



Building Codes and Standards in Trinidad and Tobago

Caribbean Buildings Standards Building Forum and Exhibition (RE) Building for a
Resilient and Robust Region.

June 13-15, 2018.

Bay Gardens Hotel, St Lucia

Trinidad and Tobago Presentation -
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Ministry of Planning and Development.

Types of Buildings in Trinidad and Tobago



Building Control in Numbers -

- ▶ **50** is the approximate amount of years that Trinidad and Tobago has been trying to create/adapt/adopt building codes at a very comprehensive level.
- ▶ **102 out of 190 Economies** is the 2018 World Bank Ease of Doing Business Ranking – (lowest ranking in the last 10 years.)
- ▶ **119 out of 190 Economies** is the 2017 World Bank ranking for Dealing with Construction Permits
- ▶ According to the World Bank, **253** is the number of estimated days it may take for an applicant to submit for planning approval and achieve the approval of the Town and Country Planning Division and all other Regulatory Bodies before the commencement of an application to develop a warehouse.
- ▶ **16** is the number of procedures an application might encounter with different regulatory agencies, or multiple encounters with a single entity, before getting the green light to commence development.

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The Institutionalisation of Informality in Building Control in Certain Areas:

- ▶ 1967- Commission of Enquiry was established to “enquire into the extent and circumstances of the erection within the past five years, of dwelling houses and commercial buildings outside the municipal areas without prior approval of plans or without the provision of suitable amenities, and to make recommendations for the better control of building operations in these areas...”

What this indirectly created was the ‘institutionalisation of informality’.

At the time the country was divided largely into three distinctive administrative areas -:

Primary Rural Areas which comprised the villages and small settlements throughout the country,

Secondary Rural Areas which were the suburbs of the municipalities and

Urban Areas- namely the municipalities of Port of Spain, San Fernando and Arima,

Building control was largely administered only in the ‘prescribed urban areas’ under the Public Health Ordinance Chapter 12, no 4 of 1917, amended in 1950.

Predictably, it created short term development with long term problems. Or as was stated, outside the prescribed areas, a land owner could “erect any building atrocity with impunity.”

With the knowledge that a building life can extend to a 100 years...

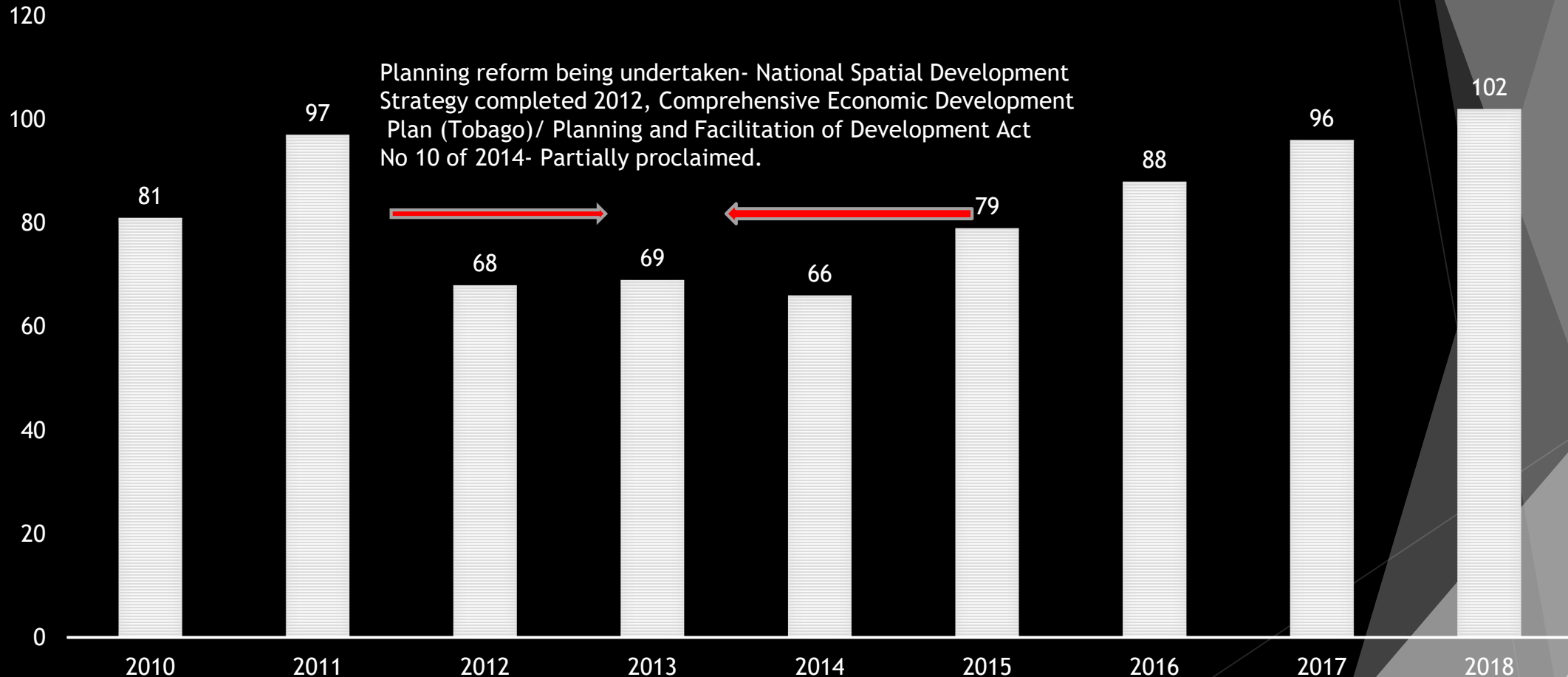


“What happened in 1967 may not have stayed in 1967”

- ▶ The development enquired into in 1967 were for areas not prescribed under the legal framework for building control. There are clear implications today:
 - ❑ They help reinforce a culture of informality and lack of appreciation for regulatory approvals. A sentiment often expressed today, particularly for rural areas. This automatically makes the task of implementing building codes and standards in those areas more difficult.
 - ❑ Unless enlightened, or pressed into the legal framework, rebuilding and building additions done over time usually occur, extending the total floor area of unregulated development.
 - ❑ These buildings can affect practical issues such as retrofitting programmes
 - ❑ As well as property taxation.
 - ❑ They can, and *have* extended from scenarios of one plot development, to wider village expansion. Leading to loss of agriculture lands as well as loss of amenity and promoting unplanned development into areas unsuitable or hazardous, such as flood plains.
 - ❑ The lack of building control in unprescribed areas has encouraged geographic development disparity and inequity in State oversight resulting in a lack of guidance to enable better quality development in the rural and semi rural areas, which, in many instances lack services and amenities. This has been a problem also noted in the British system.

