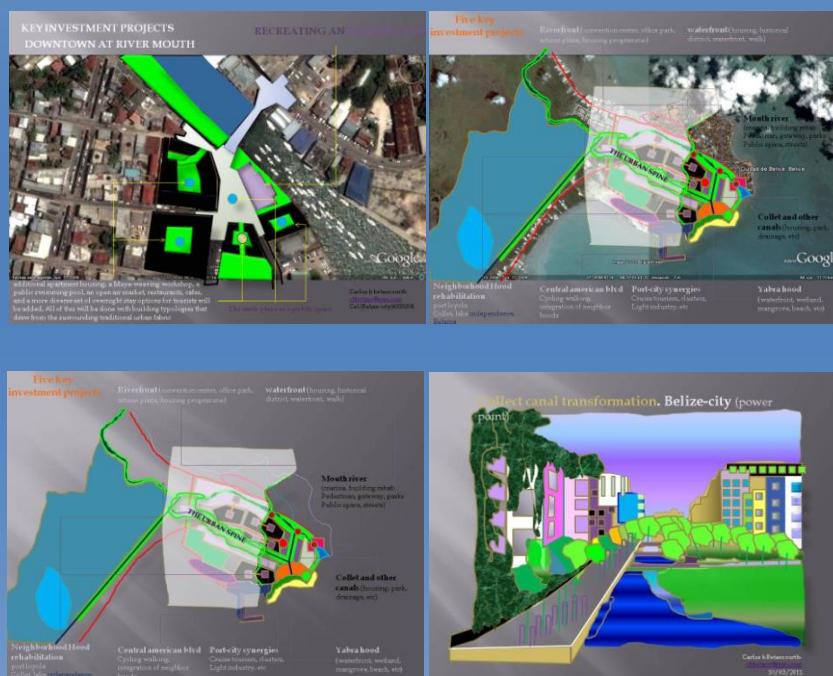




URBAN DEVELOPMENT SCENARIOS FOR BELIZE CITY 2010-2030

Recommended Scenario, Evaluation of national infrastructure plans and key investment projects



ANNEX 01

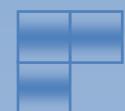


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Executive Summary

We conclude our work of Component 1 of the TOR with the following presentation on The Urban Development Scenarios for Belize City (2010-2030). The purpose of these scenarios is to elaborate and answer questions such as: what kind of city do we want Belize City to be? What are the qualities of our city? How do you make proper use of the strengths of your city? How can Belize City be kept liveable blue and green? We-with the active participation and support of a rich variety of social actors and stakeholders-, have formulated and recommended this draft vision scenario in order to begin a well organized spatial planning for the city's entire territory and functional area (including both, the area outside and the area inside the city borders)

The **Draft recommended Vision scenario** has been formulated and organized at various levels:

- **The vision itself**
 - The recommended combination of scenarios constitutes a vision scenario for the future of the city. Producing these scenarios has been fundamental for the following phases of the Master Plan Project for Belize City.
 - We begin work on Component 2 of the TOR by using this combination of scenarios as a framework for the evaluation and analysis of ongoing National spatial and infrastructures plans and projects that may have an impact on the future development of Belize City.
 - This initial work on Component 2 also includes using this combination of scenarios (that includes projects for the city's spatial and physical development) as the basis for setting the city's investment agendas (key investment priorities and projects).
- **The implementation agenda**
 - by looking at the main **ambitions** of the city (for the period 2011-2030); and the main **strengths** with which the city and its citizens can begin to draw in residents and business enterprises; we can begin to define
 - the **spatial tasks and projects** needed to reinforce them, as well as
 - to define the **key development trends, areas, urban ensembles, in the city** where we can start to implement and phase these spatial tasks (per area) and en-power these strengths so as to build the ambitions. In this recommended scenario Belize City also looks beyond its existing borders.
- **The instruments**
 - I touch briefly at the end of the paper on a brief illustration regarding the set of instruments that would establish how rules may-be enforced in order to facilitate the vision's implementation.

In section 2 we briefly introduce the **main challenges and spatial transformations and trends** that Belize City is facing and will still face in the next 30 years.

In **section 3** we center the analysis of **the existing situation** in regard to the settlement pattern of urban development in Belize City and conclude that this is an inefficient spatial structure with which to respond to the spatial challenges the city is facing and will be facing in the coming years.

In **section 4** we introduce the major **national and historical trends**. Of primary interest is the transformation of the country from a rural to an urban society, the unequal distribution of urban population growth between the cities in the country, and the decline of the primacy of Belize City.

In **section 5** we begin to define **the weaknesses and problems** on the basis of these trends. Of particular interest is how a decrease in the urban population growth rate, not only in relation to national trends but also in relation to the rapid urban growth of Belize City's outer belt of bedroom communities (the countryside and rural areas around Belize City are growing faster than the city), affects the city and its historical center. The further away from the city center this growth accommodates itself, the more marked the decline in the city center. The spatial development of Belize City and of its surrounding region of bedroom communities is to a large extent determined by this phenomenon of growth and contraction.

In **section 6** we look in more detail to **the main spatial challenges the city is facing and how these problems are exacerbated by the existing settlement pattern and spatial structure of the city**. The main spatial challenges include: the doughnut effect; the challenge of urbanization and of an urban housing problem; the challenge of mobility and accessibility; the challenge of environmental protection, flood mitigation and infrastructure development and, the institutional Challenge

In **section 7** we propose a series of **urban development scenarios** for the future of Belize City in which choices are made regarding how to accommodate (in the next 20-30 years) urban population growth and the urban functions of housing, working, commerce, recreation, accessibility, social amenities, sustainability, and the infrastructure for the protection against natural disasters and the risks of flooding. They include: **Scenario 1:** Business as usual: a pattern of urban sprawl and uncontrolled development along two corridors; **Scenario 2:** Concentrating economic activities and increasing population density within the current city boundaries; **Scenario 3:** Concentration of economic activities and of population within a polycentric model; **Scenario 4:** The Extension Plan: Expanding outside the city borders (The World Bank proposal); **Scenario 5:** The combination of concentration in Belize City (Scenario 2) with the development of a new sustainable town along the LadyVille-8 Miles axis; and, **Scenario 6:** Curtailing urban growth in Belize City and transitioning of the main population center away from Belize City to other urban areas (Belmopan, Orange Walk Town, etc.)

At this point, we conclude Component 1 of the TOR and begin to transition into Component 2 of the TOR (there are already elements of component 2 at work in the formulation of scenario-2, particularly in relation to the ongoing evaluation and analysis of national infrastructure projects).

In section 8 we recommend an urban development scenario (scenario 5) that focuses on both, a strong and sustainable city and economy. The recommended scenario is a spatial response to the urgent social and environmental issues Belize City is facing (or the social and environmental benefits of the proposed spatial interventions and scenario). The Belize City dweller (and not only the visitor) and the everyday environment take center stage in this recommended scenario. There is a broadly shared view that Belize City must re-position itself robustly in the changing economic national, regional and world order. Improving the welfare social conditions and prosperity of Belize City's residents is paramount.

Belize City needs to capitalize in its potential to offer a **rich urban experience** where life is good for its citizens and visitors (The master plan will illustrate how these urban experiences can be created). Belize City has the potential to attract people with its Caribbean and Central American image, its historical city center, the relative abundance of amenities and specialized urban and regional functions in downtown; and, the potential economies of scale and economic opportunities these functions offer; as well as its networks of waterways and green and blues spaces and landscapes. Belize City boasts a diverse group of communities, languages and belief systems, and relatively young population, which could increase its magnetic pull even further. Scores of enterprises could establish operations in Belize City because they are heavily dependent on this (future) human capital. **The quality of life in the city has thus become an important economic factor.**

All in all, Belize City holds the trump cards to become economically robust. In order to actually bring these trump cards into play, Belize City must work hard on the quality of the living environment in the city. This primarily revolves around sustainability, in all its facets. In addition to climatological and environmental factors, sustainability is also relevant to other matters. Public spaces such as the Mule and the Battlefield parks, the canals and water-ways (the river, the creek, the coastal front) could- through a high-quality design and use of materials-provide youth with more pleasure (See for instance the case of the Artisan Plaza; and the proposals for Collet canal, in section 10, ***Key Capital Projects, Investment opportunities and projects # 1-5***). Many neighbourhoods and buildings that are technically speaking out of date could be of great significance for the city. Because of their specific character, experiential value and adaptability they could become an important component of a rich urban experience and extraordinarily popular with the modern urbanite (See proposal for the Yarborough, Collet canal, and Artisan plaza in Section 10, ***Key Capital Projects Investment opportunities and projects # 1-5***). Properties and neighbourhoods from a distant past can in that sense be termed sustainable (See Section 10, ***Planning Policies And Programs, Heritage conservation***).

Yet the essence of sustainability still involves the environment: in order to be a sustainable city, Belize City and its citizens must be prepared to address the historical dynamic of natural hazards (hurricanes, storms, floods, etc) as well as the impact of climate change on this historical dynamic: the water, air, and soil must become cleaner; the city will be rendered resilient and robust to climate change impacts through its ecosystem services working as multifunctional infrastructures (See, section 9 *Investment Priority #5: flood control projects*. See also, forthcoming in Component 2 **Pretty moving blue waters for Belize City-storm water management strategy**). Belize City will become more energy and food efficient and independent, through sustainable energy sources, urban agriculture and the more intense use of scarce land.

Economic development and sustainability can no longer be regarded as each other's counterpoles, but quite the contrary: they are increasingly becoming extensions of one another. Clean air, properties full of character and an attractive, green and blue public spaces, a resilient and robust city capable to adapt to natural hazards and climate change impacts, are all aspects with which the city can secure the loyalty of people and businesses. **Investing in sustainability is therefore tantamount to investing in the economy.**

The belt of communities, towns and villages around Belize City are a fundamental component of this recommended vision scenario. The area in question (Greater Belize City), includes beaches, rivers, forests, the international Airport the Burdon Nature Reserve – all these aspects mean that our city has become greater than the space within its own boundaries: Belize City is the central city, the core city, in this larger functional area. The recommended scenario has been elaborated from this perspective.

In sections 7, 8, 9, 10 we begin to elaborate on the question of **what Belize City needs to do in terms of key investment projects in order to become economically strong and sustainable.**

In **section 7** (scenario 2), we begin to elaborate on this question by first analyzing and evaluating three very important ongoing National spatial plans and projects using the above scenarios as the analytical framework: (i), The South Side Poverty Alleviation Project (Phase 2), and within this, the proposals for Collet Canal (ii), The Chetumal street project, and, (iii), The concept for the highway connection between Ladyville-International Airport in the Northern highway and 8-miles Community in the Western highway.

In **sections 8** we begin by looking at the main **ambitions** of the city (for the period 2011-2030); the main **strengths** with which the city and its citizens can begin to draw in residents and business enterprises; and the **spatial tasks** needed to reinforce them.

We also begin to determine the **development areas, urban ensembles, and trends in the city** where we can start to implement these spatial tasks and en-power these strengths so as to build the ambitions. In this recommended scenario Belize City also looks **beyond its existing borders.**

This recommended scenario provides the basis for setting the city's **investment agendas** and series of **key investment priorities and projects.**

In **section 9** we begin to unfold this investment agenda by proposing a series of **investment priorities at the larger scale of Greater Belize City.**

In **section 10** we begin to work out this investment agenda by proposing a series of **urban ensembles and key capital investment projects at the scale of Belize City downtown.** This is followed by the definition of a series of **investment priorities in planning, policies, and programmes,** to support these key capital projects and physical works.

We end this document with a brief note on **Implementation** (forthcoming Component 3)

Urban Development Scenarios for Belize City and its surroundings

SECTION 1

Introduction

This Second Report presents the ongoing progress and results of the Technical Cooperation (TC) provided by the IDB for the development of a Belize City Master Plan. The Project is in support of various efforts of the Government of Belize, and in particular, the Ministry of Tourism, to formulate regional development strategies. The Project rationale is premised on the acknowledgement that while the increasing local and tourism-generated population is helping to drive Belize City's economic growth, there must also be initiatives to balance this growth with the upgrading and preservation of the city's infrastructure and urban heritage. This is particularly necessary in the city's downtown area.

During the First Phase of the TC, the Consultants prepared an initial assessment of the existing situation in Belize City during the months of September – December 2010. The main objective of this Technical Cooperation (TC) is the preparation of a master plan for Belize City, and the establishment of the Heritage Trust, in order to achieve its revitalization. During the first week of the IDB Startup Mission, it was realized that Belize City is facing a series of spatial challenges and transformations that need to be understood and tackled along a larger spatial scale than the scale defined by the actual administrative and historical boundaries of the city. As a result of this it was recommended that to complement the TOR in the contract, it was agreed that (a) a 20 year macro development plan for the City be prepared; and that (b) focus of the BZCMP (Belize City Master Plan) and resulting investments be the downtown area, extending approximately to the Central American Boulevard.

To begin working on this 20 year macro development plan for the City, the focus of this first part of the study (Component 1) has been on the challenges and transformations occurring at this larger scale of Greater Belize City. In line with Component 1 in the TOR, the Consultants have analyzed the existing situation and the historical trends of the settlement pattern of urban growth, its spatial structure, and urban morphologies of Belize City and their capacity to respond to the spatial challenges for urban-development that occur at this larger scale. On the basis of this analysis we have generated a series of alternative development scenarios to the settlement pattern and its spatial structure. Once an alternative scenario has been selected, the project will endeavor to redefine the function of downtown Belize City within the context of the recommended and selected settlement pattern at the larger scale of Greater Belize City, and begin to develop a strategy for Belize City downtown revitalization. In the Second Phase of the project, (Component 2) the Consultants will use these urban development scenarios (understood as spatial response to the urgent social issues Belize City is facing) as a framework for the analysis of ongoing spatial and national infrastructures plans and projects; develop alternatives to these and other projects, and use the urban development scenarios as the basis for setting the city's investment agendas and key investment projects for the city to be able to respond to these new challenges at the more local scale of the central city and its historical environment. The success of Belize City as a whole is integral to the success of downtown Belize City.

