the national legal framework. The main concern expressed by more than half the respondents was the erosion of cultural traditions. A related but distinct fear is the loss of community control (40.4%), which alludes to apprehension about undermining customary governance and collective rights. Other concerns include increased taxation (19.2%), greater government control (11.5%), and new restrictions on land use (5.8%). These responses suggest that respondents anticipate formalisation will lead to burdensome state intervention and reduced flexibility in how land is managed. Notably, 26.9% of respondents indicated no concern with formalisation, suggesting that while many fear negative impacts, there is a significant minority that either trusts the process or sees potential benefits.

In presenting the hypothetical scenario of a government-led participatory process to support Maya land rights, a majority (59.6%) preferred collaboration with the state through the Alcalde or Village Council rather than through direct negotiations between the government and individual households. Respondents indicated strong support (over 73%) for the creation of a Maya Land Authority as a central governing body on land rights. When asked about the most important support needed, respondents placed the greatest emphasis on education and economic development, while also calling for international support and cultural preservation.

6. FIT-FOR-PURPOSE LAND ADMINISTRATION

The recognition of indigenous Maya lands in Belize provides a unique opportunity to apply principles of Fit-for-Purpose Land Administration (FFPLA) within an internationally standardised data model. FFPLA, as advanced by Enemark and others, emphasizes that land administration systems should be designed to meet the needs of all citizens, and built in ways that are flexible, inclusive, affordable, and upgradeable over time (Enemark 2015). These principles are particularly relevant in the Maya context, where security of tenure must be rapidly delivered to communities, especially in light of the ongoing boundary conflict.

6.1. Modelling Maya land tenure in the LADM

To operationalize FFPLA in Belize, this study proposes an LADM-compatible model (ISO 19152:2012; Edition II 2024/2025) as the technical framework. The core LADM classes - LA_Party, LA_RRR, LA_BAUnit, and LA_SpatialUnit – must be flexible to capture both statutory and customary land relations. Table 3 shows a summary of the LADM feature classes in the FFPLA model.

LA_Party records individual rights holders, such as occupants and the Alcalde, but can also represent collectives such as Village Councils.

LA_RRR (Rights, Restrictions, Responsibilities) enables the registration of communal possession, usufruct rights, secondary use rights, and internal allocation rules alongside the dual titling and old-law system in Belize.

LA_BAUnit (Basic Administrative Unit) groups rights and parties into administrative entities, allowing each village to be treated as a BAUnit for communal holdings, while individual family allocations can be nested within.

LA_SpatialUnit captures the physical extent of land through polygons or sketch maps, which may initially be defined using participatory mapping and aerial imagery, and later upgraded with higher-accuracy surveys.

6.2. Accessibility

For the Land Administration system to be effective, land information must be usable by communities themselves, not only by state agencies. In FFPLA projects globally, accessibility is often ensured through low-cost, decentralized data platforms combined with community validation (Lengoiboni et al. 2021; Musinguzi et al. 2021). In the Belizean case, data can be stored in a central repository but accessed via:

- Village-level records maintained by Alcaldes or village councils, using printed sketch maps and ledgers derived from the LADM database.
- Digital platforms with role-based access, allowing communities to query boundaries, rights, and restrictions.
- Mobile tools for participatory updates, enabling communities to document inheritance, transfers, or dispute resolutions on-site.
- This dual approach ensures that information is both formally recognized by the state and locally meaningful to citizens.

Table 3. LADM Model for Maya land tenure

FFPLA Framework Component		
Component	Description	LADM Class / Package
Spatial	Flexible spatial units, visible boundaries, community mapping	LA_SpatialUnit, Survey Package (Part 2)
Legal	Recognition of all tenure types (customary, statutory, informal)	LA_RRR, LA_BAUnit
Institutional	Fit-for-purpose allocation of responsibilities across levels	LA_Party, LA_AdministrativeSource
Inclusivity & Participation	Participatory adjudication, community verification, gender equity	LA_Party, LA_Source
Affordability & Flexibility	Low-cost, pragmatic processes that can be adapted	LA_SpatialUnit with quality attributes

