

Key Considerations for the Adaptation of the STDM for the OECS Member States

Charisse GRIFFITH-CHARLES, Sunil LALLOO, Jamal BROWNE, Trinidad and Tobago

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SUMMARY

The Organisation of Eastern Caribbean States (OECS), with the assistance of the Australian government's aid agency, AusAID, and UNHabitat, is currently working on developing regional land policy guidelines that will address the most critical land issues being faced by the countries, not the least of which is the impending impact of climate change. These guidelines are to represent an integrated approach to land policy development that would further assist in the establishment of land administration frameworks for the individual member states. A key aspect of this project is to evaluate pro-poor land tools that would facilitate the modernisation of cadastral systems; land tenure instruments; data sharing and resource management. This initiative provides for and includes an opportunity for introducing the Social Tenure Domain Model (STDM) in the countries where it will be most effective in addressing the land issues and achieving the land policy goals whether they are economic, social or environmental. The individual member states of the OECS have already pledged political support by mandating their land agencies to participate in the initiative and have thus created a project-based momentum upon which the development of the STDM can derive stakeholder support.

This paper reviews the major characteristics in land administration amongst the OECS countries that will affect the implementation of the STDM standard. It then presents a proposed STDM profile that will address the key commonalities in the land issues of these states. The key commonalities found are, for example, the prevalence of the 'family land' customary tenure in most of the states but in particular in Saint Lucia and Grenada as well as the existence of informal occupation (squatting) on land in St. Vincent and the Grenadines and Saint Lucia. Other characteristics that will impact on the structure of the STDM include the existence of ponds as a privately owned spatial entity in the British Virgin Islands (BVI), conflict in access and use rights of coastal land resources; overlapping and contesting interests on hillsides, and the use and profit of mining resources such as sand and other aggregate in Nevis and Montserrat.

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1. INTRODUCTION

The Organisation of Eastern Caribbean States (OECS) comprises of nine small island countries in the Caribbean that are facing numerous challenges in allocation and management of their scarce land resource. The nine countries are Anguilla and Barbuda, Antigua, British Virgin Islands, Dominica, Grenada, Montserrat, Saint Lucia, St Christopher (St Kitts) and Nevis, and St Vincent and the Grenadines. The countries have requested the assistance of the Australian aid agency, AusAID, and the UNHabitat to develop land policies that can provide sustainable management of land considering not only existing deficits in development, resources and information systems but also impending risks of climate change with concomitant sea level rise, flooding and other potential natural hazard impacts (GLTN 2013). A key aspect of creating land policy that is implementable is to establish land information systems that accurately reflect existing land rights.

A coordinated grouping such as the OECS supports the introduction of a common profile for the STDM that would allow for regional databases maintaining current backup data in the event of the frequent natural disasters of hurricanes and floods. Ideally these databases should become part of a central data repository that would support the later development of national and regional spatial data infrastructures.

This paper presents the background to the land issues in the countries and the key land tenure characteristics that would need to be captured by the land information system. The paper concludes by identifying specific features that have to be included in the common OECS STDM profile. Differences in the ways that family land is managed and the rules for attaining rights, for example, have to be included in the common OECS STDM profile. Variability in legislation that, on the one hand, records ownership by heirs of the deceased such as in Saint Lucia, and on the other hand, leaves family land inheritances off the register, must also be included. Differences in limitation periods and other legal requirements to attain rights through adverse possession are also an issue. Differences between the family land customary tenure, which is interspersed amongst other formal tenure, and customary tenure as it obtains internationally confined to large rural enclaves, have to be addressed differently to the instance classes included in the ISO model.

The OECS STDM profile developed here will go some way to addressing the land issues in the primarily small island developing states (SIDS) which have both individual and collective land issues needing the intervention of the STDM. Instance level cases for the situations described are presented and described for clarification.