SECTION 2

Major Transformations and Spatial Challenges

Today, Belize City is facing a series of different spatial challenges and transformations. Our work has been focused on a set of several combined pressures - namely, (i) a trend towards a decline of population in Belize City; (ii) the expansion of urban population in the outskirts (rural Belize District) of the city; (iii), the problem of accommodating urban population growth in the City (iv), an urban housing problem, (v) the emergence of a new functional area (Greater Belize City), (vi) the problems of mobility and accessibility that this expansion dynamic entails for the City; (vii) the risk of flooding and the impacts of climate change; (viii) and, the institutional regime of Belize City.

We invite you to approach these challenges and transformations not as collections of isolated problems requiring programmatic handouts but as compelling investment opportunities for driving national prosperity. Thus, the problem of flooding can be turned into an opportunity to re-create attractive residential areas with high quality of life inside the city and in its surrounding areas.

The urban development scenarios and master plan process and concepts is an approach that could help to reorient and restructure the interactions engagements and relationships between National and Local governments in ways that invert the current top-down approach to the city (and cities in general in Belize) and its metropolitan area while bringing new value to development activity. The Urban Development Scenarios for Belize City and the master plan process is an opportunity to explore a new form of collaborative inter-governmental partnership to more effectively invest in the city economy to promote national prosperity.

SECTION 3

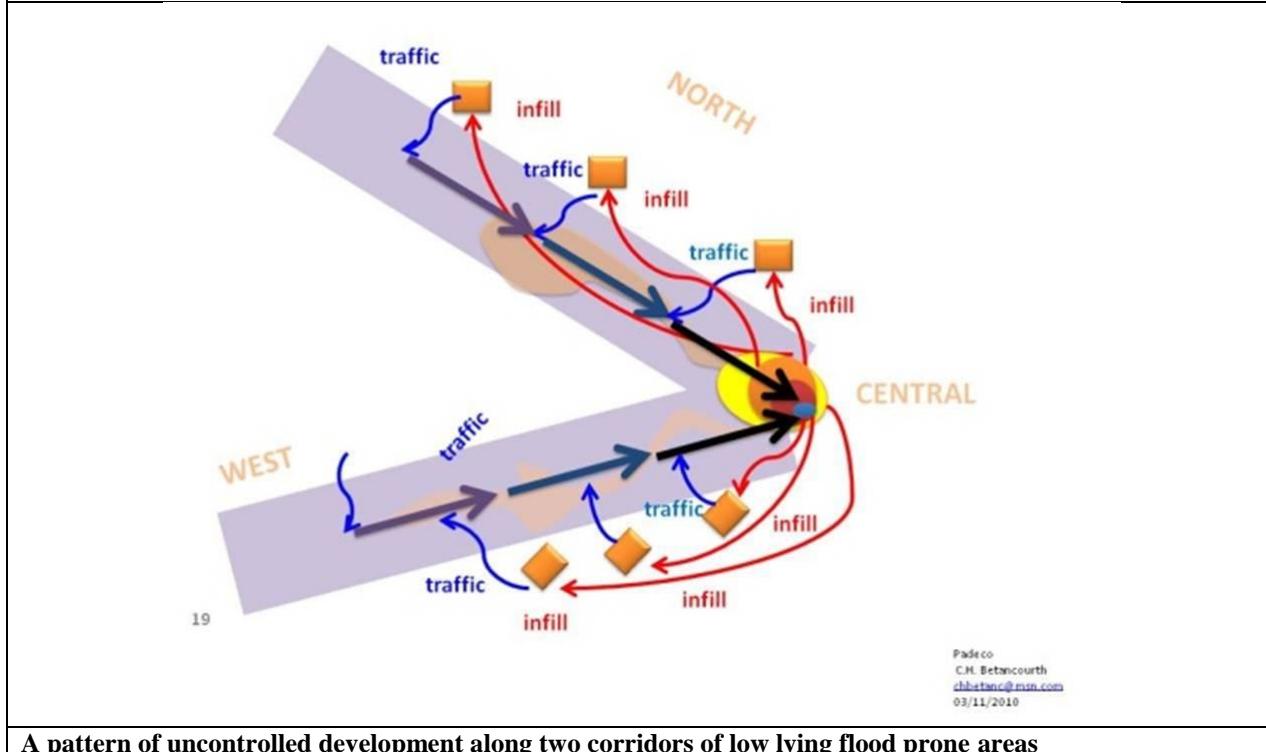
The Existing Situation

The settlement pattern and spatial structure of urban development in Belize City

The city has developed along two thin strips, one along the Northern Highway and one along the Western Highway. It concentrates the main urban functions in Belize City downtown, and builds a belt of bedroom communities and commuter towns around it (Figure 1). This pattern of urban development is extremely inefficient in addressing the above spatial challenges and transformations: it puts extra pressure on coastal areas; it creates bottlenecks along the main roads; it elongates commutes, as well as infrastructure lines; and it fragments both the urban areas and the surrounding countryside. It forces new development to occur at greater distances away from the historical city center. In addition, the continued development of Belize-city in these low lying, flood-prone areas exacerbates flood risk in Belize City. Due to its impacts on the city center, the risk of flooding and mobility, the city faces **barriers** to further lateral expansion

and needs to consider alternative options and scenarios at the larger scale of its settlement pattern and spatial structure. (Greater Belize-City)

Figure 1: the existing Settlement Pattern and spatial structure of Belize City



SECTION 4

The Trends

The decline of the primacy of Belize City

The urban population growth rate, is high within the country. As urbanization in Belize proceeds, larger and larger shares of its population will reside in urban areas, both defined and undefined urban areas. There are economic advantages of concentrating population and economic activities in cities. Underpinning this transformation from a rural and agricultural-based society to a more modernized, globally linked, urban society in Belize, are the economies of scale that make concentrated urban centers more productive. The growth of cities and towns in Belize has the potential for economic growth and poverty reduction across the country.

Urban population growth in Belize is not evenly distributed and some cities and towns are growing faster than others. Two important trends can be observed: First, the primacy of Belize City is declining. Its population comprised 60 percent of the total urban population in the country in 1970, it declined to 43 percent in 2000, and then to 39 percent in 2010, based on preliminary estimates from the 2010 Census, Statistical Institute of Belize. Secondly, the share of the urban population of Belize's fastest growing inland cities and towns-Orange Walk, San Ignacio/Santa

Elena, Benque Viejo and Belmopan -increased from 19 percent in 1970 to 35 percent in 2000. It is expected that the primacy of Belize City will continue to decline. By 2030 it will contain only 31 percent of the total urban population in the country and this share will further decline to 28 percent by 2050. The secondary cities in Belize will continue to grow at a rapid pace, while both Belmopan and San Pedro will more than double their populations between 2010 and 2030. Thus it seems as if there is a trend towards a slow-down in the urban population growth rate of Belize City. We could then define weaknesses and problems on the basis of these trends.

SECTION 5

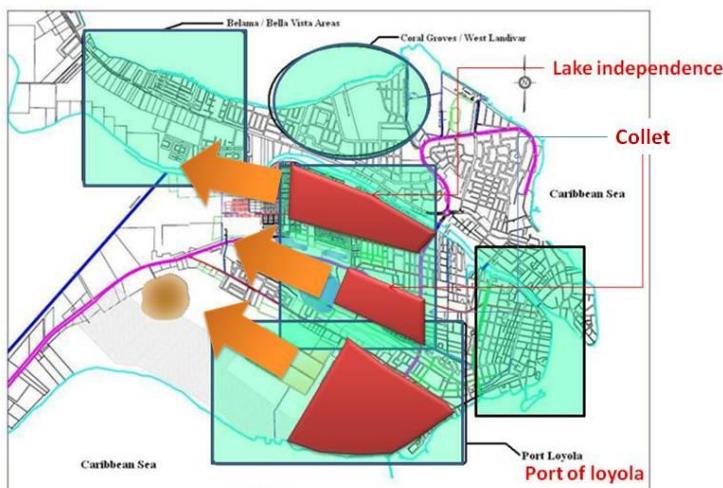
The Weakness and the Problems

A decrease in the urban population growth rate

When a slow-down in the urban population growth rate occurs, the city will become dysfunctional. Thus, Belize City is becoming a center of decay, gridlock, crime, urban sprawl and pollution, a center of slum and squatter housing formation along a belt of poverty (Figure 2); a violent and poverty stricken city, with children excluded from educational opportunities, with high levels of unemployment among youth and women, a high cost of living, with little foreign investment, and with a system of poorly accessible healthcare for its citizens. The quality of life is deteriorating and economic dynamism is faltering, and, scale diseconomies are out-weighing scale benefits. Thus, in contrast to the promises of the process of urbanization above, Belize City represents today the most alarming concentrations of poverty.

Figure 2: Belt of poverty and squatter formation towards Chetumal Street and Burdon Canal Nature Reserve

Squatter-slum formation and poverty concentration pressuring on eco-systems and on National infrastructure projects



Padeco C.H. Betancourt chbetanc@msn.com 08/12/2010

Belize City will need to confront myriad development challenges if it is going to reverse this situation and start to maximize the economic advantages of its spatial concentration. The city needs to address and respond to a series of fundamental challenges as it begins to absorb new population and manage an urban transition, as described below.

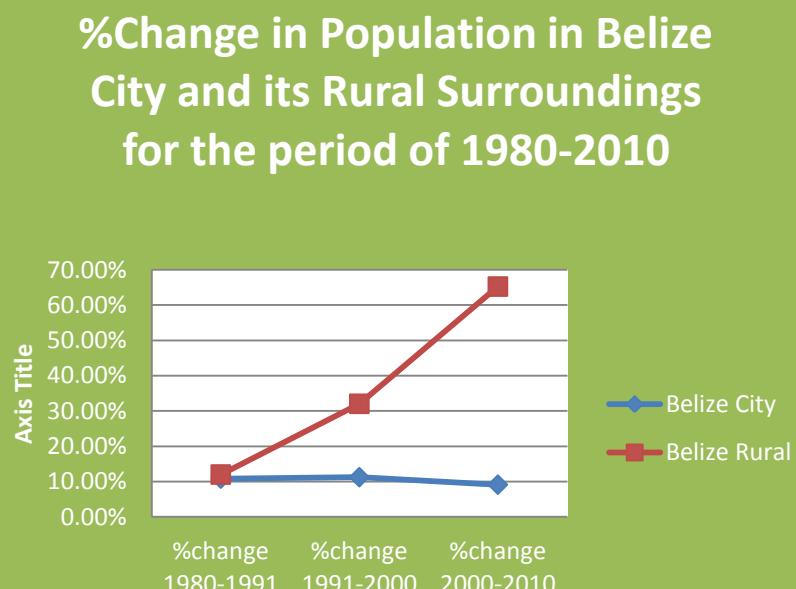
SECTION 6

The Main Spatial Challenges and their relation with the existing settlement pattern and spatial structure of Belize City

1) The challenge of a potential “doughnut” effect and the existing Settlement Pattern and spatial structure

These trends above should raise concerns over the long-term future vitality of Belize City and its downtown, including the potential “doughnut” effect where the city center becomes “hollow” as the population moves along the Northern Highway and the Western Highway, to the belt of bedroom communities around Belize City in search of newer, larger or more affordable houses (figure 3). This settlement pattern forces new development to occur at greater distances away from the city center. Already, Belize City’s downtown is empty at night. This is the challenge of an unhealthy center with associated threats of business and residential growth going to the belt of sleeping towns around Belize City, or to other cities and towns (such as Belmopan).

Figure 3: Migrating from Belize City to the belt of sleeping communities in surrounding rural areas



Source-Statistical Institute of Belize, Census Information and Preliminary Estimates of 2010 Census.

2) The challenge of urbanization and of an urban housing problem: enabling the provision of affordable land and shelter for existing and new citizens

As mentioned, an important trend is that urban population is growing in Belize country. As urbanization in Belize City proceeds and larger shares of its population begin to reside in a belt of sleeping suburbs in the rural areas around the city (Figure 3) the pressure to increase the rural housing stock will decline and the housing problem will become increasingly an urban problem. In order to accommodate this growing urban population, land and housing affordability will be crucial. Because migrants from Belize's rural areas, as well as from border countries such as Guatemala, Honduras and San Salvador, often transition to middle class citizens in cities, Belize City should have the capacity to shelter migrants during this transition. Ignoring migrants' needs for adequate shelter impedes assimilation in the formal economy and carries a high social cost (Figure 2).

Urban Expansion and the existing Settlement Pattern and spatial structure

As result of the above settlement pattern and spatial structure (Figure 1), there is a tendency for land to be scarce and costly in Belize City. Belize City is in need of available land space to respond to the need to accommodate the Nation's increasing urban population. Ensuring that developed land is affordable to various income groups is a major challenge for Belize City. Unlocking land supply is fundamental and an **expansion plan** will be required. For this, the National government and the city may need to look beyond its own borders and into its functional metropolitan area of Greater Belize City, as well as into the necessary investments on primary infrastructures (including infrastructures for managing flood risk, transport networks, sewage and water treatment, electricity and communications networks, and land use regulations needed to develop these lands). As these primary infrastructures would still be vulnerable to severe damage from natural disasters, they should be rendered more resilient to the probable effects of flooding and climate change. This may require new regulations from the government. If Belize City succeeds in building more resilient infrastructures, that could be an attraction for both local and foreign investments.