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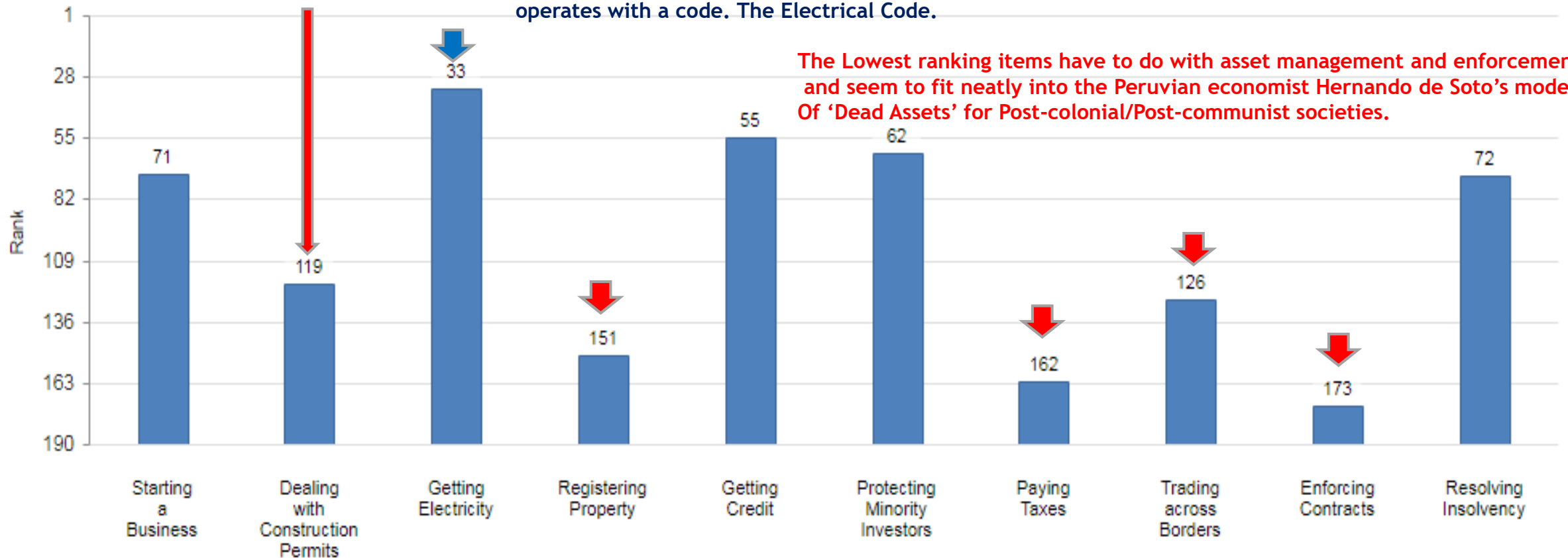
TRINIDAD AND TOBAGO - DOING BUSINESS RANKING 2010-2018 WORLD BANK RANKING OUT OF 190 ECONOMIES



119 out of 190 Economies is the 2017 World Bank ranking for Dealing with Construction Permits

Rankings on Doing Business topics - Trinidad and Tobago

The highest ranking item in the construction permitting system is the one that currently operates with a code. The Electrical Code.



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Regulatory

1. Head Office - Town and Country Planning Division
2. Regional Offices - Town and Country Planning Division
3. Municipal Corporations
4. Environmental Management Authority
5. Electrical Inspectorate
6. Water and Sewerage Authority
7. Highways Division
8. Fire Services Division
9. Occupational Safety & Health Agency
10. Commissioner of State Lands
11. Minerals Advisory Committee
12. Tobago House of Assembly
13. Land Reclamation Committee
14. Housing Development Corporation (HDC)-
15. Caroni 1975 LTD
16. Drainage Division
17. Construction Division