Upgradeability & Maintenance	Records and data structures designed for incremental upgrades	Versioning in LA_BAUnit & LA_RRR; Source lineage
------------------------------	---	--

6.3. Integration with Belize’s existing system

The model proposed here favours integration through interoperability rather than a separate parallel system. By using LADM, communal lands can be registered as a distinct tenure type within the national land information infrastructure. This avoids the pitfalls of creating siloed records, while still preserving the legal distinctiveness of Maya tenure. Importantly, Edition II of LADM allows modular adoption, meaning Belize can initially implement only the classes needed for communal recognition and later expand to other domains (Kara et al. 2024; Ahsan et al. 2024).

Consistent with critiques of conventional titling, recent FFPLA literature stresses the importance of participatory adjudication and mapping (Lengoiboni et al. 2021; Griffith-Charles 2021; Enemark et al. 2021). In the Belizean case, adjudication should be carried out by the Village Councils under the Alcalde system, with oversight from Maya Leaders Alliance and national authorities. This ensures political feasibility by grounding the process in existing customary governance while linking outcomes to statutory recognition. Experiences from Uganda, where pilot projects were scaled into a national FFPLA strategy, show that pilots must be consolidated into a unified framework to avoid fragmentation (Musinguzi et al. 2021). Belize can draw directly from this lesson.

7. CONCLUSION

A careful review of the responses from the participants of this study concludes that recognition and operationalisation of Maya land tenure in Belize requires more than judicial rulings; it demands technical and institutional frameworks that can integrate communal practices into the national cadastre and land administration system. The survey findings confirm that while tenure security is deeply rooted in social legitimacy, the absence of State-endorsed instruments continues to limit broader benefits of land tenure security. By aligning customary governance with Fit-for-Purpose Land Administration principles, a pathway can be drawn that is inclusive and responsive to Maya indigenous traditions and modern land registration.

The proposed model underscores that accessibility, affordability, and upgradeability are not abstract ideals but practical necessities for indigenous communities facing ongoing encroachment and climate risks. Integrating Maya communal lands into Belize’s cadastral infrastructure through an LADM-based, interoperable framework can facilitate legal pluralism without eroding existing rights. More importantly, participatory adjudication, village-level data maintenance, and recognition of the Alcalde system position communities as co-stewards of land governance rather than passive beneficiaries. In this regard, the model aids not only in securing tenure but also in enhancing climate resilience, preserving culture, and fostering equitable development - goals that are pivotal to both the Maya people and Belizean government.