3) The challenge of mobility

As the city expands and accommodates its urban population, the problem of mobility in Belize City becomes the problem of maintaining mobility of people and goods within the functional and expansion area of Greater Belize City, as this is one of the conditions to realizing economic benefits. Maintaining mobility is important because the productivity of large labor markets is important for cities, and lack of mobility fragments labor markets and decreases productivity. Maximizing the economic advantages of spatial concentration hinges on citizens' capacity to find work anywhere in the city and its functional area, and employers' ability to select workers among a large pool of labor in the functional economic area of Belize City.

Mobility and the existing Settlement Pattern and spatial structure

As the city expands and accommodates its urban population in the existing spatial structure (Figure 1), today's congestion will be exacerbated and act as a tax on the city's productivity because it will impair the free movement of goods and people. If Belize City were to reach a point at which it will be unable to maintain mobility, the tax of severe congestion might surpass the economic benefits of the spatial concentration of specialized urban functions in Belize-city. In the long-run, if Belize City cannot sustain mobility it is bound to decay economically. Thus, maintaining mobility of people and goods should be a prime spatial objective and key priority area of land use planning and infrastructure investments at the larger scale of Greater Belize City, which is the functional spatial area for the expansion of Belize City as well as for the operation of strategic and vital hubs and gateways of mobility and accessibility such as the airports and the sea-port.

Maintaining mobility has two aspects: (i) the location mobility for firms; and (ii) households, workers, citizens and consumers' commuting mobility. These both depend strongly on the form of the settlement pattern and of the spatial structure of the city. For instance the traditional planning principle at work in Belize City settlement pattern of locating low income housing in distant sleeping suburbs and bedroom communities limits the accessibility of poor citizens to all areas of the city, and thus segregates low income housing into pre-designated areas (such as is the case with the *Mahogany Heights*). Thus such settlement pattern and spatial structure generates a lack of accessibility and mobility that doesn't allow for the maximization of the economic advantages of the spatial concentration of urban functions that characterizes Belize City.

4) The challenge of infrastructure development for flood protection and storm water management

Belize City is located in the heart of the Belize River and is a water-based delta city at the mouth of the Halouver Creek, an important branch of the Belize River. The Belize River Delta is a highly dynamic landscape, subjected to constant change. As a result, human intervention and innovation have always been necessary to safely live and work in Belize City's delta areas.

Historically the city has a two-fold relationship with water as both resource and threat. The location of Belize City and its growing urban region in this delta has brought prosperity and economic wealth, but at the same time there are disadvantages and challenges to overcome. Belize City lies entirely at or below sea level. Being a low-lying area, the Belize City delta is prone to flooding by the river that forms it; by large volumes of rainfall-typical of the Caribbean coastal climate-, and by storm surges from the adjoining Caribbean Sea. The city is particularly vulnerable to the impacts of hurricanes and tropical storms. As a coastal and river-side city, it is very vulnerable to health consequences of **the urban heat island effect**. These extreme weather

events are expected to become more common as the world warms. Belize City is currently unprepared for these impacts. The potential rapid urbanization of this delta puts natural resources at risk and amplifies the possible consequences, both economical and psychological, in case of disaster. The exposure of the city to natural hazards (hurricanes, storm surge, tropical storms, etc) and the increased risk of river and coastal flooding, as well as surface water, surface run-off, or sewer flooding, raises the following question: how is the city to guarantee the environmental protection of this growing population, its property and its vital infrastructures and historical environments, from these risks?

Flood Risks and the Settlement Pattern

The settlement pattern and form of urban development of Belize-city, has required land reclamation, the deforestation of the mangrove forest, and the reclamation of the wetland and its habitats, for residential housing, industrial, commercial subdivisions, tourism use, and related infrastructures. An important component of this settlement pattern is the storm water conveyance system and network, primarily consisting of canals, culverts, underground pipes, the creek, the river and the coast. Its primary purpose is to remove stormwater from the city as quickly as possible and thus allow for the settlement of increasingly larger land tracts in and around Belize City. It could be argued hypothetically (and this of course deserves further study and investigation), that this system could potentially create an additional problem: rainwater is pumped out of the city before it has a chance to infiltrate and replenish the water table, resulting in land subsidence. Land subsidence has consequences beyond water intrusion and flooding. Subsidence may result in **buckling and potholing of the city streets** (a common occurrence in Belize City streets), cracked building foundations, and threatens infrastructure such as sewer and water lines, bridges and highways, and industrial facilities. The negative impacts of this settlement pattern on these ecosystems and their services constantly exacerbate flood risk in the city. The expansion of the city along these two thin strips of low-lying, flood-prone areas (in combination with the expected effects of climate change) is increasing the risk of floods.

5) The Institutional Challenge

Belize and Belize City have at best an incomplete regulatory, institutional regime and lacks an expansion and master plan that can effectively govern, support and guide urban development, in general. There is lack of coordination and cooperation between government officials and local politicians when implementing national policy. It is safe to say that most urban development and housing regulation takes place at the national level (the Ministry of Housing and Urban Development, the Ministry of Natural Resources and the Environment, the Ministry of Works which has a significant role in the provision of urban and residential infrastructure), and not at the local level. There are several important, national laws that have a bearing on the performance of the urban development in the country and its cities (The National Lands Act; The Land Utilization Act; The Housing and Town Planning Act; The Belize Building Act; The Forest Act; The Environmental Protection Act; The Disaster Preparedness and Response Act; and The Coastal Zone Management Act). In spite of these laws there is a lack of any coordination and mandate for land use planning and zoning in urban areas, and the consequent absence of land use plans in all municipal areas, save a master plan in Belmopan, that was not executed due to the

regulatory vacuum. There are no restrictions on the conversion of land from rural to urban use on the fringe of cities, and no effective implementation of restrictions on buildings, be it on the outer periphery of inland cities and towns, along the coast, or on the cayes. The conversion of land for urban use; be it for residential, commercial, industrial, cultural or tourism purposes is therefore not regulated. It is the environmental laws (The Forest Act, The Disaster Preparedness and Response Act, The Environmental Protection Act, The Coastal Zone Management Act) that can place restrictions on the conversion of land to urban use.

The vacuum created by the absence of urban planning in Belize City empowers national authorities to engage in land use planning to fill the void. The agendas of these authorities may or may not give proper attention to the priorities in urban development and the need for an expansion plan to accommodate urban population growth in ways that ensure that there are adequate serviced lands for residential development and that those lands remain affordable by those who require them, while preserving the ecosystem services (such as the mangrove forests and its wetlands).

The absence of a regulatory and institutional regime governing urban development and planning in Belize City, means that the successful implementation of the urban development scenarios and master plan for Belize City may depend on the consideration of an expansion plan capable to inform and enrich the national land use plan and respond to the national and local need to accommodate a growing urban population, while guaranteeing its protection against a natural hazard dynamics, flood risks and climate change impacts. The master plan for downtown Belize City and for the preservation of the historical environment should be placed in the context of this expansion plan as worked out preliminarily, in the urban development scenarios. An important trend to consider is that the National Government, at the moment, is working on three key initiatives that should allow for a more effective coordination and execution of Master Development Plans in the future, these are: the development of a National Land Use Policy and Framework, the approval of a new Municipal Development Act, and the development of a National Coastal Zone Management Plan. This leaves an important opportunity for this master plan to be implemented as a pilot and demonstration project

Hence, addressing these pressures challenges and their impacts above requires the simultaneous elaboration of an urban development strategy for Greater Belize City that includes the development of the alternative direction and scenarios for the settlement pattern and spatial structure, the downtown master plan-strategy and the programs for the preservation of the historical environment and its heritage assets.

SECTION 7

Alternative Urban Development Scenarios for Belize City

An important recommendation is that Belize City and The National Government begin to address these issues and challenges by producing a long term urban development strategy (2030) for the expansion of the city at its various scales. The strategy should outline the desired spatial developments of the area that it covers. It should also explain which authorities and instruments

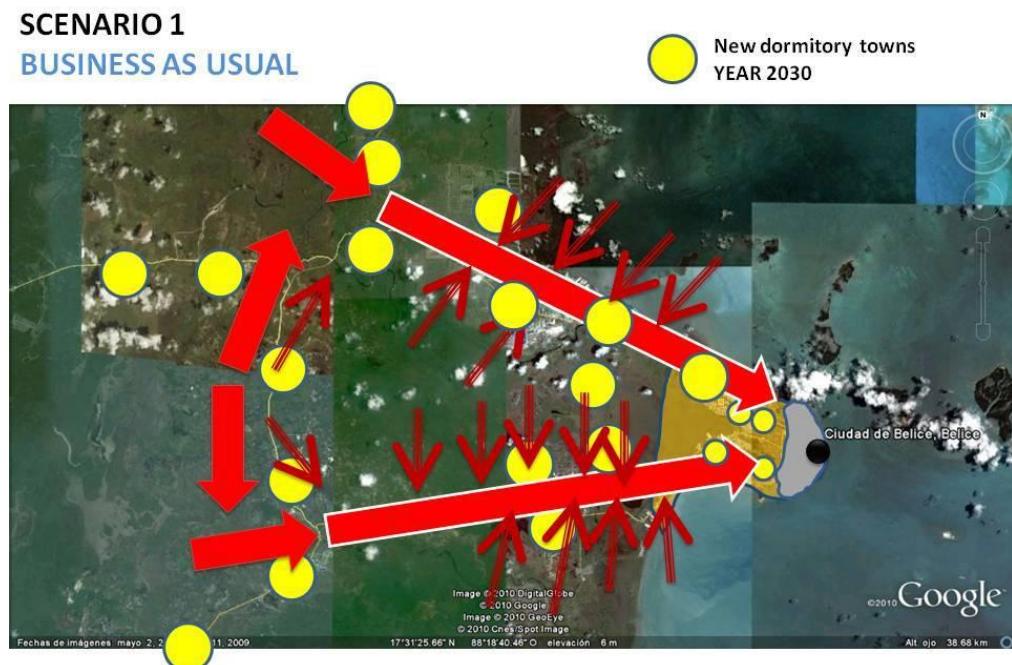
will be engaged to achieve these developments. It should become a statutory planning and policy instrument. In addition, it should include projects for the city's spatial and physical development in which choices are made regarding how to accommodate urban population growth and the urban functions of housing, working, commerce, recreation, accessibility, social amenities, sustainability, and the protection against the risks of flooding. This strategic direction should be a guiding document for national and local governments, civil society, the private sector, and citizens in order to clarify the spatial objectives of the city. This draft strategic direction begins with a series of long term scenarios for the city's spatial development through 2030, which have been developed through consultation with key stakeholders at every stage of the process. We are recommending a combination of these scenarios that needs to be subject to extensive stakeholder consultation, including public and private sector partners and the general public, in order to further refine the ambitions of the people of Belize City regarding the future of their city.

Scenario 1: Business as usual: a pattern of urban sprawl and uncontrolled development along two corridors

This is a baseline scenario that examines the consequences of continuing current trends (Figure 4). This will be an urbanized region composed primarily of low-density, sprawling commuter towns and sleeping communities along transportation corridors. It will be poorly suited to mass transit, will increase vehicle miles driven by commuters, contribute to traffic fatalities and become a safety hazard. It will increase the consumption of scarce resources, resulting greenhouse gas (GHG) emissions and infrastructure costs. It will also fragment the wider landscape and occupy lands where development is environmentally disadvantageous and detrimental to the conservation of large patches of land (such as the Burdon Nature Reserve) for the functioning of flood managing ecosystems. This settlement pattern tends to destroy a natural, hurricane and surplus water buffering, namely, the mangrove forest and its wetlands. In this scenario, a pattern of uncontrolled urban development along two corridors continues to spread out from the historically compact urban core of Belize City. The institutional regime remains unchanged (weak land use controls and dysfunctional land markets) and the various towns and local authorities (such as *Ladyville* and *Vista del Mar*, *Hattieville*, *Lords Bank*, etc) would continue to pursue independent growth strategies and coordination between settlements would be lacking.

Doing nothing to this extremely inefficient settlement pattern and spatial structure and continue with the current trends of urban development spreading out along two thin strips in new subdivisions, may end up consolidating a disorderly, expensive, unsustainable and inequitable linear constellation of bedroom communities and towns commuting to a central node of urban functions along overcrowded highways (Figure 4).