Advisory

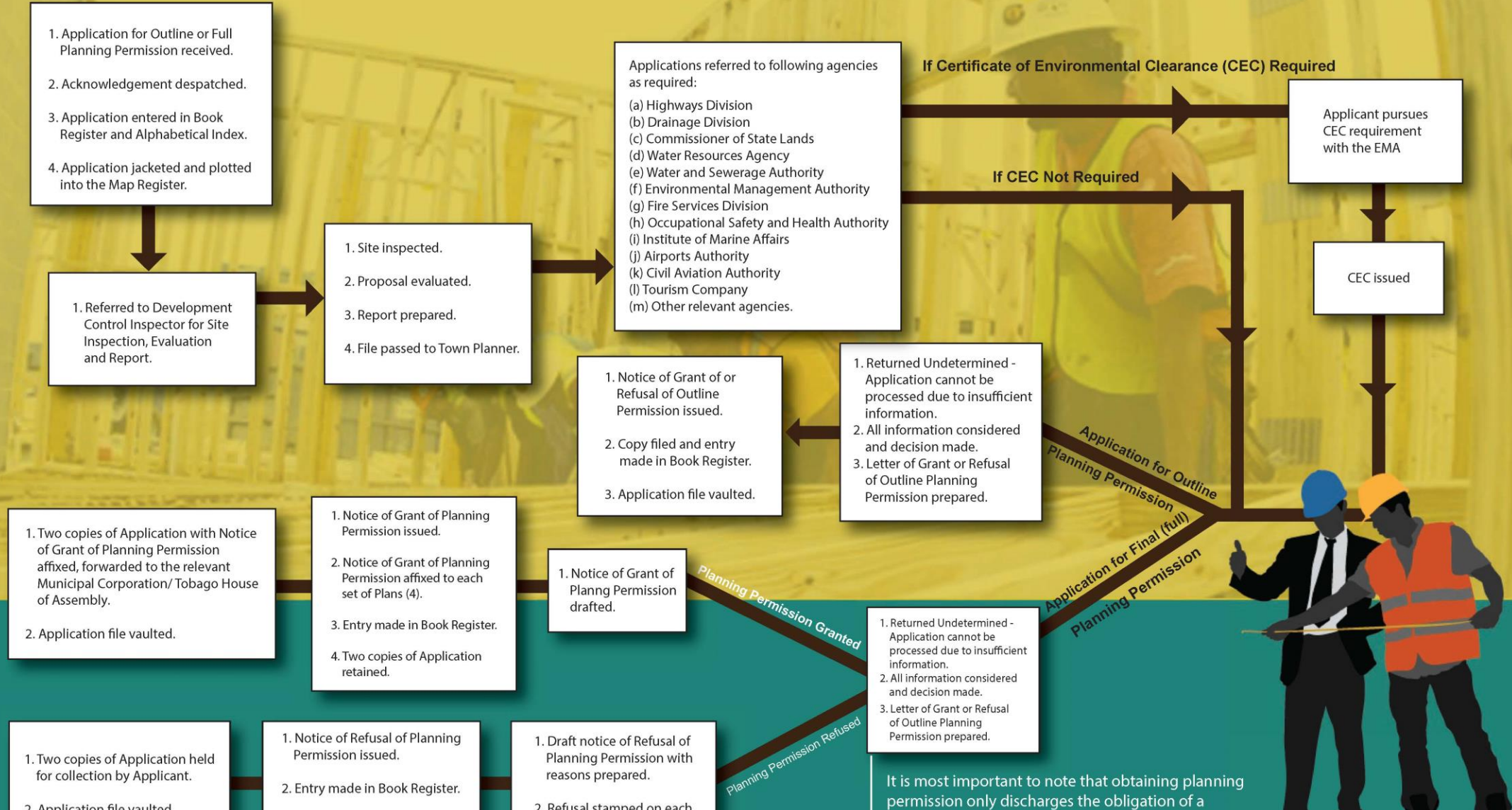
Trinidad and Tobago Electricity Commission
Ministry of Agriculture, Land and Fisheries
Institute of Marine Affairs
National Trust of Trinidad and Tobago
Trinidad and Tobago Civil Aviation Authority
Heritage and Restoration Unit
Registrar General Department
Trinidad and Tobago Society of Planners
Advisory Town Planning Panel
Ministry of Works and Transport
Ministry of Local Government

16 is the number of procedures



Ministry of Planning
and Development
Town & Country Planning Division

HOW YOUR APPLICATIONS ARE PROCESSED



History of Building Standards

- ▶ Same for most of the Anglophone Caribbean - British adapted planning system and legislation - Premise of development control - *Nuisance and Hazards*
- ▶ Usually building control standards in the British system can be traced directly to the Great Fire of London in 1666 which destroyed an estimated 80% of built structures. This resulted in the 1667 London Rebuilding Act which itself was amended several times over the next 100 years to grapple with intense densification, returning its most significant, prescriptive iteration in 1774.
- ▶ Closer scrutiny however, identifies London having prescribed forms for its built development all the way back to the rule of Elizabeth 1 in the 16th century and even prior to that, regulations governing building form and layout and administered by the Mayors and Aldermen of London go back to the feudal era. Thus, the origin of 'modern' codes and standards as practiced by Development Control in Trinidad and Tobago can be traced to the medieval 14th Century Britain where these were established under *Neighbour Objections* (Nuisance) which were extensions of the 'Proprietary rights of the freeholder' (Philip Booth, *Planning By Consent* -2003) - This means therefore, development control in its most tangible form, started in Modern world with the evolution of ownership of land rights.

Or, put another way, when people owned property they felt an obligation to preserve the value of that ownership. This is perhaps the psychology of renting a car vs owning a car and the treatment therein. Consider however, it is easy to evolve such a system and treatment of property over 2000 years vs 200-300 years, which is the amount of time most Caribbean countries have accumulated in their development trajectory.

Is property ownership key to the implementation of Building Codes and Standards?

- ▶ According to economist Hernando de Soto- Property ownership is the key to capitalism.

In his seminal - *The Mystery of Capital - Why Capitalism Triumphs in the West and Fails Everywhere Else* - de Soto argues that post-colonial/post-communist societies hold resources...

“in defective forms; houses built on land whose ownership rights are not adequately recorded , unincorporated businesses with undefined liability, industries located where financiers and investors cannot see them. Because the rights to these possessions are not adequately documented, these assets cannot readily be turned into capital, cannot be traded outside of narrow local circles where people know and trust each other, cannot be used as collateral for a loan, and cannot be used as a share against and investment. In the West, by contrast, every parcel of land, every building, every piece of equipment, or store of inventories is represented in a property document that is a visible sign of a vast hidden process that connects all these assets to the rest of the economy.” Hernando de Soto, 2000

Much of what de Soto describes rings extremely familiar. However, to quantify property ownership for Trinidad and Tobago is a challenging prospect, thus the efficacy of de Soto's hypothesis cannot be validated. One country however, exemplifies this ideology. That country is Singapore, where the State has 100% ultimate ownership of all land. Singapore has been perpetually ranked in the top 5 in the ease of doing business in the last decade and has developed a vested interest and value in the quality of its built environment which translates into a higher quality of life for its people.

Trinidad and Tobago Legislations that impact directly or indirectly on the development and application of building codes and standards.

There are at least **26** pieces of legislations that can affect both the adoption/creation and the enforcement of building codes and standards either directly or indirectly.