REFERENCES

- Ahsan, Muhammad Sheraz, Ejaz Hussain, Christiaan Lemmen, et al. 2024. "Applying the Land Administration Domain Model (LADM) for Integrated, Standardized, and Sustainable Development of Cadastre Country Profile for Pakistan." *Land* 13 (6): 883. <https://doi.org/10.3390/land13060883>.
- Alden Wily, Liz. 2012. *Customary Land Tenure in the Modern World - Rights to Resources in Crisis*. Reviewing the Fate of Customary Tenure in Africa - Brief #1 of 5, edited by Rights and Resources Initiative.
- Alden Wily, Liz. 2017. "Customary Tenure: Remaking Property for the 21st Century." In *Comparative Property Law*, by Michele Graziadei and Lionel Smith. Edward Elgar Publishing. <https://doi.org/10.4337/9781785369162.00030>.
- Anaya, S. James. 1998. "Maya Aboriginal Land and Resource Rights and the Conflict over Logging in Southern Belize." *Yale Hum. Rts. & Dev. LJ* 1: 17.
- Ardi Shidiq, Razin, and M. Sofyan Pulungan. 2025. "Alternative Dispute Resolution for Customary Land Through Customary Courts." *Asian Journal of Engineering, Social and Health* 4 (1): 152–62. <https://doi.org/10.46799/ajesh.v4i1.517>.
- Barnes, Grenville, and Stig Enemark. 2020. "Land Tenure Security: An Essential Component of Responsible Land Administration." *FIG Working Week 2020: Smart Surveyors for Land and Water Management*.
- Bolland, O. Nigel. 2003. *Colonialism and Resistance in Belize: Essays in Historical Sociology*. University of the West Indies Press.
- Bonte, Yesyurun. 2024. "Legal Protection of The Customary Rights of The Pubabu-Besipae Indigenous People." *Jurnal Indonesia Sosial Sains* 5 (06): 1332–39. <https://doi.org/10.59141/jiss.v5i06.1139>.
- Chege Waiganjo, and Paul E. N. Ngugi. 2001. "The Effect of Existing Land Tenure Systems on Land Use in Kenya." International Conference on Spatial Information for Sustainable Development, Nairobi, October 2.
- Clark, Charles. 2000. "State Leasehold and Mayan Customary Cultivation Rights in Belize." *Society & Natural Resources* 13 (1): 15–32. <https://doi.org/10.1080/089419200279216>.
- Cotula, Lorenzo, and Jean-Pierre Chauveau. 2007. *Changes in Customary Land Tenure Systems in Africa*. Iied - FAO.
- Cousins, Ben. 2007. "More than Socially Embedded: The Distinctive Character of 'Communal Tenure' Regimes in South Africa and Its Implications for Land Policy." *Journal of Agrarian Change* 7 (3): 281–315.
- Creswell, John W. 2022. *A Concise Introduction to Mixed Methods Research*. Second edition. SAGE.
- Deininger, Klaus, and Aparajita Goyal. 2023. *Land Institutions to Address New Challenges in Africa: Implications for the World Bank's Land Policy*. World Bank, Washington, DC. <https://doi.org/10.1596/1813-9450-10389>.
- Delville, Philippe Lavigne. 2014. *Competing Conceptions of Customary Land Rights Registration (Rural Land Maps PFRs in Benin): Methodological, Policy and Policy Issues*.

- Edwin, David Asante, Evam Kofi Glover, and Edinam K. Glover. 2020. “When Tradition Meets Modernity in Land Registration: Evidence from Dagbon, Ghana.” *Land* 9 (11): 416. <https://doi.org/10.3390/land9110416>.
- Ekern, Stener. 2011. “The Production of Autonomy: Leadership and Community in Mayan Guatemala.” *Journal of Latin American Studies* 43 (1): 93–119. <https://doi.org/10.1017/S0022216X1000180X>.
- ELAW. 2025. “The Maya Leaders Alliance v. The Attorney General of Belize.” Environmental Law Alliance Worldwide. <https://elaw.org/resource/maya-leaders-alliance-v-attorney-general-belize-1>.
- Enemark, Stig. 2015. “Fit-For-Purpose Land Administration: In Support of the Post 2015 Global Agenda.” *Annual World Bank Conference on Land and Poverty 2015: Linking Land Tenure and Use for Shared Prosperity*, 323.
- Enemark, Stig, Robin McLaren, and Christiaan Lemmen. 2021. “Fit-for-Purpose Land Administration—Providing Secure Land Rights at Scale.” *Land* 10 (9): 972. <https://doi.org/10.3390/land10090972>.
- FAO. 2012. *Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests in the Context of National Food Security*. First Revision. FAO. <https://doi.org/10.4060/i2801e>.
- Farran, Sue, and Jennifer Corrin. 2017. “Developing Legislation to Formalise Customary Land Management: Deep Legal Pluralism or a Shallow Veneer?” *Law and Development Review* 10 (1): 1–27. <https://doi.org/10.1515/ldr-2016-0017>.
- Field, Erica, and Maximo Torero. 2006. *Do Property Titles Increase Credit Access among the Urban Poor? Evidence from a Nationwide Titling Program*. Working paper, Department of Economics, Harvard University, Cambridge, MA.
- Fonmanu, Keresi R., Lisa Ting, and Ian P. Williamson. 2003. “DISPUTE RESOLUTION FOR CUSTOMARY LANDS: SOME LESSONS FROM FIJI.” *Survey Review* 37 (289): 177–89. <https://doi.org/10.1179/sre.2003.37.289.177>.
- Frazer, Leonel. 2025. “Maya Land Rights in Belize: Governing Ancestral Territories.” Unpublished Undergraduate Thesis, The University of the West Indies.
- Gahman, Levi, Adaeze Greenidge, and Atiyah Mohamed. 2020. “Plunder via Violation of FPIC: Land Grabbing, State Negligence, and Pathways to Peace in Central America and the Caribbean.” *Journal of Peacebuilding & Development* 15 (3): 372–76. <https://doi.org/10.1177/1542316620951278>.
- Griffith-Charles, Charisse. 2021. “Application of FFPLA to Achieve Economically Beneficial Outcomes Post Disaster in the Caribbean.” *Land* 10 (5): 475. <https://doi.org/10.3390/land10050475>.
- Herrera, José Israel. 2011. “Unveiling the Face of Diversity: Interlegality and Legal Pluralism in the Mayan Area of the Yucatan Peninsula.” Doctoral Dissertation, University of Amsterdam. https://pure.uva.nl/ws/files/1514000/91990_05.pdf.
- Hoffmann, Odile. 2015. “Políticas Territoriales y Exclusiones Étnicas En Belice: Un Siglo de Transformaciones En Tierras Maya.” *Revista de Estudios e Pesquisas Sobre as Américas* 9 (3): 5–19.
- Hyde, Colin. 2021. “Time to Demarcate Mayan Lands.” *Amandala Newspaper*, June 19. <https://amandala.com.bz/news/time-to-demarcate-mayan-lands/>.