Figure 4: Scenario 1: Business As Usual



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A pattern of uncontrolled development along two corridors of low lying flood prone areas

The potential impacts of this scenario call for an alternative direction for the existing settlement pattern and spatial structure of Belize City

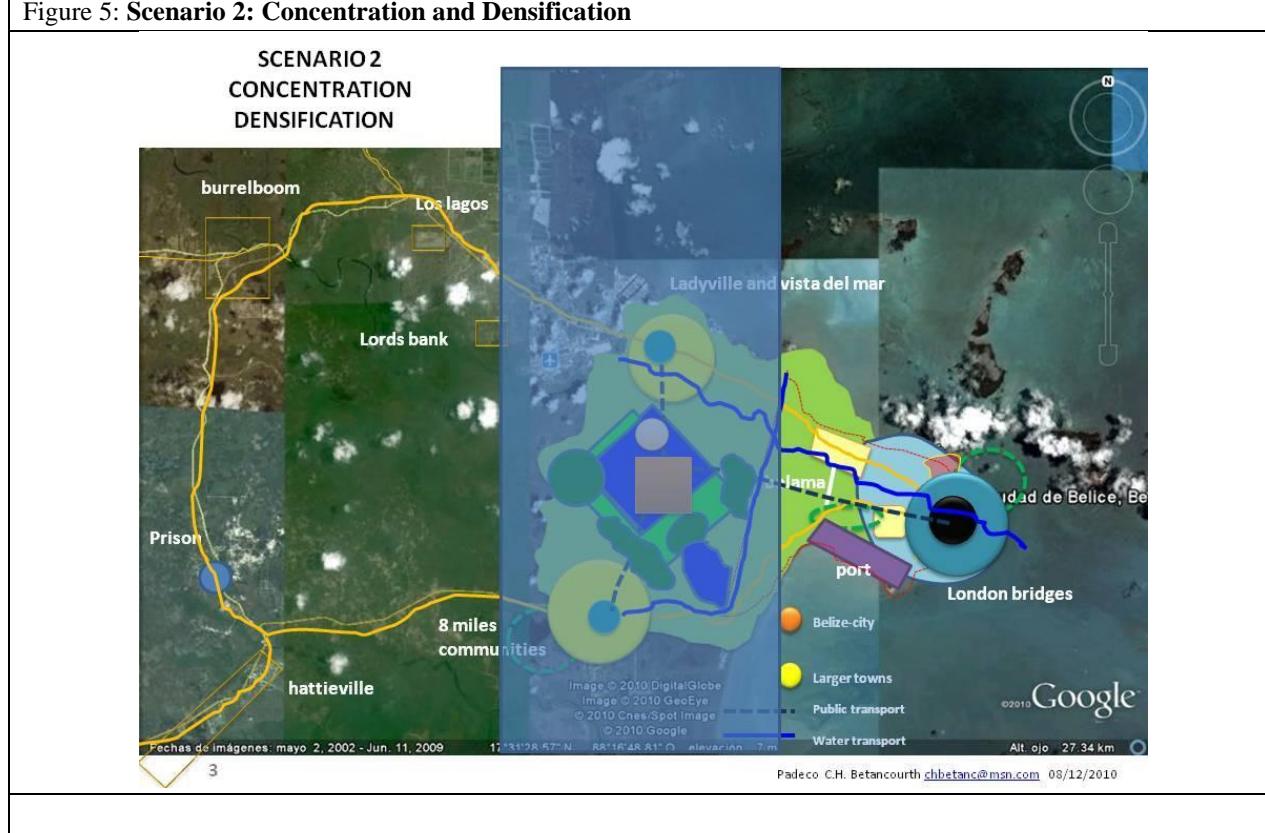
Scenario 2: Concentrating economic activities and increasing population density within the current city boundaries while preserving large patches of green space (The Burdon Reserve and its mangrove forest)

Building-up is an ongoing trend that can be observed in Belize City downtown (See case Collet Canal, below). This scenario (Figure 5) will take the re-organization of Belize City as a compact city as the guiding principle. A second main guiding principle is to adopt a holistic approach towards creating and re-designing Belize City as a liveable, efficient and compact city, which would be developed in an environmentally sustainable manner. The intention is for development to take place around a central core of rehabilitated water bodies (canals, creek, river and coastal front), and of rehabilitated and conserved landscapes, mangrove forests and wetlands. It also concentrates economic activities and increases population densities within the current city administrative boundaries. An important area within this scenario will be located on the historical Belize river course (including the creek and the channels), which will be planned for a variety of uses, including commercial, cultural and recreational uses. This will allow for a varied live-work-play environment close to the natural environment, and provide easy public access to the waterfront. There will also be dedicated business parks, light industrial parks and social

amenities like the existing schools and hospitals within the downtown city, which will contribute to the city's economies of scale, competitiveness and sustainable development.

This will allow Belizeans and their businesses to take advantage of agglomeration economics (see above, economies of scale) while protecting the environment. This scenario can promote dense growth by redeveloping downtown and inner city brown-fields. The reuse of downtown and inner-city land that has been abandoned not only decreases development pressure at the urban fringe, but also can yield significant co-benefits in terms of tax revenues, job creation, and lower investments in infrastructure.

Figure 5: Scenario 2: Concentration and Densification



A comprehensive multimodal transport network will be developed. Green and blue open spaces and public amenities will be interspersed amongst the residential developments to facilitate recreation and social interaction (See proposal Collet Canal). Compact growth around the transfer station (bus terminal) at Collet Canal could slow the conversion of land to urban uses at the urban fringe as well as reduce greenhouse gas (GHG) emissions due to lower dependence on private vehicles. This scenario supports both the densification of the existing downtown (around the water, the canals, the Creek and the coastal line) as well as the orderly extension of the city towards the new Chetumal street (See section 10 *key Investment Project-1 for the downtown area: the urban ensemble around Collet Canal*).

Requirements and main constraints

This scenario will require elaborating an extension plan that makes emphasis on finding space for residential development, focusing exclusively on locations within the city limits, the intermixing of functions and densification, and the redesign of large infrastructure systems such as the transformation of the harbor area, the river and coastal front, the mouth of the river area, and the canals into a set of infrastructures (harbor-waterfront-river-canals), that mix well with residential areas (See section 10 *key investment projects for the downtown area*).

This scenario also requires the efficacious combination and mix of functions and land uses in order to meet the demand for places to work, live, and recreate; as well as investments in protecting and re-using the historical environment and its heritage-assets, and in recreating its public spaces (squares, parks, streets. See (See section 10, *key Investment Project-3 for the downtown area: the artisan square*).

Preliminary analysis and evaluation and analysis of ongoing national spatial and infrastructures plans and projects from the perspective of this scenario

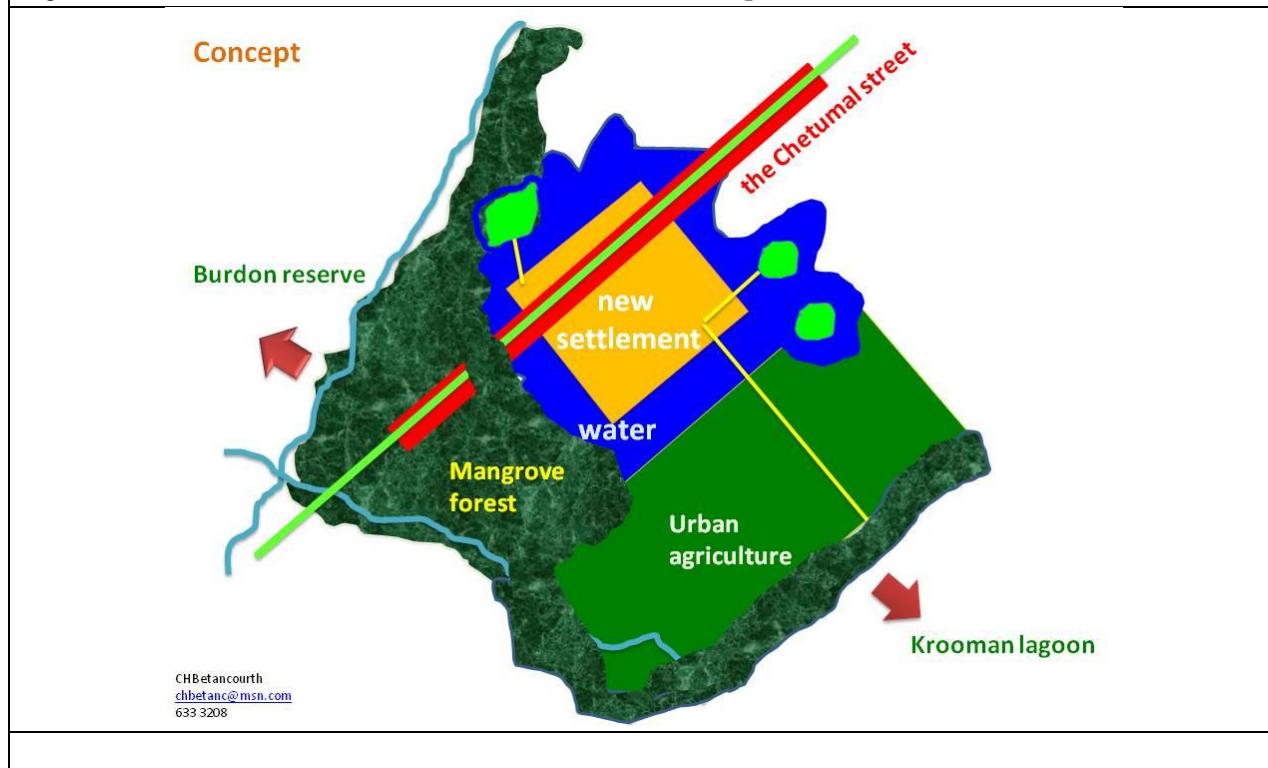
This scenario (Figure 5) requires reconsidering the plans by the Ministry of Public Works to move the actual bus station at Collet Canal to the new Chetumal street. A brief analysis (See Component 2-**Key inputs for the master plan: urban development scenarios as a framework for the evaluation and analysis of ongoing spatial and national infrastructures plans and projects**) suggests that the actual station rather than just being a parking lot for buses, is used as a transfer stations by the citizens of Belize city and surrounding communities. This means that people arriving at the station from these communities **TRANSFER** to a different mode (either a local bus, taxi, bike and above all, walk) and continue their journey into downtown Belize City. By moving the station to the new Chetumal-street; it will increase the distance from the station to downtown, will eliminate the transfer function of the station, and citizens won't be able to walk or bike from the station to downtown. In addition both, the dependence on private vehicles and greenhouse gas (GHG) emissions will be increased. It is important to elaborate an **alternative key investment project** that would aim at reinforcing both, the transfer function of the station and thus at enriching its multimodal character (walk-bike-bus-taxi to downtown. See section 10, *key Investment Project-1 for the downtown area: Collet Canal*).

The opening of the new Chetumal street is already promoting (rather than preventing) squatter formation along the new highway (Figure 2). We are proposing a **key investment project** to plan for this process by elaborating a proposal for a new development along the new Chetumal-street that will open new affordable land for development while integrating the new settlement with the ecosystem services of the mangrove forest and the wetlands. This will require to redesign of the new Chetumal-street as it crosses through the new proposed settlement (Figure 5a, 5b). Together with the new Krooman Lagoon development and the Collet Canal, this new settlement will constitute a new urban spine that will begin from the Burdon Canal and end in the

coastal waterfront (See section 10, *key Investment Project-1 for the downtown area: Collet Canal*. See also, section 9, *Investment priority # 5-Flood control projects*)¹.

Last but not the least, this scenario and brown-fields redevelopment will also require proactive leadership and hard work; given that land ownership may be fragmented.

Figure 5a: Scenario 2: the Chetumal street new settlement concept



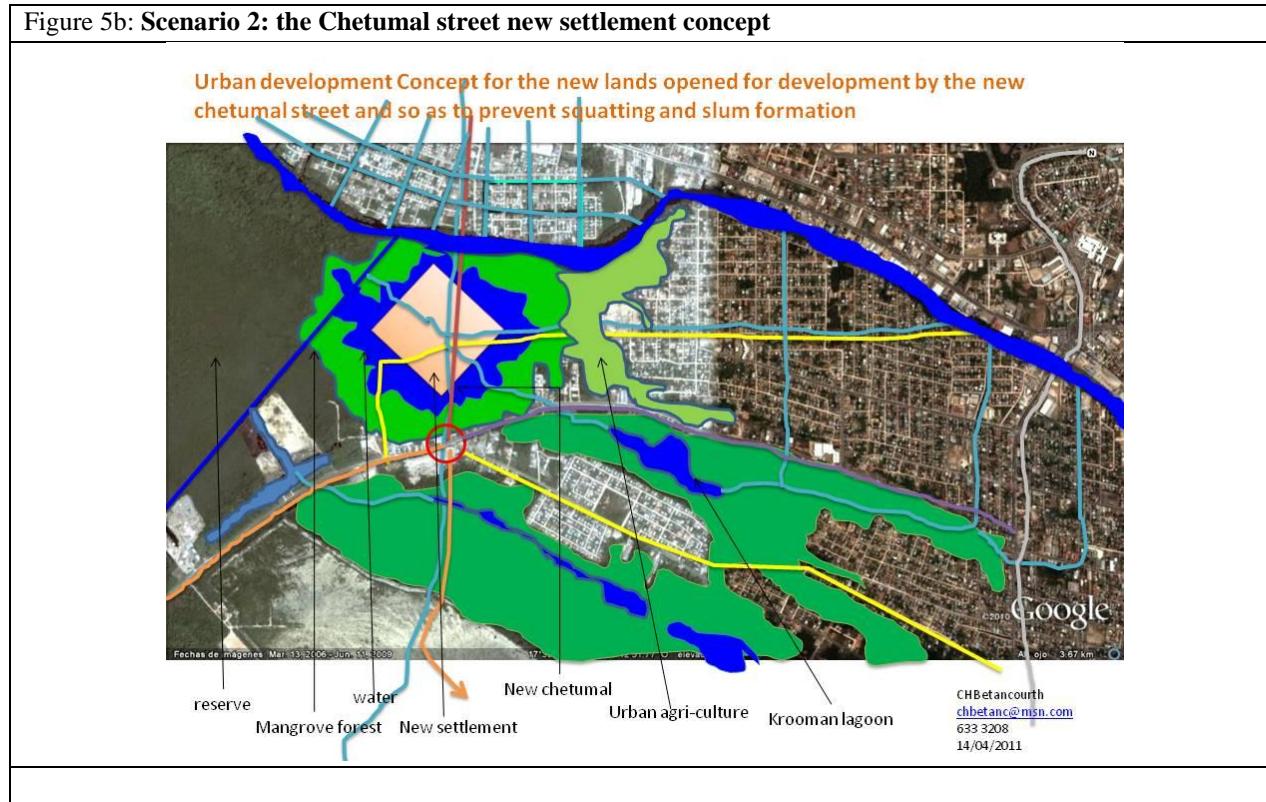
Scenario 3: Concentration of economic activities and of population within a polycentric model

This is a regional system of multiple, compact, interactive synergetic small cities linked by strategically-located transit lines that reduces resource consumption and greenhouse gas (GHG) emissions while preserving an overall land mosaic in which ecological systems can interlink and thrive (Figures 6). This scenario is an extension of and evolution from scenarios 2 and 5 within an extended polycentric spatial structure. It concentrates future urban development and growth at various scales in Greater Belize City functional area: first, it builds upwards within Belize City (scenario-2); second, it expands in the larger towns and small villages in the surrounding

¹ From an **institutional point of view**, we have recently presented this project proposals regarding the implementation of this scenario, to the Ministry of Natural Resources, and the Commissioner of Lands, and they are willing to explore it further (See Report March-April 2011)

commuter-belt (scenario 5); balancing in this way, future urban development between existing communities. It includes existing and new urban and regional functions such as the national landfill (under construction), the new cemetery and the national prison.