1. The Constitution of the Republic of Trinidad and Tobago Chap 1.01

This provided for the creation of State lands where all lands vested into the colonial government under the Queen, were transferred to the State. Also, all lands that were to be absorbed by the colonial government via the process of escheat (no legal heirs) were to become part of State lands.

State Lands is estimated to comprise 50% of the total land area of Trinidad and Tobago. Most government development projects especially industrial, residential, office uses, are done on State lands. A usual query of the State for development is not what is the *most suitable* land for a certain type of development, but what is the most suitable *State* Land. It happens therefore that, development planning, particularly for residential development, can occur in ways that conflict with the most appropriate methods for community development, creating isolated housing developments with poor connectivity and the encouragement of urban sprawl. This situation was facilitated by the existing Town and Country Planning Act Chapter 35:01 not legally binding the State to its provision. The new Planning and Facilitation of Development Act however, *does* bind the State to act in accordance with sound planning principles. This is in addition to the State's self-awareness that this should be done.

▶ Summary Courts Act Chap. 4.20

Known as the Magistrates Court - All planning enforcement matters are dealt with by this Court of Justice. Planning Enforcement is conducted within a Statutory period of 4 years from the submission of a complaint. In an environment of limited establishment of building codes and increasing violation of building planning standards, the capacity of the Magistrates Court as a mechanism for enforcement of existing and future building regulations is paramount.

▶ The Supreme Court of Judicature Chap 4.01

Representation can be made to the High Court if a defendant appeals the Magistrate's decision. The final court of appeal is still the Privy Council.

▶ Registrar General Chap. 19:03 , the Registration of Deeds Act Chap. 19.06 and the Tobago Deeds Act Chap. 19.07 (delegated functions of the Registrar General for Tobago)

The Registrar General is the entity with responsibility for all matters relating to Deeds and the establishment of Ownership. Currently, enforcement action under both the Municipal Corporations Act for building regulations matters and the Town and Country Planning Act for planning matters is taken against the property owner. For the enforcement of future building codes and standards, procedures should be developed to identify the chain of responsibility and accountability from the owner to the builder, to the regulating body and the others in between. A question of distinct complexity is 'what occurs if the owner is the State?'

► Municipal Corporation Act Chap. 25:04

STREETS AND BUILDINGS

Additions to, and alterations of, buildings.

New building to conform to Regulations.

Continuation of existing Building Regulations.

Certificate of compliance with Building Regulations.

Power of Engineer to order discontinuance of building operations.

Council may remove or pull down works executed in contravention of Act or Regulations. Power conferred by this section to be in addition to any other remedy.

No building to be removed except after notice to the Corporation.

Owner of vacant land to notify Chief Executive Officer of removal of house therefrom

Plans deposited to be of no effect if building is not commenced within two years.

Penalty for breach of Regulations with respect to new buildings.

Building over drain.

Public buildings not to be used until approved.

Conversion into a public building of building erected for other purposes.

Council may require alterations necessary for safety of public.

Verandahs projecting over streets.

Door not to open over public thoroughfare.

Dangerous building notice to owner.

Ruinous or dilapidated structure to be demolished or repaired.

Structure dangerous or prejudicial to occupier to be demolished or repaired.

Failure to comply with notice.

Penalty.

▶ Public Health Ordinance. Ch. 12. No. 4. (1950 Ed.). (incorporated into the Municipal Corporations Act as Regulations.)

▶ TOWN AND COUNTRY PLANNING ACT CHAPTER 35:01

An Act to make provision for the orderly and progressive development of land in both urban and rural areas and to preserve and improve the amenities thereof; for the grant of permission to develop land and for other powers of control over the use of land; to confer additional powers in respect of the acquisition and development of land for planning; and for purposes connected with the matters aforesaid.

In this Act, except where the context otherwise requires, the expression “development” means the carrying out of building, engineering, mining or other operations in, on, over or under any land, the making of any material change in the use of any buildings or other land, or the subdivision of any land.

9. (1) The Minister shall by Order provide for the grant of permission for the development of land under this Part, and such permission may be granted— (a) in the case of any development specified in any such Order, or in the case of development of any class so specified, by that Order itself; (b) in any other case, by the Minister on an application in that behalf made to him in accordance with the Order.

- ▶ The Statistic Act Chap 19:02

Licensing Authorities Committees are established under legislation to license the following types of development.

- ▶ Cinematograph Chap. 20:10
- ▶ Motion Picture Films (Carriage and Storage) Chap. 20:11
- ▶ Registration of Clubs Chap. 21:01
- ▶ Theatres and Dance Halls Chap. 21:03

- ▶ Engineering Profession Act Chap. 90:01
- ▶ ARCHITECTURE PROFESSION ACT CHAPTER 90:02
- ▶ TRINIDAD AND TOBAGO HOUSING DEVELOPMENT CORPORATION ACT CHAPTER 33:03
- ▶ DEMOLITION OF UNSAFE STRUCTURES ACT CHAPTER 35:55 (Minister of Works and Transport to administer)

An Act to provide for the demolition of unsafe structures.

- ▶ NATIONAL TRUST OF TRINIDAD AND TOBAGO ACT CHAPTER 40:53
- ▶ ELECTRICITY (INSPECTION) ACT CHAPTER 54:72
- ▶ METROLOGY ACT CHAPTER 82:06
- ▶ TOURISM DEVELOPMENT ACT CHAPTER 87:22
- ▶ OCCUPATIONAL SAFETY AND HEALTH ACT CHAPTER 88:08
- ▶ WATER AND SEWERAGE ACT CHAPTER 54:40
- ▶ FIRE SERVICE ACT CHAPTER 35:50
- ▶ TOBAGO HOUSE OF ASSEMBLY ACT CHAPTER 25:03
- ▶ STATE LAND (REGULARISATION OF TENURE) ACT CHAPTER 57:05
- ▶ PROPERTY TAX ACT CHAPTER 76:04

Conservative estimates of an 'informal' population of 250,000 persons and rising.