- Hyde, Richard F. 1991. "The Feasibility of a Land Information System for Belize, Central America." *International Journal of Geographical Information Systems* 5 (1): 99–109. <https://doi.org/10.1080/02693799108927834>.
- Kara, Abdullah, Christiaan Lemmen, Peter Van Oosterom, Eftychia Kalogianni, Abdullah Alattas, and Agung Indrajit. 2024. "Design of the New Structure and Capabilities of LADM Edition II Including 3D Aspects." *Land Use Policy* 137 (February): 107003. <https://doi.org/10.1016/j.landusepol.2023.107003>.
- Kus, Roberto, Levi Gahman, Adaeze Greenidge, Filiberto Penados, and Shelda-Jane Smith. 2023. "Snapshots of Maya Self-Determination in Southern Belize: For Q'eqchi' and Mopan Communities of Toledo District, Resisting Land Grabs and Stewarding the Commons Are Central to Struggles to Protect Territory, Heritage, and Collective Ways of Being." *NACLA Report on the Americas* 55 (3): 294–304. <https://doi.org/10.1080/10714839.2023.2247761>.
- Law of Property Act, Cap 190 (2000).
- Lemmen, Christiaan, J Du Plessis, C Augustinus, et al. 2015. "The Operationalisation of the 'Continuum of Land Rights' at Country Level." 1–27.
- Lengoiboni, Monica, Christine Richter, Paul Van Asperen, and Jaap Zevenbergen. 2021. "Initial Insights on Land Adjudication in a Fit-for-Purpose Land Administration." *Land* 10 (4): 414. <https://doi.org/10.3390/land10040414>.
- Maya Leaders Alliance. 2018. *Update Report to the Human Rights Committee of the ICCPR for the 124th Session Review of Belize*. Centre for Civil and Political Rights. [https://ccprcentre.org/files/documents/INT_CCPR_CSS_BLZ_32402_E_\(1\).pdf](https://ccprcentre.org/files/documents/INT_CCPR_CSS_BLZ_32402_E_(1).pdf).
- Meaghan M. Peuramaki-Brown and Shawn G. Morton. 2021. *People, Animals, Protected Places, and Archaeology: A Complex Collaboration in Belize*. Edited by Boyd Cothran, Saara Kekki, and Rani-Henrik Andersson. Helsinki University Press. <https://doi.org/10.2307/j.ctv26qjj3b.10>.
- Medina, Laurie Kroshus. 2016. "The Production of Indigenous Land Rights: Judicial Decisions across National, Regional, and Global Scales." *PoLAR: Political and Legal Anthropology Review* 39 (S1): 139–53. <https://doi.org/10.1111/plar.12176>.
- Mekking, Steven, Dossa Victorien Kougblenou, and Fabrice Gilles Kossou. 2021. "Fit-For-Purpose Upscaling Land Administration—A Case Study from Benin." *Land* 10 (5): 440. <https://doi.org/10.3390/land10050440>.
- Minority Rights Group. 2016. "Belize: Advocating Maya People's Rights to Land." Blog, November 22. <https://minorityrights.org/belize-advocating-maya-peoples-rights-to-land/>.
- Mitchell, David, Bernhard Barth, Serene Ho, M. Sait, and Darryn McEvoy. 2021. "The Benefits of Fit-for-Purpose Land Administration for Urban Community Resilience in a Time of Climate Change and COVID-19 Pandemic." *Land* 10 (6): 563. <https://doi.org/10.3390/land10060563>.
- Moberg, Mark. 1992. "Continuity under Colonial Rule: The Alcalde System and the Garifuna in Belize, 1858-1969." *Ethnohistory* 39 (1): 1. <https://doi.org/10.2307/482562>.
- Mushinge, Anthony, and Sharon Mulenga. 2016. "Legal Pluralism and Tenure Security: Exploring the Relationship between Statutory and Customary Land Tenure in Zambia." *International Journal of Social Science Studies* 4 (3): 7–17. <https://doi.org/10.11114/ijsss.v4i3.1331>.