Figure 5b: Scenario 2: the Chetumal street new settlement concept



Requirements and main constraints

As polycentric development is also about the connections between the various nodes in the polycentric pattern, the proximity to transport nodes and accessibility of information are crucial assets. Whereas accessibility and specialization target the potential of polycentric development, cooperation and interaction is about the use of such potentials. Individual settlements towns and villages may play to some extent specialized roles within the polycentric territory.

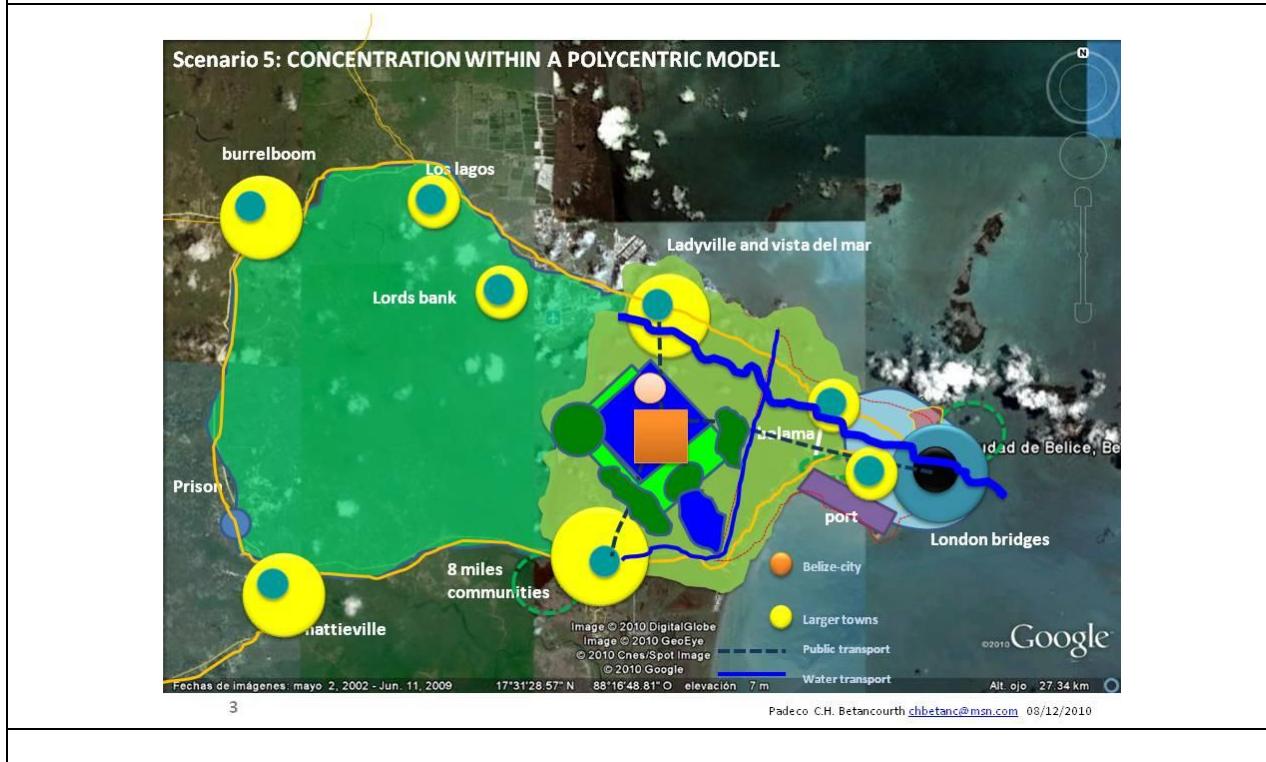
Scenario 4: The Extension Plan: Expanding outside the city borders

In a Report prepared for the Government of Belize and the World Bank, Dr. Shlomo Angel, proposes an extension plan that is basically a grid of arterial roads spaced at one and a half kilometer intervals, as an alternative settlement pattern and spatial structure vision for Belize City (Figure 7).

Grid spacing of 80-100m provides an optimum network for pedestrian and vehicular needs. In a central area with intensive pedestrian activity (such as Belize City downtown), grid spacing of 50-70m provides an optimum circulation network (This is the historical grid that is still to be

found in Albert and Regent streets. See forthcoming, Component 2, *key inputs master plan downtown Belize City*). The grid of arterial roads spaced at one and a half kilometer is perfect for increasing and promoting private automobile mobility.

Figure 6: Scenario 3: Concentration within a polycentric model



Requirements and main constraints

Thus, the World Bank proposed grid of arterial roads may end up:

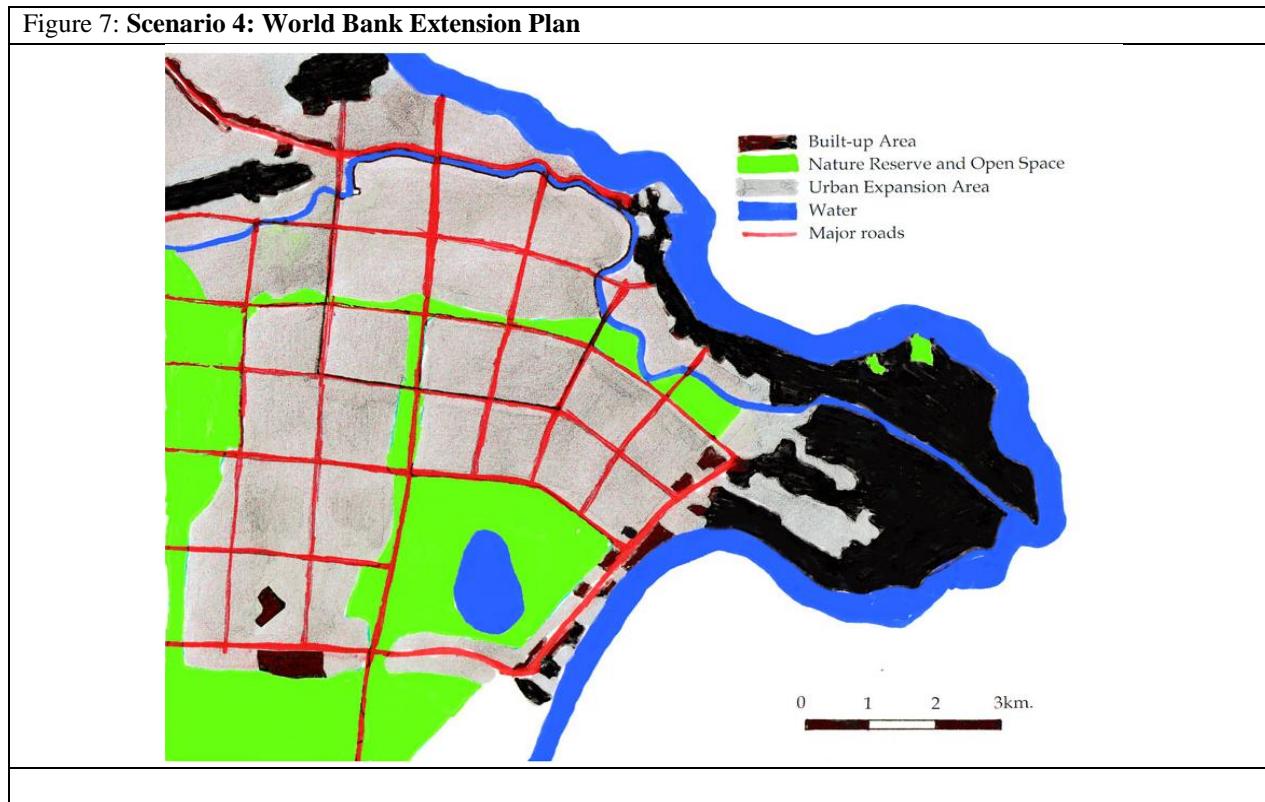
- eliminating a natural drainage basin for the city (The Burdon Canal Nature Reserve and the mangrove wetland) in times of river, rain and sea flooding and inundation;
- destroying a protection against hurricanes and storms (the mangrove forests); and,
- increasing rather than seeking to reduce or offset greenhouse gas (GHG) emissions and thus destroying a potential source (the mangrove forest) of **carbon credits**.

The World Bank is proposing a model of urbanization (expansion plan), that could be accompanied by the loss of valuable natural resources.

Scenario 5: The combination of concentration in Belize City (scenario 2) with the development of a new sustainable town along the Ladyville-8 Miles axis

This scenario (figure 8) that combines concentration of some economic activity and population density in an expansion area outside the city boundaries (Greater Belize City) with concentration and densification within the current city boundaries, transform some of the existing bedroom communities (specifically, Ladyville, and the 8 Miles community) into small compact cities-characterized by higher densities in the suburb's center, with some expansion into adjacent areas-in order to keep the surrounding landscape of the he Burdon Nature Reserve open, as well as to preserve and develop its ecosystem services for the managing of flood risk.

Figure 7: Scenario 4: World Bank Extension Plan



Thus urban expansion will still be occurring in areas and towns located as close to Belize City as possible, to keep transportation distances to a minimum. A key consideration in the formulation of the Master Plan is the need to strike a good balance between environmental protection and economic development (See Executive Summary, and section 8). Apart from the main Belize City center containing offices, hotels and other commercial uses, these two sub-centers located in the northern and Western parts of Belize City will provide employment opportunities for the residents and reduce their need for commuting.

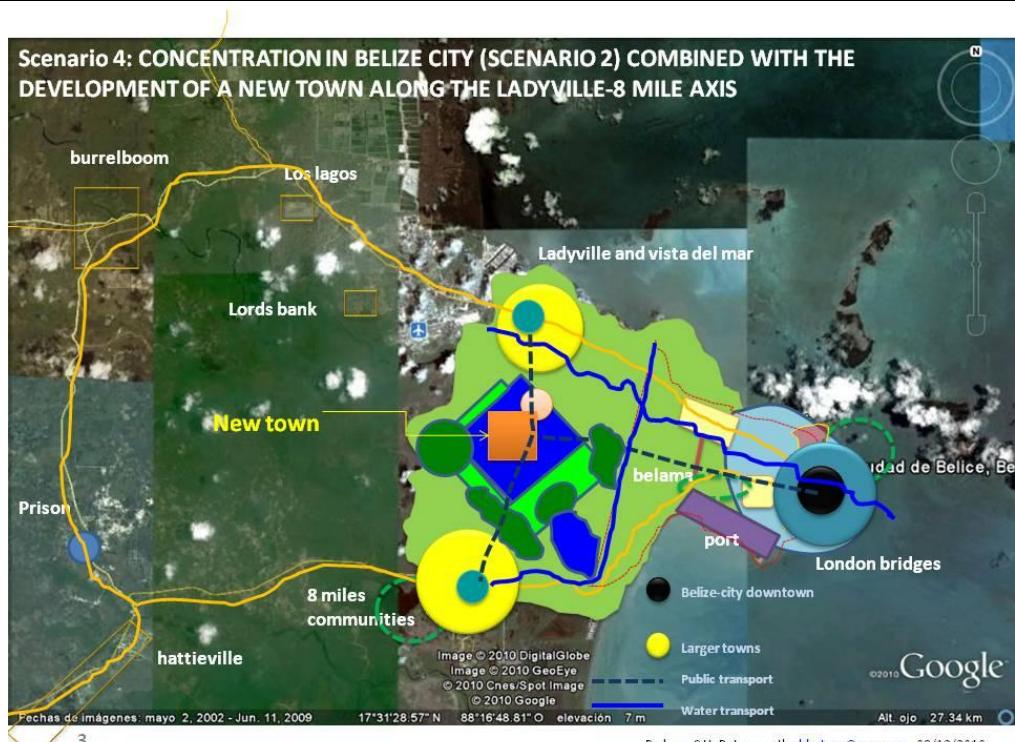
Requirements and main constraints

It is important to ensure that residents in these suburbs transformed in small cities, have adequate access to jobs, retail and services opportunities for such settlements to be successful.

Preliminary analysis and evaluation and analysis of ongoing national spatial and infrastructures plans and projects from the perspective of this scenario

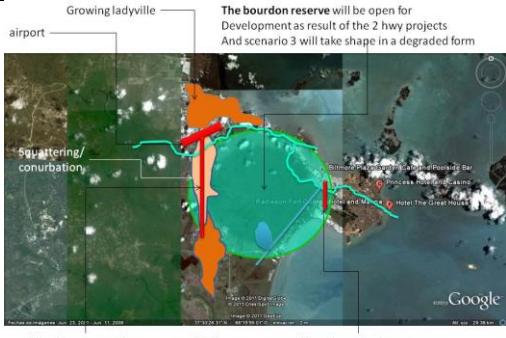
There is an ongoing process of *conurbation* taking place between Ladyville in the Northern Highway, and 8-miles Community in the Western Highway. In addition, the National Government is proposing a new highway connection between Ladyville and 8-Miles. This highway project, together with the new Chetumal street ongoing project (scenario 2), will basically open the Burdon Nature Reserve for land development (Scenario 4). Given the institutional make up described above (See *The Institutional Challenge*), these two national infrastructure plans and projects will simply facilitate the implementation of scenario 3 above, in a way that will promote rather than prevent squatting and slum formation and destroy the ecosystem services of the Burdon Nature Reserve (Figures 8a, 8b).