- ▶ The Land Settlement Agency (LSA) - the entity mandated to administer the STATE LAND (REGULARISATION OF TENURE) ACT CHAPTER 57:05 In 2017, estimated the informal settlement population to be approximately 250,000 persons or 18% of the estimated population from the 2011 National Census.
- ▶ This figure includes illegal migrants but how much this element has increased, is currently the subject of research.

Considerations:

Informal does not necessarily equate to poor quality construction over time. It does however, translate into the non-adherence to explicit building standards. The implications of environmental degradation, public health issues and physical hazards are self-evident in established informal settlements. Psychological harm from the insecurity of access to one of the basic necessities of life, that of the right to appropriate shelter, is an understudied area. How does such lack of access to both land as well as housing influence and set normative cultures of behaviour?

The dominant language for informal settlements from the land management sector has been a jargon of enforcement. To mention otherwise is to run the risk of being accused of social activism. The fact remains however, that such settlements comprising largely of the less empowered, have clear historical precedence of being institutionalised and is currently very challenging to manage.

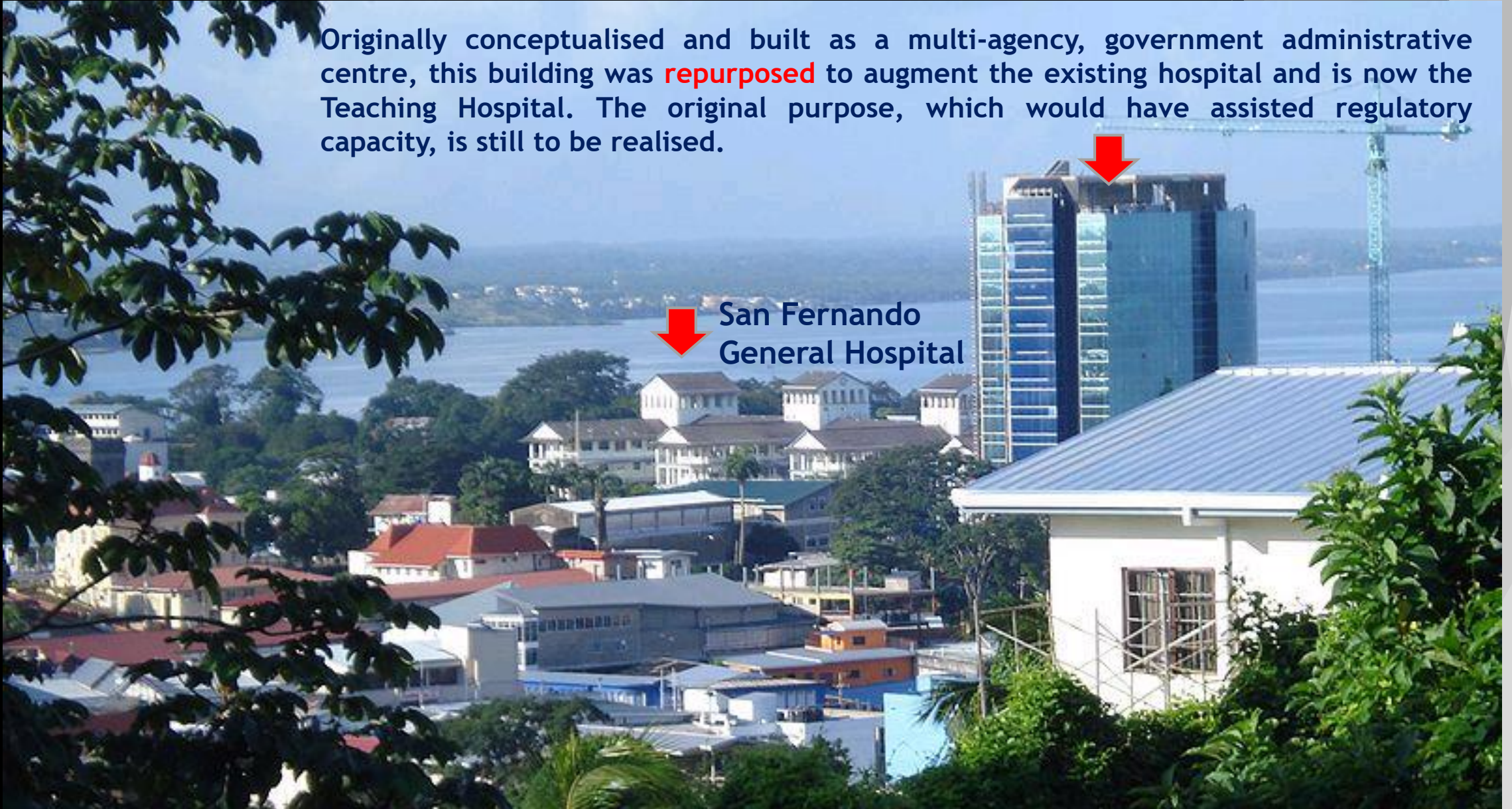
Special note on the 2018 World Bank's T&T ranking of 'Getting Credit' - 55/190

- ▶ Currently in Trinidad and Tobago, commercial banks can give up to 10 x salary in an unsecured loan arrangement, depending on one's credit rating. This can be as much as \$100,000.00 TTD or approximately \$15,000.00 USD.
- ▶ With collateral, this can go to twice that much. This sum is enough to commence significant building works or renovations outside of the regulatory framework in the form of INCREMENTAL DEVELOPMENT. Which is a widely practiced endeavour in Trinidad and Tobago.
- ▶ Building standards processes already dictate that banks adhere to granting loans and providing other financing mechanisms based on regulatory approvals, particularly, planning approval. However, the loophole 'measures of relief' that help to facilitate incremental development must be given consideration in the development and application of building codes. Adopting the International Codes Council (ICC) for Residential Buildings for example must appreciate the building culture even IF that building culture has to be modified.

Implications of Building Codes and Built to Purpose.