2. BACKGROUND

Land policy can be instrumental in defining the goals and objectives of a country since much of development must be underpinned by how land is allocated and distributed. In order for land policy to move from the blue print to practical implementation, a land administration system is required that will provide information on existing land rights so that they would not be infringed on in development. Many developed countries have comprehensive and up-to-date tenure information systems so the outcomes of land policy implementation plans can be predicted or anticipated. Developing countries, such as the OECS countries, have incomplete systems that defy accurate land planning. Where systems have been put in place, such as in Saint Lucia, the systems do not fully reflect the tenure existing on the ground. Introducing an STDM based system will therefore be beneficial to the design of relevant land policy and also would be supportive to the implementation of the designed policy.

3. KEY CONSIDERATIONS FOR THE STDM

The countries of the OECS have a similar history of colonisation and settlement and thus share in a number of issues relating to land use and governance. Each member state however, has had its own unique political and social development and it would therefore be important to avoid an over-generalisation of the issues pertaining to land. It is also worthwhile to note some of the individual land reforms that would have either simplified or formalised aspects of land governance that are essential in the development of a Land Administration Domain Model for the OECS. The key considerations for the development of appropriate STDM based systems are presented in this section.

3.1 Family land

The customary system of family land exists in significant proportion in the OECS countries and by extension – the Caribbean. This system, denoted primarily by the transmission of land in undivided shares from one generation to the next dates back to the post-emancipation era at which point, ex-slaves acquired freehold land (Clarke 1966; Besson 1984; Espeut 1992). The extent of family lands varies throughout the OECS and is more prominent in countries that have a large agricultural sector. Family land in St. Lucia for example accounts for 42% of the land area (King-Joseph 2013), but is minimal in Anguilla where, even though Jackson (2003a) notes that large parcels of land are held by families, the traditional type of family land that is characterised by informal transmission is insignificant. In Montserrat, Greenaway (2013) reports that of the 14,717 parcels in the country, those with three or more owners (up to 16 in some cases) are predominantly - family land. The informal nature of the tenure type leads to a number of issues including lack of investment in land; absentee claimants; informal fragmentation and lack of agricultural productivity. In the Dominican case study, Baptiste (2013) reports that family land accounts for 11% of land ownership on the island and is responsible for the problems listed above. These problems are typical of family land regimes in the rural Caribbean landscape. The case of Saint Christopher presents a different issue as family land is also found in the city centre (Basseterre) as highlighted by Williams (2013) who opines that family lands in this commercial area should be privatised to allow for urban revitalisation. The social structures that govern family land are often complex and differ from one case study to the next. Despite the irregular nature of family land and the large degree of

subjectivity in the application of customary norms, the fundamental aspects of governance are common and can be generalised to allow for the tenure system to be modelled in the STDM (Laloo and Griffith-Charles 2013; Griffith-Charles 2011). Such fundamental components include transmission; cognatic descent; land use and management; and dissolution/disposal.

Various land reforms in the OECS served as ‘shocks’ to the family land tenure system and tested its resilience¹. These reforms have been geared toward the formalisation of land tenure and the establishment of complete cadastral records. Examples of this include the Cadastral system reform in Anguilla in 1974 (Jackson 2003a); and the Land Registration and Titling project – Saint Lucia in 1983 (King-Joseph 2013; Griffith-Charles 2004; Dujon 1995). Even though this impacted significantly on the family land tenure form by providing the land holders with formal titles for the land it was noted that in the medium term after the reforms, family land occupants reverted to informal dealings in the land (Griffith-Charles 2004). The largely social aspects of family land thus survived these external shocks and are testament to the reality that family land occupants will continue to practice informal governance. This substantiates the call for a flexible approach to recording the existing land management practices in the family land tenure such as the STDM.