Figure 8: Scenario 5: Concentration in Belize City (scenario 2) combined with the development of a new town along the Ladyville-8 Miles Axis



To avoid the impact of these processes on the ecosystem services, this scenario also proposes that a key investment priority is to plan sustainable new town in the area along a new highway connection between Ladyville and 8 Miles (Figure 8c) that could also significantly reduce and prevent ongoing squatter and slum formation, help to contain urban sprawl, and preserve the ecosystem services of the Burdon Nature Reserve (See, Section 9, *Investment priority # 3*). We propose to use the same principles at work in figure 5a and 5b for this case.

This scenario also requires a new institutional framework and strategy as well as new partners (Ladyville and 8 miles communities, the airport, the Ministry of Natural Resources and the Environment, etc) to work together and collaboratively beyond their own towns and city boundaries.

The infrastructure project open new land for development	The result: the opening up of the Bourdon reserve for development
	
Figure 8a	Figure 8b

Scenario 6: Curtailing urban growth in Belize City and transitioning of the main population center away from Belize City to other urban areas (Belmopan, Orange Walk Town, etc.)

Due to high levels of vulnerability, Scenario 6 (Figure 9) is about curtailing urban growth in Belize City, and developing a long term gradual process and strategy for facilitating in the medium to long term a gradual transition of the main population center away from Belize City to Belmopan as well as other centers located in less hazardous and vulnerable areas, by encouraging commercial development in these alternative locations.

Requirements and main constraints

This scenario will entail abandoning the Historical Capital of the Country (1600s-2011); a strategic maritime transportation hub, a financial, economic and trade Center; specialized urban functions of regional and national relevance; as well an strategically political city and region. Given that around 30% of the country's population still lives in Belize City, investments there in the near term should not be reduced but must incorporate risk reduction measures such as enhanced drainage, and improved capacity for maintenance, early warning, and evacuation. In the short term, the challenge is to reduce the vulnerability of population and infrastructure that remain exposed in Belize City.

Figure 8c: Scenario 5: development of a new town along the Ladyville-8 Miles Axis

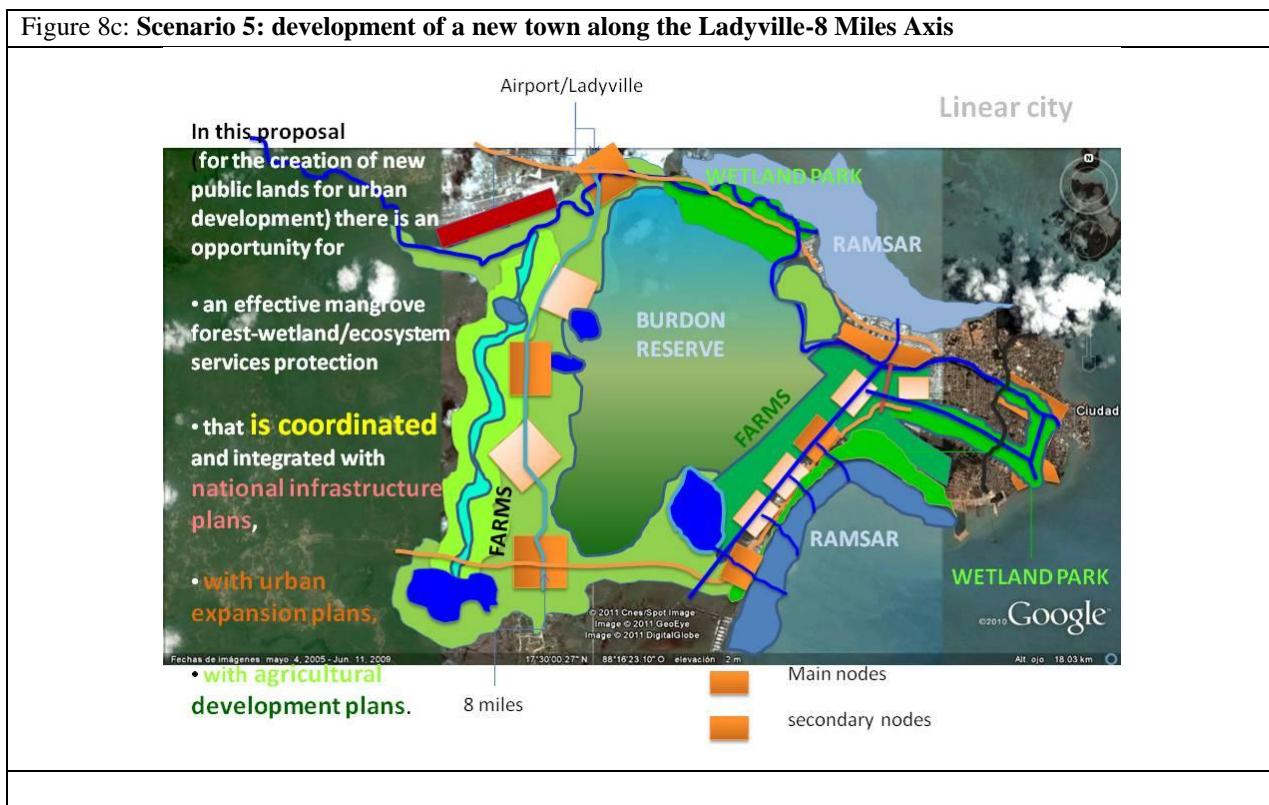


Figure 9: Scenario 6: Curtailing urban growth in Belize City



SECTION 8

The recommended Scenario: this is the fifth scenario above that combines concentration in Belize City (scenario 2) with new sustainable urban developments, along national infrastructure plans (such as the Ladyville-8 Mile highway connection; the new Chetumal street, and, the infrastructure works in the canals, particularly the Collet canal. See, Figures 5, 5a, 5b, 8,10a, 10b).

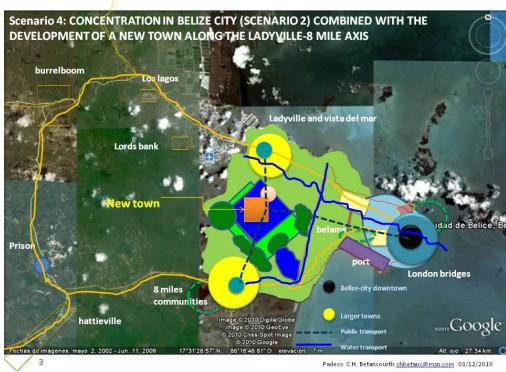
Concentration in Belize City including the Chetumal area	Development of a new town along the Ladyville-8 miles Axis
 <p>Scenario 4: CONCENTRATION IN BELIZE CITY (SCENARIO 2) COMBINED WITH THE DEVELOPMENT OF A NEW TOWN ALONG THE LADYVILLE-8 MILE AXIS</p> <p>This map illustrates a proposed urban development scenario for Belize City. It shows the city's current layout with various neighborhoods like Newtown, Lords bank, and Belmopan. A proposed 'New town' is highlighted in green, situated along the Ladyville-8 Mile highway. The map also indicates the port area and London bridges. A legend at the bottom left provides information on imagery dates (May 2, 2000; Jun 11, 2009), resolution (30m), and coordinate system (WGS 1984). A scale bar shows distances up to 8 miles.</p>	 <p>In this proposal for the creation of new public lands for urban development there is an opportunity for:</p> <ul style="list-style-type: none"> • an effective mangrove forest-wetland/ecosystem services protection • that is coordinated and integrated with national infrastructure plans, • with urban expansion plans, • with agricultural development plans. <p>The map shows a 'Linear city' stretching along the Ladyville-8 miles axis. It includes areas labeled 'Farms', 'Ramsar', 'Bourdon Reserve', and 'Wetland Park'. A legend indicates 'Main nodes' (orange squares) and 'secondary nodes' (orange triangles). A scale bar shows distances up to 8 miles.</p>

Figure 10a

Figure 10b

This **recommended urban development scenario** focuses on both, a strong and sustainable city and economy. It is a spatial response to the urgent social and environmental issues Belize City is facing (or the social and environmental benefits of the proposed spatial interventions and scenario). This scenario aims at re-positioning Belize City robustly in the changing economic national, regional and world order. The Belize City dweller (and not only the visitor) and the everyday environment take center stage in this recommended scenario. Improving the welfare, social conditions, and prosperity of Belize City's residents is paramount to this scenario. This scenario capitalizes in Belize City potential to offer a **rich urban experience** where life is good for its citizens and visitors. Belize City has the potential to attract people with its Caribbean and Central American image, its historical city center, the relative abundance of amenities and specialized urban and regional functions in downtown; and, the potential economies of scale and economic opportunities these functions offer; as well as its networks of waterways and green and blues spaces and landscapes. Belize City boasts a diverse group of communities, languages and belief systems, and relatively young population, which could increase its magnetic pull even further. Scores of enterprises could establish operations in Belize City because they are heavily dependent on this (future) human capital. **The quality of life in the city has thus become an important economic factor.**

All in all, Belize City holds assets to become economically robust. In order to actually bring these assets into play, Belize City must work hard on the quality of the living environment in the city. This primarily revolves around sustainability, in all its facets. In addition to climatological and environmental factors, sustainability is also relevant to other matters. Public spaces such as the Mule and the Battlefield parks, the canals and water-ways (the river, the creek, the coastal

front) could provide youth with more opportunities (See for instance the case of the *Artisan Plaza*; and the proposals for *Collet canal*, in section 10, *Key Capital Projects, Investment opportunities and projects # 1-5*). Many neighbourhoods and buildings that are technically speaking out of date could be of great significance for the city. Because of their specific character, experiential value and adaptability they could become an important component of a rich urban experience and extraordinarily popular with the modern urbanite (See proposal for the Yarborough, Collet canal, and Artisan plaza in Section 10, *Key Capital Projects Investment opportunities and projects # 1-5*). Properties and neighbourhoods from a distant past can in that sense be termed sustainable (See Section 10, *Planning Policies And Programs, Heritage conservation*). Yet the essence of sustainability still involves the environment: in order to be a sustainable city, Belize City and its citizens must be prepared to address the historical dynamic of natural hazards (hurricanes, storms, floods, etc) as well as the impact of climate change on this historical dynamic: the water, air, and soil must become cleaner; the city will be rendered resilient and robust to climate change impacts through its ecosystem services working as multifunctional infrastructures (See, section 9 *Investment Priority #5: flood control projects*. See also, forthcoming in Component 2 *Pretty moving blue waters for Belize City-storm water management strategy*). Belize City will become more energy and food efficient and independent, through sustainable energy sources, urban agriculture and the more intense use of scarce land.

In this recommended scenario, economic development and sustainability are no longer regarded as each other's counter-poles, but quite the contrary: they are treated as extensions of one another. Clean air, properties full of character, attractive, green and blue public spaces, a resilient and robust city capable to adapt to natural hazards and climate change impacts, are all aspects with which the city can secure the loyalty of people and businesses. In this scenario, **Investing in sustainability is therefore tantamount to investing in the economy**. The belt of communities, towns and villages around Belize City are a fundamental component of this recommended scenario. The area in question (Greater Belize City), includes beaches, rivers, forests, the international Airport the Burdon Nature Reserve – all these aspects mean that our city has become greater than the space within its own boundaries: in this recommended scenario, Belize City is the central city, the core city, in this larger functional area. The recommended scenario has been elaborated from this perspective.

What Belize City needs to do in terms of key investment projects in order to become economically strong and sustainable and thus begin to implement the recommended scenario?²

The six main strengths with which the city and its citizens will draw in residents and business enterprises and the spatial tasks needed to reinforce them

(1) **Densify.** It densifies Belize City center. More intensive use of the space in the city will make it possible to accommodate many more people and businesses. This increases the customer base for amenities such as schools, shops, sport facilities, etc. It proposes to add value and balance existing strategic specialized urban functions and facilities concentrated in Belize City downtown (such as the port, the financial center, the universities, the hospitals, etc. figure 10c)

² Here we begin to address Component 2., 3.3., in the TOR

with the creation of supplementary new value chains, employment zones, clusters and nodes (the port and a new light industrial area; the airports, the university, the financial center and their services areas and business areas. See figure 10d) so as to diversify local economic opportunities, strengthen scale economies, the competitiveness of the city, and to keep citizens' daily and weekly transportation trips short

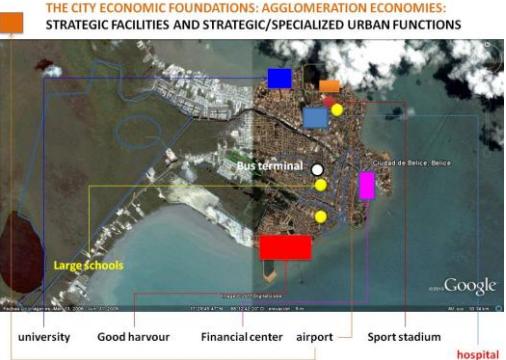
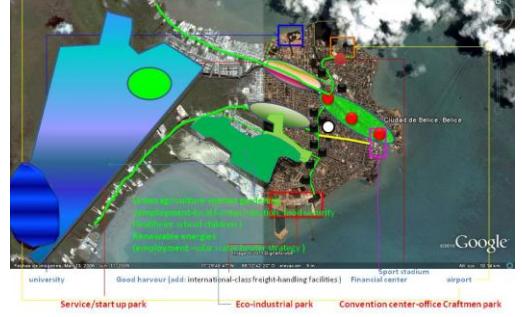
Strategic specialized urban functions	Diversifying the local economic opportunities
	

Figure 10c

Figure 10d

The proposed business parks and light industrial area within the city and the port area will also be used more intensively. It proposes new residential environments with accompanying amenities within the city's existing boundaries so as to expand the city center milieu that has the potential to make the city very attractive (see proposal for building up around the transfer station and Central American Boulevard. See, section 10, *key investment projects # 1 at the scale of Central Belize City*)