Originally conceptualised and built as a multi-agency, government administrative centre, this building was **repurposed** to augment the existing hospital and is now the Teaching Hospital. The original purpose, which would have assisted regulatory capacity, is still to be realised.

San Fernando
General Hospital



The cost of demolition- Currently both the Stop Notices of the Municipal Corporations and the Enforcement Notices of the Town and Country Planning Division fall short of demolishing violating structures. Demolition has a cost, what effective mechanisms will be put in place to ensure that cost does not consistently fall upon the state? One method is to privatise inspections and create enabling legislations to allow the private sector to conduct site inspections and enforce building codes and standards. This type of mechanism is practiced in both Germany and Australia.



Application of Building Codes and Standards to Historic Buildings



New Thrusts in the development paradigm for Trinidad and Tobago- Integrated Coastal Zone Management and Disaster Risk Reduction. The use of hard and soft engineering and the utilisation of ecosystems services, especially in harnessing the value of wetlands. The promulgation of site specific standards for reclaimed areas and the development of seismic microzonation maps.



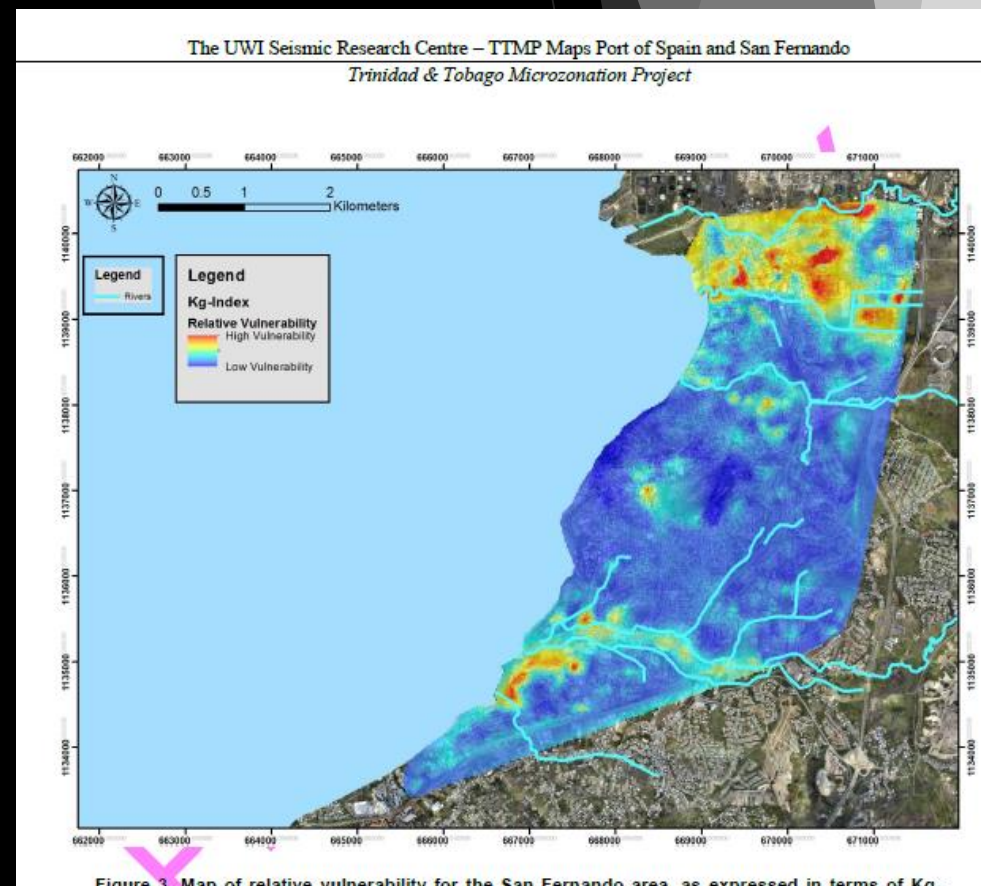
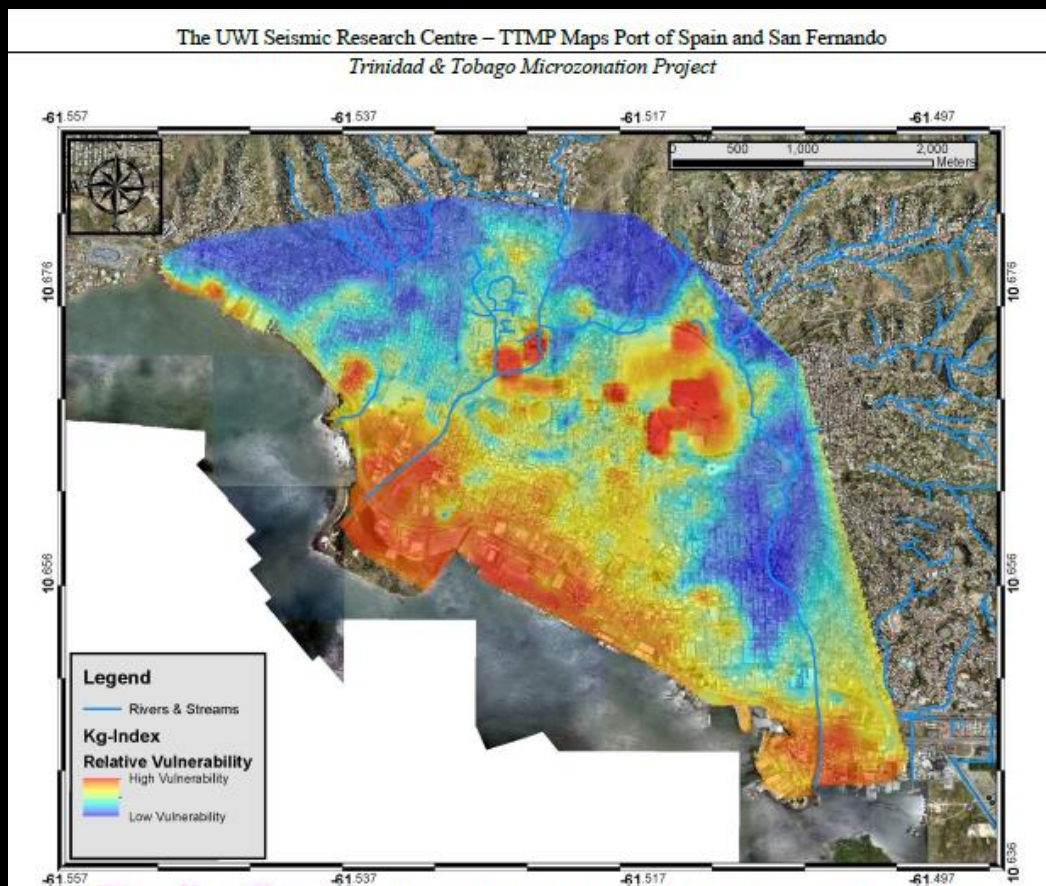
DRR and Resilience for Trinidad and Tobago- The Earthquake Hazard- Impact local and regional.