3.2 Squatting

The illegal occupation of lands is a problem that plagues most of the countries in the OECS². Squatting is done for either housing or agricultural purposes where the former is prevalent in the peri-urban landscape and the latter in rural village communities. In the case study on Antigua and Barbuda, Jackson (2003b) mentions that 10 areas on the islands have been identified as squatter sites that are earmarked for regularisation. He further elaborates that squatting is a result of high land prices, absentee owners and inadequate enforcement. Although squatting accounts for small percentages of land in the OECS countries³, it is a formidable problem. Squatting typically occurs in the outskirts of cities or in particularly vulnerable areas that are unsuited for development or residential dwelling (Williams 2013; Baptiste 2013). In the countries where squatting is a paramount land issue, large scale regularisation programmes have been put in place. In Dominica for example the Housing Revolution programme was initiated in 2007 to improve access to housing for the poor and to address the issue of squatting on the island. This project has since cost upward of EC\$ 53 million.

The lands that are most affected by squatting are those under the management of the state and its agencies (King-Joseph 2013). This is due in part by a failure of the state to enforce legislation and to police its land resources. In his report on the Saint Christopher and Nevis case study, Williams (2013) lists a number of interrelated characterises of squatting including: unplanned growth that results in environmental degradation and health issues; tenure of occupants are not clearly defined or based on enforceable title documents; building and other

¹ For a discussion on the resilience of customary land tenure systems to external shocks see: Barnes, Grenville. 2009. "The evolution and resilience of community-based land tenure in rural Mexico." *Land Use Policy* 26 (2): 393-400

² Squatting however is not common in the British Virgin Islands or Anguilla. It is worthwhile to note that both these countries are still foreign territories of the UK.

³ 3.27% in St Kitts and Nevis; 3% in Dominica for example

development codes are not applied; service infrastructure are inadequate to meet basic needs; and the majority of residents are among low income groups.

The STDM as a pro-poor land tool has been developed to serve primarily, the needs of the poor (Lemmen 2010). Squatting is a symptom of poverty; therefore the STDM can be effective in recording the occupation and other de facto tenure mechanisms that are practiced by informal settlers that would aid in the establishment of secure land tenure instruments for such occupiers.

3.3 Lands held on trust in Barbuda

Jackson (2003b) reports on a unique situation in Barbuda that is worth mentioning as it would require specific consideration for the development of an STDM for the island within the twin island state. Although the Registered Land Act 1975 created the legal framework for the establishment of a cadastre for Antigua, this did not apply to Barbuda. Instead, land in Barbuda is fully owned by its residents and held on trust by the Barbuda Council. Lands cannot be sold to outsiders and can only be conferred by right to Barbudans over the age of 18 for residential, crop and livestock purposes in which they will receive a lease for 12 years with the option to renew. This communal form of ownership is similar to the community land trust system (Community Economic Development 2009; Cirillo et al 1982) and a further investigation needs to be done to identify other details of its governance.

4. IMPACTS ON STDM MODEL

The social tenure domain model is a specialisation of the generic Land administration domain model and focuses on describing the social relationships between land and people (Griffith-Charles 2011; Augustinus, Lemmen and Van Oosterom 2006). To develop an STDM for the OECS countries, the key considerations listed above must form the basis of the modular component as the STDM itself is descriptive and not prescriptive. This means simply, that the STDM seeks to record the status quo without interfering in the actual people-land relationships. It is not linked to the legality or formality of the tenure types themselves and is thus a conceptual model rather than an application model (ISO 2012). The Land Administration Domain Model standard that was recently published gave examples of how the STDM is to apply in basic situations. Figure 1 below shows a model for the relationship between the 'Dong People' and their customary land. It follows from the core-cadastral domain model that connects the 'person' feature class to the spatial unit through the tenure relationship. In this case, that relationship is that of customary ownership