(2) **Transform.** As a component of densification, various mono-functional infrastructures, such as the canals, will be transformed into multifunctional infrastructures and areas with an urban mix of residential and business functions. The prime candidates for this are the canals and waterways (including the river and waterfronts), as well as the port area (See, section 10, *key investment projects # 1, at the scale of Central Belize City*. See also, *key investment projects # 2* that will mix port functions with dwellings, business and amenities such as the new cruise terminal)

(3) **Public Transport System on the larger scale of Greater Belize City.** People must be able to travel swiftly and without problems from Ladyville to 8 Miles, and from the airport to any other village and town in the ring of settlements around Belize City, or from the Airports to the seaport and Belize City, by means of rapid and efficient bus services and connections (Figures 10a, 10b). In addition, a seamless transfer from this regional transport system to a multimodal local system of buses and taxis, walking and biking paths, and water taxis, will become possible at the transfer station at Collet Canal (See, section 10, *key investment projects # 1, at the scale of Central Belize City*). A transfer point from private car to public transport will become possible at the new bus terminal at the Chetumal street project area (See section 9 *key investment priority # 4 at the large scale of Greater Belize City*)

(4) **High Quality Public Spaces.** The quality of life in Belize City is becoming increasingly important, and along with this the layout and the use of the public domain. Within major roads

(such as Central American Boulevard, Princess Margaret Drive, Mahagony street, Coney Drive, etc.) the pressure for and on public space is great (at the same time there is pressure to transform these potential public spaces-such as Collet Canal-, into paved surfaces for car mobility and parking, with the result that blue and green spaces are transformed into grey surfaces. This is illustrated by the contrast between Collet Canal and West Collet Canal). More space will be set aside for cyclists and pedestrians in Belize City's streets. The social atmosphere in the streets will be improved by increasing the quality and diversity of the shops and food services and by refurbishing edifices and street-level frontages (See section 10, *Artisan square project*, in, *key investment projects # 3 at the scale of Central Belize City*). That is only feasible if we simultaneously invest in the public space, walking and biking paths, public transport and a renewed transfer bus station (See section 10, *key investment projects # 1 at the scale of Central Belize City*).

(5) Invest in the multifunctional use (storm water, flooding, biodiversity, open spaces, recreation) of green and blue networks. This will be a network of green and open spaces within a short distance of each other, that in addition to managing storm water and flooding, create new spaces for recreation, urban biodiversity creation, and for bringing the countryside into the city (See section 9, *key investment priority # 5 (the network of green and blue landscapes composed by the Burdon Nature Reserve, the Krooman Lagoon, the Collet canal, the river, the creek and the waterfronts)*). See also section 10, *key investment projects # 1 at the scale of Central Belize City*).

(6) Converting to sustainable energies. Belize City must be ready to address the pressures of a swindling global fossil fuel reserve. It must therefore become more energy-efficient. A big step can be made by rendering the existing housing and building stock more energy-efficient. Belize City could become energy independent and generate a large proportion of its energy needs itself, which may includes the collection of solar energy on rooftops , and the installation of wind turbines (section 10, *key investment projects # 1 at the scale of Central Belize City*).

The main four development areas and development trends in the city

These above are the six strengths and spatial tasks of the city (represented in the recommended scenario above), with which the city and its citizens can draw in residents and business enterprises. These six strengths and spatial tasks are to be focus on various major **development trends or thrusts** that can be observed at work in both, the city and outside it. In this recommended vision scenario, Belize City emphatically looks beyond its borders. **These development trends and areas can be decisive for the success or failure of the key investment projects and supporting plans and programmes** we will be proposing later (section 10). The major development trends are:

(1) The moving forward of the downtown to Central American Boulevard (and possibly to the new Chetumal street).

One of the main spatial trends and potentials is that Belize City's center could be used more and more intensively and could expand further (than Regent and Albert streets). Several neighbourhoods within the Central American orbital boulevard (and the coastal lines it connects)

have the potential to display city-center traits (see the case of Mahagony street). Living within this orbital road could be highly desirable. A network of green and blue landscapes could be created that attract more and more residents and visitors (See section 9, *key investment priority # 5 (the network of green and blue landscapes composed by the Burdon Nature Reserve, the Krooman Lagoon, the Collet canal, the river, the creek and the waterfronts)*).

This could become also an ideal business location for new enterprises (See proposal *business-park on the river-front*. In, section 10, *key investment project #1*). There is a rich variety of amenities and public services (such as a rich variety of schools) in the historical downtown. Several neighbourhoods that are out of favour (such as Port of Loyola, Collect and Lake Independence. Figure 2) could be swept onwards and upwards in this moving forward of the downtown to Central American Boulevard. For example, the Yarborough neighborhood, could become the western end of the new Collet Canal, and the new home to new trendy cafés and restaurants on a coastal waterfront and beach that would attract a clientele from across the city and beyond (See section 10, *key investment projects # 1 at the scale of Central Belize City*)

This major development trend and development area may emanate from the enormous magnetism of the heart of Belize City for people, enterprises and institutions. However, the scarcity of space means that people are always forced to search a little further out: first in the Central American Boulevard districts, then in the new lands that will be open for urban development through the opening of the Chetumal street; then in the surrounding belt of communities and the new developments that may emerge as result of the opening of a new connection between Ladyville, the airport area in the north, and 8 miles communities in the west. Problems, challenges and opportunities present themselves on the scale of the functional area of Greater Belize City, so the vision map covers the whole belt of surrounding communities (Figures 10a, 10b). This is the territory that must operate as an economically robust entity on the national and international stage, in order to be able to compete with, other areas in Central America and the Caribbean. Belize City is the core city within this region and its showpiece.

(2) Interweaving the rural landscape (Burdon Nature Reserve, Krooman Lagoon, Dolphin Park Reserve) and the city (the river, the creek, the canals, the cemeteries, the old plazas and squares).

Belize City is surrounded by a highly diverse landscape (The Burdon Nature Reserve, the Krooman Lagoon, the Dolphin Park Reserve, the river and coastal front, the canals, the cemeteries, the old plazas and squares, etc). This penetrates far into the city in the form of slices and fragments of greenery and blue landscapes. These blue and green networks must be weaved together so as to increase the city's appeal and present Belize City with the possibility of densifying within the existing urban footprint while remaining livable. This network of green and blue landscape should be incorporated into the extension plan as green wedges penetrating into the expanding city (See section 9, *key investment priorities # 3, 5 at the large scale of Greater Belize City*; see also section 10, *key investment projects # 1 at the scale of Central Belize City*)

The ambition of this recommended vision and scenario is to keep the green and blue networks green and blue, improve their accessibility and continuity and make them more attractive for

recreational use, biodiversity recreation, storm water management and flood control, water mobility and transportation.

(3) The rediscovery of the river and waterfronts and of the port-city synergies.

Belize City is a delta, lowlands, and riverine flood plains water city. It is a river city, composed of historic liquid landscapes and aquatic areas, located in a flood-prone delta area at the confluence of the Belize River and the Caribbean Sea. This historical character of the city, its water landscapes, and its relative compactness are the specific qualities of the city that may give it a unique identity though which is not yet fully identified and recognized by its citizens. The water in and around the city is of one of the qualities that distinguishes Belize City from most other cities. The awareness that this is a huge asset for the city will only grow stronger. These unique assets constitute its unique strengths, potentials and opportunities. The recommended scenario (and the master plan) identifies strategies and key investment projects by which to capitalize on these unique assets, and address the above mentioned challenges by working towards a more sustainable, more climate-robust, adaptable, healthy and pleasant living and working environment for all residents of the urban areas in the city delta and in its floodplains.

The Belize River, the Haulover Creek as well as the coastal waterfront and the canals expanses of water have a particularly **high experiential value** and offer many possibilities for recreation (water-sports) and for the development of new residential and mix use environments. The waterfronts and shorelines offer countless opportunities for urban development, especially in the obsolete port precincts and industrial zones. Belize City and its surrounding region can be physically interconnected (through water transport, as well as biking and walking paths) via the banks of the Belize River (Haulover Creek) and the coastal waterfront.

(4) The western extension area.

The point of departure for the recommended scenario is also, a trend towards the “conurbation” between Ladyville in the Northern Highway, and the 8-miles Community in the Western Highway; as well as the National Government’s proposal for both, a new highway connection between Ladyville and 8-Miles; and the new Chetumal street project to connect the western and northern highways closer to the city boundaries (scenarios 2, 4). This scenario adds value to these two national highway projects by means of proposing planned sustainable new towns in the new lands opened for development by these two major infrastructure investments. These planned sustainable new settlements and towns could significantly reduce and prevent ongoing squatter and slum formation (or the social benefits of the proposed spatial interventions), help to contain urban sprawl, and, improve the quality of the environment and of its ecosystem services. The western development area must be seen as a succession of important infrastructure projects: the improvement and expansion of the international airport, the implementation of the new highway connection between the 8 Miles community in the Western Highway, and Ladyville in the Northern Highway, as well as the development of new residential and working areas along the new Chetumal street. The main driver of these future developments is the bundle of infrastructures that links Belize City with the other settlements in the region, with the rest of the

country, and via the airport, with the world (See section 9, *key investment priorities # 1, 2, 3, 4, 5 at the large scale of Greater Belize City*).

To conclude this description of the recommended scenario before we move into the key investment projects: this recommended combination of scenarios need to be subject to extensive stakeholder consultation, including public and private sector partners and the general public, in order to further refine the **ambitions** of the people of Belize City regarding the future of their city.

The vision proposed by the combination of these various scenarios outlines the ambitions for the long term (20-30 years plan), which is why the vision and scenarios must be continuously readjusted in the light of current events, such as the ongoing economic and social crisis. Or, indeed, quite the contrary: in turbulent times, the vision for the future must provide a framework of analysis to determine the plans, programmes and key investment projects that ought to be executed and those that are of secondary importance. The vision for the future should not be swayed by the issues of the day; it must map out how we respond to them. Only then can Belize City become both economically strong and sustainable.

The following are the **main key investment projects for which this combination of scenarios and visions provide a solid backing**. As it was agreed in the TOR that the focus of the key investment projects will be the downtown area, brief reference will now be given to some investment priorities in the wider Greater Belize City area and then return to the case of downtown.

SECTION 9

The key investment priorities needed to begin implementing the recommended scenario

Key Investment Priorities at the large scale of Greater Belize City (figure 10)

Investment Priority #1: For the city to make substantial progress in overcoming the above challenges (Section 5 and 6), the first key investment project it must pursue is **an expansion plan for Belize City** that focuses on increasing the city's residential population and attracting new business enterprises. Yet as the city faces serious limitations to its lateral expansion, this expansion plan should include, the existing belt of bedroom communities surrounding Belize City (Ladyville, 8 Miles Community, etc), a new town, as well as the city itself (the central city and its downtown). By addressing these priorities and enhancing the unique qualities that make Greater Belize City and Belize central city enjoyable and distinctive, we have the opportunity to transform Belize City downtown into one of the nation's and Caribbean's premier urban environments. Thus, the success of our master plan project for a vibrant and prosperous downtown in Belize City depends on and is integral to the success of the urban development strategy for Belize City as a whole (Greater Belize City). The master plan project for downtown Belize City is aimed at strengthening the heart of Belize City and is a key component of Greater

Belize City wider urban development strategy. In terms of (National) housing policy, a certain amount of new homes should then be built in the belt of commuter towns (surrounding Belize City), in the proposed new town, and the rest within Belize City as such, its downtown and historical environment.

Investment Priority #2: the transformation of today's sleeping suburbs (such as the Ladyville and 8 Miles Communities, etc.) **into small compact cities** (characterized by higher densities in the suburb's center), in order to keep the surrounding landscape open as well as to preserve and develop their ecosystem services for the managing of flood risk. We could reconfigure these existing small suburbs into small cities around local hubs, avoiding the need for constant cross-town traffic (from suburb to Belize City downtown). Part of the National Housing Policy should be built in these suburbs located as close to Belize City as possible, to keep transportation distances to a minimum. These so transformed sleeping communities would then be able to have a strong identity of their own and thus establish synergies with Belize City downtown.

Investment Priority #3: the creation of a new settlement and town. This will be a new planned neighbourhood and urban extension defined and developed in proximity to the existing urban areas and in coordination with the extension of national urban networks (such as the proposed connection between Ladyville and 8 Miles, as well as the new Chetumal street) that could significantly reduce and prevent ongoing slum formation and help to contain urban sprawl. These will be sustainable waterside living areas, which will be designed to be CO₂ emissions neutral areas (to be achieved through the preservation of the mangrove forest and its wetlands as well as through the use of renewal energies such as solar and wind), and climate change resistant, composed of a rich diversity of housing units, types and prices (and related amenities such as schools, nurseries, shops, medical and community centers, etc), services and employment opportunities, as well as areas of recreation, and of a water and mangrove forest buffer. It will connect with Belize City downtown through a boulevard or urban spine weaving together the Burdon Nature Reserve, the Krooman Lagoon, the Collet Canal, and the river and coastal waterfronts. In this project we will be harmonizing the expansion plan for Belize City with mobility, and flood risk strategies.

Investment Priority #4: a multimodal regional system of accessibility and mobility that includes public transport, networks of bicycles routes, as well as water transport and walking paths along the above urban spine, as well as along the river and coastal fronts. This integrated movement network of buses, cycle lanes, water transport links and pedestrian routes between downtown, its neighborhoods and Greater Belize City will be delivered in advance of development.