“Some significant earthquakes that have affected Trinidad and Tobago

- ▶ **2010 (Dec 26)** - 4.7 felt throughout Trinidad, from Carenage to Moruga to Matura. No reported injuries or damages.
- ▶ **2009** - 4.8 occurred on land and felt in Sangre Grande and Penal, no reported injuries.
- ▶ **2008** - 5.6 located on the East Coast and felt mainly in Galeota, no reported injuries.
- ▶ **2007** - 7.3 felt throughout the Eastern Caribbean from Puerto Rico to Guyana; damage reported in Martinique, St. Lucia, St. Vincent and Barbados. This is the fifth earthquake in the magnitude 7 range to occur near Martinique since 1727.
- ▶ **2006** - 5.8 felt throughout Trinidad with 3 reported injuries in Point Lisas.
- ▶ **1997 (April 22)** - 6.1 US \$ 25 million in damages to Tobago, 2 were injured and 15 were left homeless.
- ▶ **1996** - 5.2 North of Trinidad occurred New Year's Day. No reported injuries.
- ▶ **1988** - 6.3 occurred off east Coast Trinidad. No injuries reported.
- ▶ **1982** - 5.2 largest earthquake near Tobago up to that time.
- ▶ **1968** - 7.0 significant damage in Venezuela with some damages to Port of Spain, Trinidad.
- ▶ **1954** - 6.5 one person was killed and many were injured.
- ▶ **1888** - 7.5 Damage occurring from Trinidad to St. Vincent.
- ▶ **1766 - 7.9 Destroyed Trinidad's then capital San Jose.”**

(Source: the Office of Disaster Preparedness and Management ODPM)

Response- The GoRTT, through the Ministry of Planning and Development, has embarked on a 10 year collaboration with the Seismic Research Centre of the University of the West Indies to implement Seismic Microzonation Studies in select urban areas. The result of these studies will focus on two policy areas- Pre-earthquake event to prepare for the scenario earthquake of a 7.9 magnitude and post-earthquake event of emergency management and restoration. This project will also assist to build the capacity of the Seismic Research Centre which is to the benefit of the entire Caribbean Region. The application and development of new technologies in seismology could become integral to future seismic code development which would translate into building codes. This is especially so if, as is envisioned, the building codes to be adapted and adopted for the national community are those from the International Codes Council. These ICC codes, which are reviewed and revised every three years, can very well be informed by the seismic information and research generated locally and regionally.