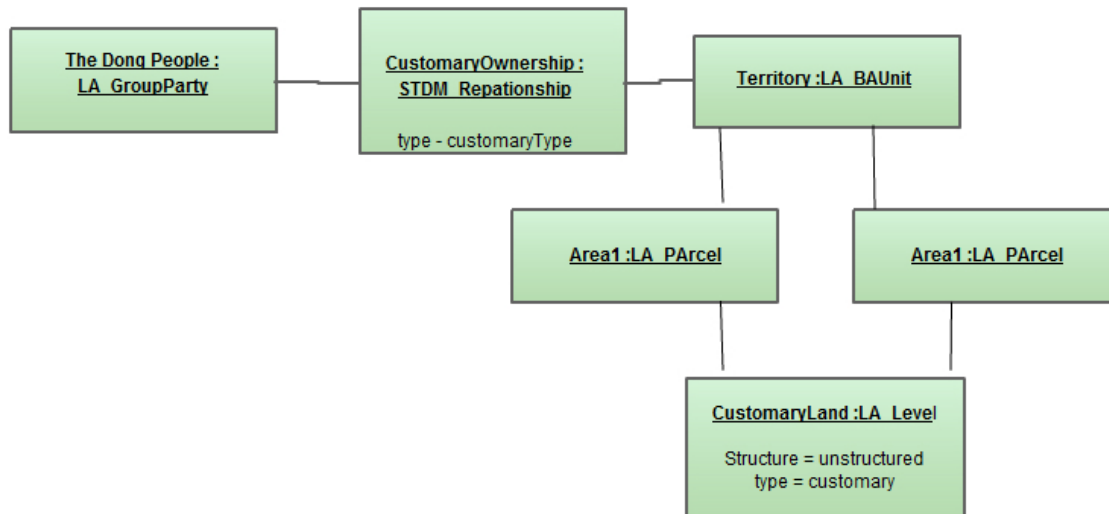


Figure 1: Example of a simple STDM model (adapted from ISO 2012:53)

Figure 2 shows an adaptation of the STDM for the recordation of informal tenure situations in the OECS countries. It shows the classes in the system that relate to the various forms of social tenure highlighted in the case studies. The social tenure relationships are defined in a code list which is a universal set of all the possible instances in the OECS. It includes:

- familyLandTenure_cognatic – where rights to a family land parcel were acquired through cognatic descent lines
- familyLandTenure_traditional – where rights to a family land parcel were acquired through lateral descent lines from the original purchasers in the post emancipation era.
- familyLandTenure_formal – where an original family land parcel has been registered in a formal system but retains traditional family land governance.
- informalOccupation_state; informalOccupation_private; informalOccupation_reserve – which refer to squatting on state, private and reserved lands respectively.
- Common_trust – lands that are held by occupants beneficially through a trust or held in common (for lands in Barbuda). Membership is evidenced by a document that establishes that the person was born on the island.

The STDM_party is a subset of LA_party and the occupants for the two main forms of social tenures – family land and squatting are represented in group classes – STDM_groupParty1 and STDM_groupParty2 respectively.