- Musinguzi, Moses, Stig Enemark, and Simon Peter Mwesigye. 2021. "Fit for Purpose Land Administration: Country Implementation Strategy for Addressing Uganda's Land Tenure Security Problems." *Land* 10 (6): 629. <https://doi.org/10.3390/land10060629>.
- Nettheim, Garth. 2007. "'The Maya Land Rights Case': Recognition of Native Title in Belize." *Indigenous Law Bulletin* 7 (2): 25–26.
- Owusu, Sampson, and David Simmons. 2021. *Commonwealth Caribbean Land Law*. 1st ed. Routledge-Cavendish. <https://doi.org/10.4324/9781003070665>.
- Parks, Shoshaunna. 2011. "Winning Title to Land but Not to Its Past: The Toledo Maya and Sites of Pre-Hispanic Heritage." *International Journal of Cultural Property* 18 (1): 111–29. <https://doi.org/10.1017/S0940739111000063>.
- Rachael S. Knight. 2010. *Statutory Recognition of Customary Land Rights in Africa: An Investigation into Best Practices for Law Making and Implementation*. Food and Agriculture Organisation of the United Nations (UN-FAO).
- Registered Land Act, Cap 190 (2020).
- Schulman, Sam. 1957. "Land Tenure among the Aborigines of Latin America." *The Americas* 13 (1): 43–67. <https://doi.org/10.2307/979213>.
- Sieder, Rachel, and Jessica Witchell. 2001. "Advancing Indigenous Claims through the Law: Reflections on the Guatemalan Peace Process." In *Culture and Rights*, 1st ed., edited by Jane K. Cowan, Marie-Bénédicte Dembour, and Richard A. Wilson. Cambridge University Press. <https://doi.org/10.1017/CBO9780511804687.012>.
- Sunil Laloo, and Charisse Griffith-Charles. 2014. "Designing a Registration System to Support Family Land Governance in the Caribbean." The World Bank's Land and Poverty Conference 2013, Washington DC, April 8.
- The Maya Leaders Alliance et al v. Attorney General of Belize, BZ 2015 CCJ 3 ____ (Caribbean Court of Justice (CCJ) 2015). https://elaw.org/wp-content/uploads/archive/bz.mayaleaders_0.pdf.
- Unruh, Jon D. 2003. "Land Tenure and Legal Pluralism in the Peace Process." *Peace & Change* 28 (3): 352–77. <https://doi.org/10.1111/1468-0130.00267>.
- Vieira, Luciane Klein, and Marcelo Andrade De Azambuja. 2020. "Maya Leaders Alliance & Others V. The Attorney General of Belize: An Example of Decolonization of International Human Rights Law." *Caderno de Relações Internacionais* 11 (21). <https://doi.org/10.22293/2179-1376.v11i21.1346>.
- Wainwright, Joel. 2022. "The Maya and the Belizean State: 1997-2004." *Latin American and Caribbean Ethnic Studies* 17 (3): 320–49. <https://doi.org/10.1080/17442222.2021.1935694>.