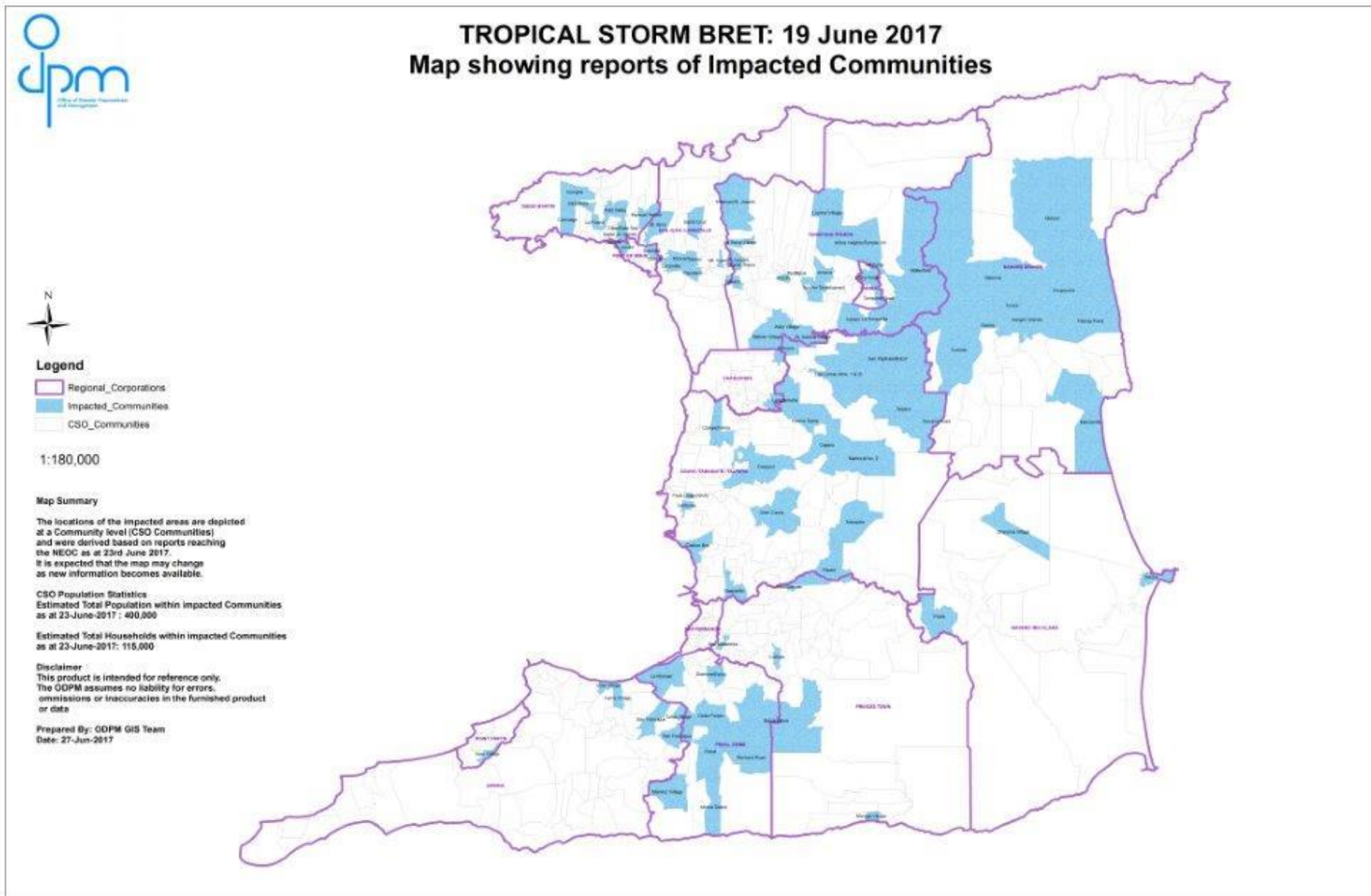


The Flood Hazard

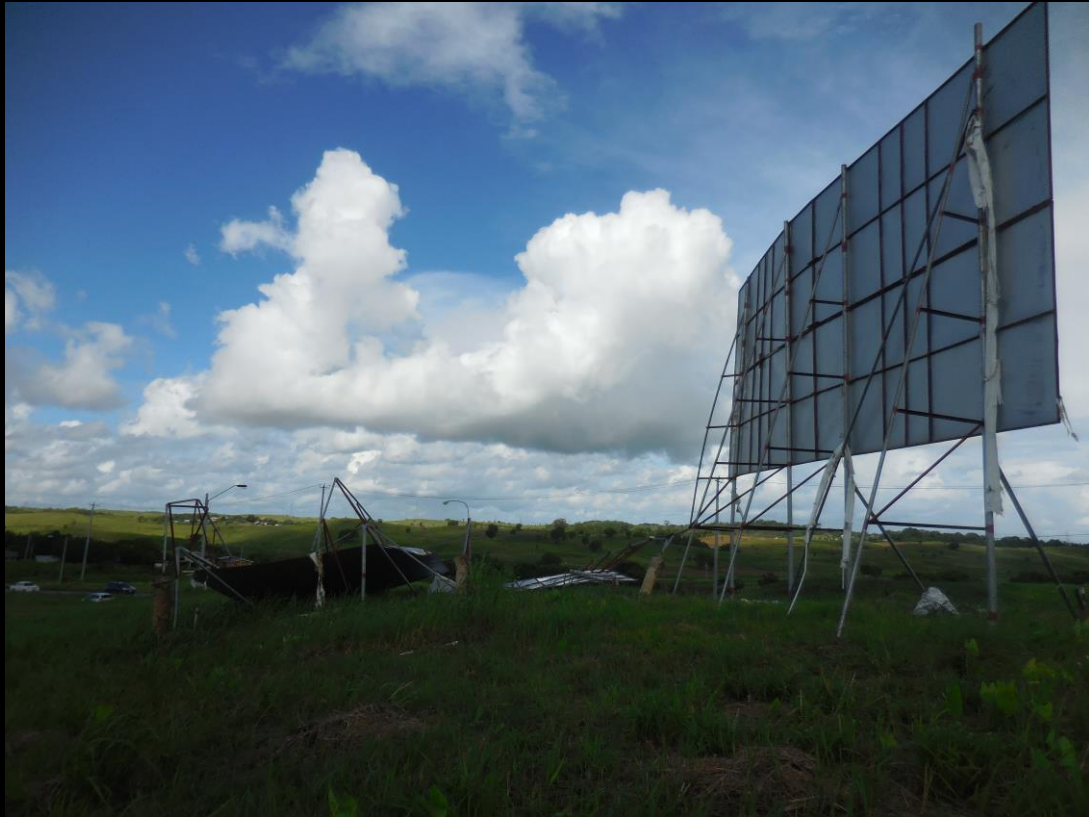
While Trinidad and Tobago, perhaps moreso Trinidad, is out of the main path for Tropical cyclones, the impact of flooding is a perennial problem. Flooding is particularly problematic in dense urban areas, including the capital, Port of Spain.



Trinidad and Tobago was however impacted by Tropical Storm Bret in 2017



Structures of concern that form part of the built environment - Billboards along the major roadways. The main conflict is one of 'who has jurisdiction to enforce'. These smaller structures also need to be managed through building standards



Examples of fallen billboards after the passage of Tropical Storm Bret in 2017

Although with respect to disasters and natural hazards, population complacency is a concern, the State is keen to continue its campaign of building public awareness to assist in building community resilience. This as it continues other significant initiatives in the drive towards the development and eventual implementation of new building codes and development standards where few exist, example energy efficiency, and the revision and strengthening of what already exist by building institutional and legislative capacity.

Examples -

- ▶ The passing and partially proclaimed Planning and Facilitation of Development Act No 10 of 2014. This act will eventually repeal the existing Town and Country Planning Legislation. This new law promotes and facilitates the devolution of planning functions to the 14 Municipal Corporations and Tobago. It also makes provision for the development of a National Building Code to be managed by the National Planning Authority.
- ▶ The Automation of the Construction Permitting System and the development of the Single Electronic Window (SEW) to facilitate close and real time collaboration between both the regulatory and advisory agencies involved in the Construction Permitting process, of which building codes will become a significant component.
- ▶ The completion and acceptance by Cabinet as government policy of the National Development Strategy also known as Vision 2030
- ▶ The completion and acceptance by Cabinet of the National Spatial Development Strategy which is the overarching government policy to guide spatial development and land use planning.

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Questions?