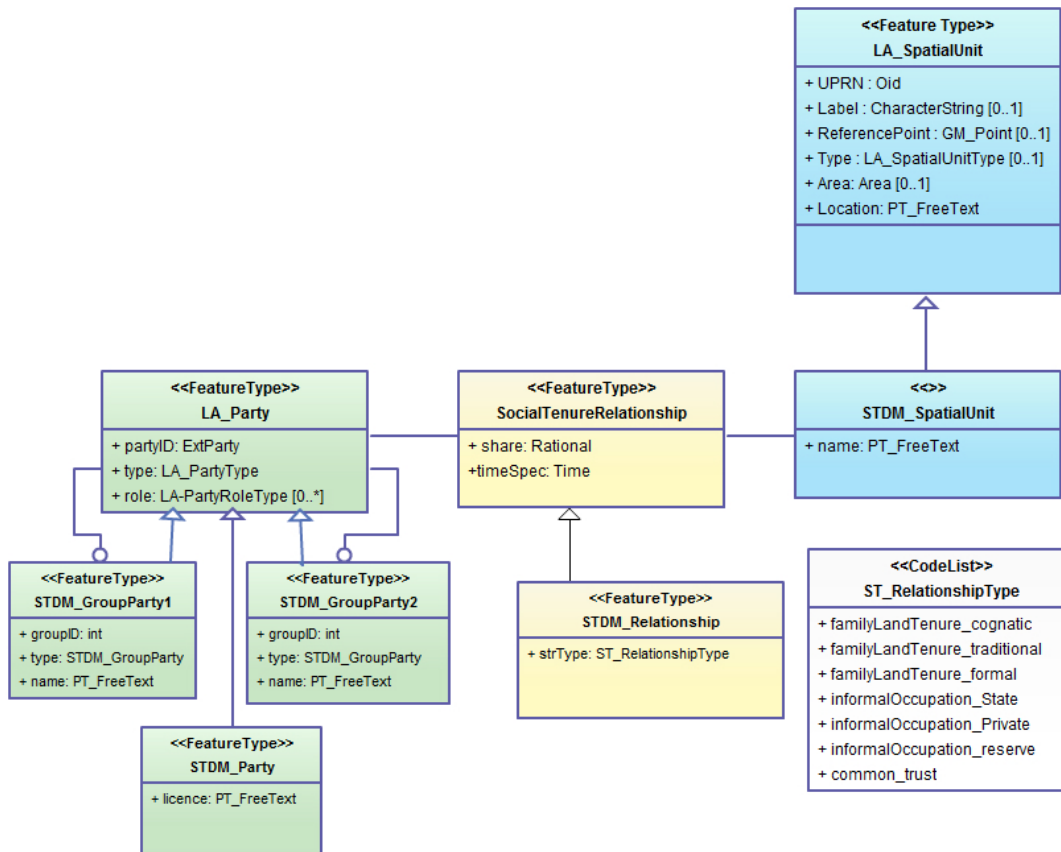


Figure 2 - OECS informal recording situation for family land

5. IMPACTS ON IMPLEMENTATION

There are already existing software packages based on the STDM concept. Some of these are commercial and fashioned to run on proprietary GIS such as ArcGIS. Others run on free open source GIS software. Developed and tested software has been applied to real life cases in several countries where informal tenure rights do not strictly conform to the standard models and attendant software. The STDM software developed by UNHabitat and the GLTN is to be piloted in the OECS countries as a way of testing the applicability to the particular land issues existing in these countries as described in this paper. What is required to be determined, prior to the application of the software, is the list of standards for populating the STDM database that is most appropriate to the social, economic, and institutional environment within which it will operate. Failing to determine these requirements runs the risk of alienating the beneficiaries of the intervention or being under-resourced and therefore not completing the programme. For example the region is highly literate so signed declarations can be used instead of voice clips of the claimant.

The STDM is ideally a community-based application, and should be implemented as such regardless of the size of the territory and complexity of the social tenures. Therefore, the technology used for data collection should first be clearly understood by the community.

Several data collection options present themselves as practical in this sub-regional context. For quick and simple data acquisition, a GPS centroid coordinate can be acquired anywhere on the parcel. Later as time and resources allow, the precision of the definition of the parcel can be increased. Where discrepancies between local projections and WG84 have been resolved, points can easily be collected using handheld GPS instruments. For informal communities within urban business areas, high accuracy rovers may become necessary and would therefore require the supervision of trained land surveyors.

Aerial photography and high resolution satellite imagery is today available at the surveys and mapping divisions of most OECS territories. These have proven to be very useful resources in establishing parcel index maps in informal settlements.

Such is the case of New Sandy Bay Village on the north eastern coast of St. Vincent & the Grenadines, where original surveys were commissioned by the colonial administration in the mid-1940s. This data has since been digitally draped over aerial photography dated 2005 as seen in Figure 3. Unfortunately, over 50% of residents of New Sandy Bay Village have no formal record of their real property rights. In this scenario, the existing parcel information and imagery can be readily used to augment enumerations. Similar scenarios can be found across the OECS.