BIOGRAPHICAL NOTES

Dr Sunil Laloo B.Sc. (hons); LLB (hons), LLM, PhD (UWI) is a Chartered Surveyor and Fellow of the Royal Institution of Chartered Surveyors (RICS). He is currently a full-time Lecturer in the Department of Geomatics Engineering and Land Management, UWI; a part time Valuation Consultant at G.A. Farrell and Associates Limited, and an Attorney-at-Law. He is Chair of the Southern Caribbean Chapter of the RICS and the Trinidad and Tobago Delegate for Commission 9 (Valuation and the Management of Real Estate) of the International

20

Sunil Laloo, Charisse Griffith-Charles, Trinidad and Tobago and Leonel Frazer, Belize
Maya Communal Lands in Belize: A fit-for-purpose model to support indigenous land rights, climate resilience and legal integration.

FIG Brazil Joint Land Administration Conference (3DLA2025, UN-Habitat STDM, FIG Commissions 7+8 AM)
3-5 November 2025, Florianópolis, Santa Catarina, Brazil

Federation of Surveyors (FIG). He specialises in the valuation of commercial and special purpose properties and has conducted research in the areas of Land Tenure, Land Administration, and Property Valuation.

Dr Charisse Griffith-Charles Cert. Ed. (UBC), MPhil. (UWI), PhD (UF), FRICS, is a Senior Researcher in the fields of land registration systems, land administration, and communal tenure especially ‘family land’. She places importance on professional membership and is a Fellow of the Royal Institution of Chartered Surveyors (FRICS) and member of the Institute of Surveyors of Trinidad and Tobago (ISTT). She has also been President of the ISTT, President of the Commonwealth Association of Surveying and Land Economy (CASLE) Atlantic Region, and President of the Fulbright Alumni Association of Trinidad and Tobago (FAATT). Dr Griffith-Charles has served as consultant and conducted research on, inter alia, projects to revise land survey legislation in Trinidad and Tobago, assess the impact and sustainability of land titling in St. Lucia, address tenure issues in regularising informal occupants of land, and to assess the socio-economic impact of land adjudication and registration in Trinidad and Tobago, apply the STDM to the eastern Caribbean countries, and document land policy in the Caribbean. Her publications focus on land registration systems, land administration, cadastral systems, and land tenure.

Mr. Leonel Frazer is a seasoned geomatics professional with nearly two decades of experience in Belize’s Surveys and Mapping Section, Ministry of Natural Resources. His technical work includes cadastral and engineering surveys, along with other technical land matters in support of national development. He recently completed a BSc in Geomatics Engineering, graduating at the top of his programme with First Class Honours, and is currently pursuing an MSc in City Planning and Real Estate Development at the University of Glasgow in Scotland. He is undertaking this postgraduate study to contribute in a more impactful capacity to the government of Belize. His research focuses on the Maya communal land issue in southern Belize, a complex and unresolved matter with major implications for land governance, tenure security, and economic development. Drawing on his field experience and academic training, he is committed to advancing equitable and fit-for-purpose frameworks that can address both indigenous rights and national development goals.

CONTACT

Sunil Laloo (Corresponding Author)
The University of the West Indies, St. Augustine Campus
Trinidad and Tobago
Phone: + 1(868) 336-3245
E-mail: Sunil.Laloo@uwi.edu
Website: <https://sta.uwi.edu/eng/geomatics/>