Figure 3 - 1940s mapping data for New Sandy Bay Village, St. Vincent, is seen draped over aerial photography dated 2005.

For rural agricultural lands (where plots are often in excess of one acre), existing aerial photography or high resolution satellite imagery - printed on paper at 1:2500 scale - can be used for data collection. Prominent features such as roads, rivers and structures can be used to

guide parties involved. Boundaries can be drawn and scanned, or digital pens can be used to draw boundaries on scaled images thus creating geo-referenced lines. Data quality can always be improved as social tenures are progressively formalised if desired.

In the context of the OECS, a reasonable goal of STDM implementation is its integration with or updating of the formal land administration systems. To achieve this, all data must be collected using the same structure: Party - Social Tenure Relationship - Spatial Unit. It must also be determined in advance whether the 'Party' would be a natural person, a household, or family; whereas determination must also be made as to what comprises the 'Spatial Unit': The land parcel, the structure, or any other object. This is illustrated in figure 4 below which shows a Google Maps image of a section of Diamond Village on the south-eastern coast of St. Vincent. The image was geo-referenced using the geo-referencing tool in Quantum GIS before proceeding with tests in the STDM software. The STDM is likely to benefit hundreds of residents of Diamond Village – most of whom have been plagued for nearly two decades by the daunting effects of informality. It is proposed that the parcels be evidenced by a GPS coordinate taken somewhere on the parcel near the dwelling. Additional information recorded will be the claimant's name and length of time of occupation.

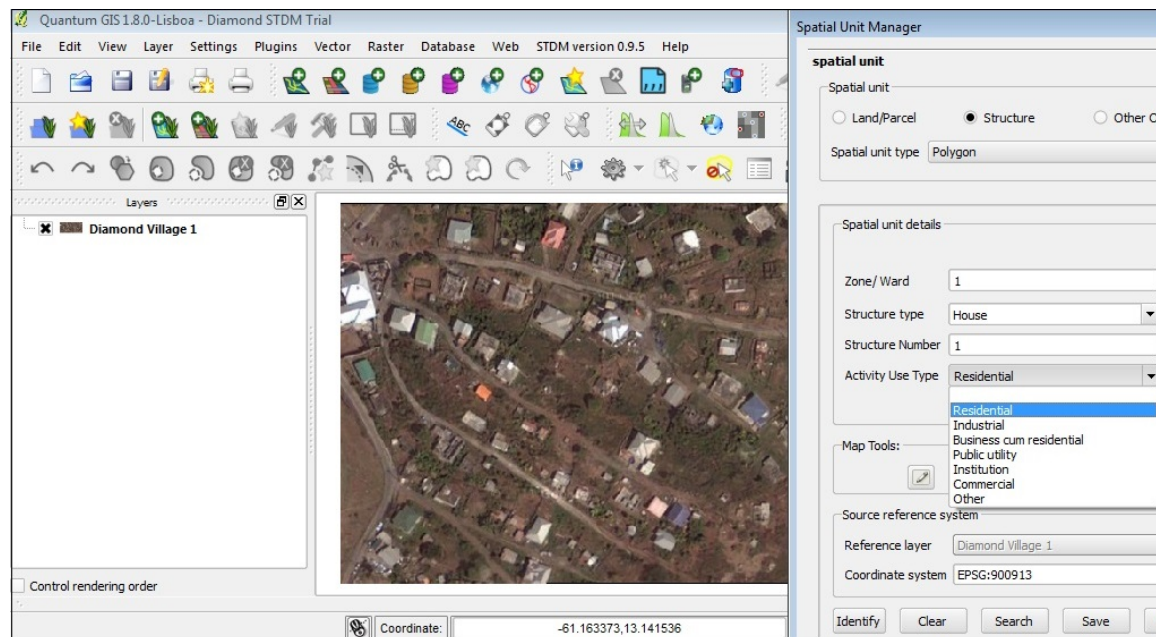


Figure 4 - Screenshot of the Geo-referencing tool in Quantum GIS used for the east coast of St. Vincent

One of the greatest data-related challenges in STDM implementation within the OECS would be devising a practical and user friendly system for updating social tenure information. Such a system must incorporate building awareness on the importance of reporting and processing changes in social tenure relationships. The reporting procedures must be simple enough to attract even those most severely affected by informality within the land sector - the poor.

6. CONCLUSION

This paper set out the key considerations that would impact on the implementation of the STDM in the OECS. These considerations relate to family land communal tenure with various characteristics, squatting on land, and the particular communal ownership for the persons born on the island of Barbuda. The implementation of the concept using the STDM software developed by UNHabitat was explored for the types of spatial units to be input. Suitable imagery was used as the foundation for spatial unit definition and evidence of rights.

It is intended that pilot projects be conducted in St. Vincent and St. Lucia before the end of 2013. This study forms the basis of decisions to structure the requirements for the pilot projects.

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BIOGRAPHICAL NOTES

Charisse Griffith-Charles is currently lecturer in Cadastral Systems, Land Administration and Surveying in the Department of Geomatics Engineering and Land Management at the University of the West Indies, St. Augustine, Trinidad and Tobago where her research interests are in land registration systems and communal tenure. She is a Fellow of the Royal Institution of Chartered Surveyors and a registered and licensed land surveyor in Trinidad and Tobago and has worked 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 regularizing informal occupants of land, and to assess the socio-economic impact of

land adjudication and registration in Trinidad and Tobago. She is currently President of the Institute of Surveyors of Trinidad and Tobago (ISTT) and President of the Commonwealth Association of Surveying and Land Economy (CASLE) Atlantic Region.

Sunil Lalloo is a PhD candidate in the Department of Geomatics Engineering and Land management at the University of the West Indies, St. Augustine, Trinidad and Tobago where he also works as a graduate research assistant. His research is focused on family land tenure in the Caribbean with the goal to develop a registration system for social tenures in the Caribbean using the island of Tobago as a case study and pilot. He has a background in land surveying and law and has recently graduated from the Institute of Housing and Urban Development Studies, Rotterdam with graduate training in informal settlements regularisation.

Jamal Browne is a Land Surveyor by profession, and is currently enrolled as a MPhil Candidate in Surveying & Land Information within the Department of Geomatics Engineering & Land Management of the University of the West Indies (UWI), St. Augustine Campus in Trinidad & Tobago. His current research focus is on land tenure systems development within the Organization of Eastern Caribbean States (OECS) – particularly in support of natural hazard vulnerability reduction. His MPhil research is currently under consideration for his PhD candidacy with The UWI St. Augustine.

CONTACTS

Charisse Griffith-Charles

The University of the West Indies, St. Augustine

St. Augustine

TRINIDAD AND TOBAGO

Phone: + 868 662 2002 Ext 82520

Fax: + 868 662 2002 Ext 83700

E-mail: Charisse.Griffith-Charles@sta.uwi.edu

Website: <http://www.eng.uwi.tt/depts/survey/staff/cgriffith-charles/cgriffith-charles.htm>

Sunil Lalloo

The University of the West Indies, St. Augustine

St. Augustine

TRINIDAD AND TOBAGO

Phone: + 868 336 3245

Fax: + 868 662 2002 Ext 83700

E-mail: Sunil.Lalloo@sta.uwi.edu

Jamal Browne

The University of the West Indies, St. Augustine

St. Augustine

TRINIDAD AND TOBAGO

Phone: + 868 327 2671

Fax: + 868 662 2002 Ext 83700

E-mail: jaavbrowne@gmail.com