Investment Priority #5: flood control projects. Adaptation to climate change is likely to involve more investments in more infrastructure for coastal defenses and flood control (dams and reservoirs to buffer against increased variability in rainfall and runoff) to reduce the vulnerability of human settlements to climate change. Investments in water resource infrastructure, especially dams for storage, flood control or regulation may be essential for economic development. Similarly to these traditional engineered solutions, the abundance of natural ecosystems in Belize and Belize City can reduce vulnerability to natural hazards and extreme climatic events and complement, or substitute for, these more expensive infrastructure investments to protect the

coastal and riverine settlements and areas in Belize City (and Country). The river's floodplain forests and coastal mangroves could provide storm protection, coastal defenses, and water recharge, and act as safety barriers against natural hazards such as floods, hurricanes, and tsunamis, while the mangrove wetlands could filter pollutants and serve as water recharge areas and nurseries for local fisheries. It is fundamental to invest in flood control and protection projects and programmes that utilize the natural storage and recharge properties of these critical mangrove forests and wetlands in and around Belize City by integrating them into cohabiting with floods strategies that incorporate forest protected areas and riparian corridors. More wetlands (along the river and the coastal zone) would also help to control flooding by acting as storage for the more intense rainfall expected in a warmer climate.

This can be simple and effective solutions that protect both Belize City's communities and natural capital. It is therefore important to invest in maintenance and restoration of the mangrove forest (that reduce vulnerability of the city's coastal areas to sea level rise and extreme weather events, while also contributing to food security) as part of this natural flood defense system. This incorporation of natural habitats into flood defenses provided a low-cost solution as an alternative to costly infrastructure, with the added benefit of high biodiversity, and open space gains. This **water plan and natural flood defense system** for Greater Belize City and Belize City and its downtown is based on the principles of retain-store-discharge and on a robust network of native vegetation such as the mangrove forest and the wetlands, as well as on the restoration of the flood plains of the river's wetlands. This will in turn form the **new landscape of green and blue networks** (figure 11) which in combination with a denser, urban fabric in downtown Belize City, are the fundamental pillars for the implementation of the recommended scenario (see, section 10, *key investment projects # 1 at the scale of Central Belize City*). By utilizing the empty spaces due to vacancy following hurricanes, storms and floods, to serve as water storage, the problem of flooding turns into an opportunity to re-create attractive residential areas with high quality of life by combining water storage with the improvement of the quality of urban public and residential space (We will explore this in more detail in section 10, *Investment opportunities and projects at the scale of Central Belize City # 1*)

SECTION 10

Key capital projects and physical works at the scale of Central Belize City (figure 16)

Investment opportunities and projects # 1

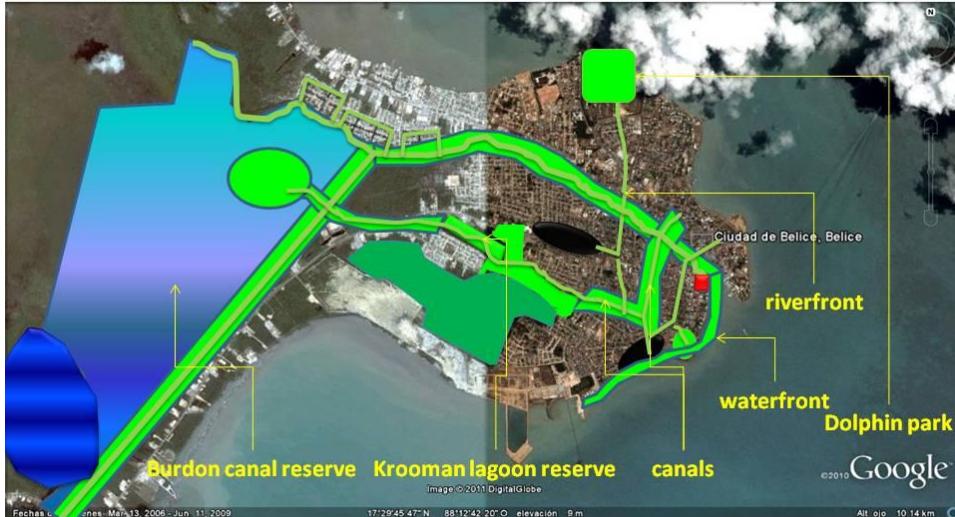
An urban ensemble composed of the river, the canals, the coastal waterfront (Yarborough) connected with an urban spine that ties the Burdon Nature Reserve and the Krooman Lagoon with downtown

The Belize River, the waterways (The Halouver-creek), and the city-channels (the Collet Canal) are also to be considered as strategic historical and heritage assets. This is a restoration key investment project (figure 12) composed by the river, the creek, and the canals, that transforms the Collet canal into a landscaped ecologically sensitive green pedestrian (and bike) pathway and

corridor that runs from the river to the ocean, thus consolidating the **urban experience of Belize City downtown as an island** surrounded by the river delta, the coastal line and the Collet canal.

Figure 11: Blue-Green Network

WEAVING THE FRAGMENTS TOGETHER WITH **BLUE AND GREEN CORRIDORS** IN A NETWORK OF GREEN OPEN AND BLUE SPACES FOR THE CONTINUOUS CIRCULATION OF WATER (drainage)



THE COLLET CANAL IS OF STRATEGIC IMPORTANCE FOR WEAVING TOGETHER THESE VARIOUS ECOSYSTEMS (Burdon-krooman) WITH THE OCEAN AND THE RIVER

(See, C.H.B. Urban development scenarios for Belize City. Power Point Presentation March-April .2011)

A first important component of this project is that this new Collet Canal will be conceived as a multifunctional infrastructure that functions as an open public green and blue landscapes; as a space for urban habitat and biodiversity restoration, as a system for water transportation; as a ecosystem for flood defense and storm water management; and, as an opportunity to re-create high quality of life, and attractive residential and working areas along the canal and in the river and water fronts.

This will be in turn connected with a new urban valley and spine that brings the countryside into the city downtown weaving together the Burdon Nature Reserve and the Krooman Lagoon with the system of canals, the creek and the coastal front (Figure 11, 12). This valley serves as the main ecological green and blue spine and incorporates water sensitive urban elements. This valley will connect the major transit nodes (at Chatumal street and at collet canal), residential areas, community facilities and commercial centers. It will be a key open space and focal point of the city (figure 11, 12)

This restored canal is connected to the revitalized Creek and river, which in turn connects with the new urban development proposed along the national infrastructure projects (Chetumal street, the connection between Ladyville and 8 Miles. See, section 9, *Investment Priority #3, 5: at the large scale of Greater Belize City above*).

Figure 12: Urban ensemble and Key Investment Projects 1



This will help improving the links between Belize City and the surrounding ecosystem services and landscapes in such a manner that their qualities are shown to full advantage.

A second important component of this key investment project will be a business park along the riverfront (that includes international convention center; an office node, and an artisan square).

A third important component is the transformation of the bus terminal into a transfer station (See scenario 2 above).

A fourth important component will be the improvement of the food and the fish markets as proper open urban markets. An important issue to be addressed is **the modernization of a sustainable market infrastructure, facilities and services** that are essential elements of the food supply and distribution system (equipped with new technology, such as refrigerated transportation and storage and information systems that track inventories). This **sustainable market infrastructure** should be planned at the regional, metropolitan and urban levels. An important aspect for policy consideration is also the role played by the informal sector in making food available to low income urban areas of downtown Belize City and in generating income for poor families.

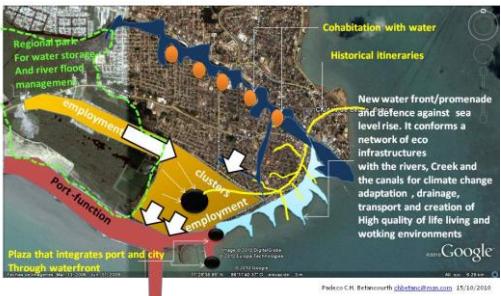
The Collet Canal as a multifunctional infrastructure and the multi-level housing programme accommodated along it, could be punctuated with a series of local urban functions to be housed in traditional and vernacular architecture. One of these functions could include a *new city council campus* along the canal that will provide an iconic home for Belize City (and country)

most significant public institutions and demonstrate the community's commitment to sustainability.

This first set of **investment projects** could become a strategic vehicle for urban renewal, economic development and the revitalization of downtown. It could also signify a shift in planning priorities from an emphasis on accelerated growth, to an emphasis on health, sustainability and social responsibility, in short, on quality of human life and the creation of public affluence. We are working this in more detail as part of component 2 and in relation with two important investment projects by the Ministry of Works, namely, *the fixing of the Collet canal under the Southside Poverty Alleviation Project, and, the Chetumal street bridge and extension*.

Investment opportunities and projects # 2

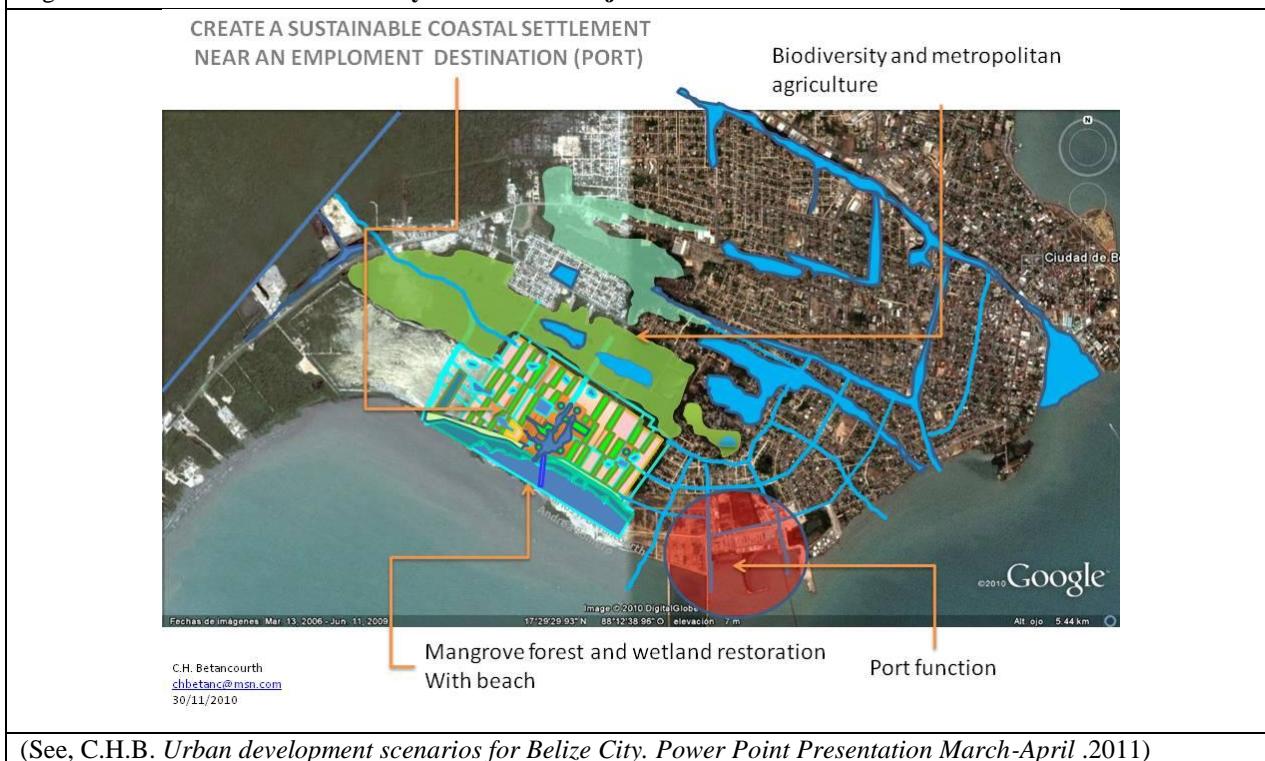
An urban ensemble composed of the city-port synergies, the tourism sector and the historical environment

Urban ensemble and Key Investment Projects 2	
Figure 13a (Recreating synergies between port and city) <small>Establish synergies between port and the city so that the port becomes a source of employment And helps to alleviate poverty and crime in the area. The new clusters (as part of global value chains) will be integrated into historical itineraries and with the city along a water front</small> 	Figure 13b (Defense wall as promenade and park integrating the port and the city) <small>Defence wall as promenade</small> 
<small>(See, C.H.B. Sea port competitiveness, cruise movement and the recovery of synergies between the port and the city through a waterfront. 24/10/2010)</small>	

Belize City will be working on the future of its main-port (Figure 13a, 13b). Belize City will accommodate activities that enhance the functional cohesion and synergies between the city and its port. Belize City and its Port will be developed into a sustainable seaport that generates plenty of job opportunities and recreates synergies with downtown. A second urban ensemble and key investment project may consist in the enhancement of the areas and infrastructures around the sea-port and the coastal waterfront.

There are large patches of land in the vicinity of the port that should be designated as areas for the development of urban key projects that re-establish the synergies between the port and the city and integrate new housing, tourism and the historical environment into this ensemble (Figure 14).

Figure 14: Urban ensemble and Key Investment Projects 2



(See, C.H.B. *Urban development scenarios for Belize City. Power Point Presentation March-April .2011*)

In addition, the historic infrastructure landscapes of aquatic areas will also be integral parts of this residential and mix-use development. These historical water infrastructures will be re-established and work as multifunctional infrastructures for storm water drainage, for flood risk protection, for encouraging biodiversity, for the creation of new habitats, informal amenity areas and formal areas of public open space. Here, a concept of water infrastructure will be explored, where the drainage function will be conceived as a hybrid of built infrastructure, ecosystem's services and people's green space. These water infrastructures can serve as a fundamental component of changing urban and regional form (Figure 14). This plan will allow for the clear coordination and integration of mangrove protection with national infrastructure plans (the Chetumal street), with urban expansion plans, with urban agricultural development plans. This will make a contribution to the land use plans that are being prepared for national land area and coastal areas of Belize by the Ministry of Natural Resources, and the Environment, and the Belize Coastal Zone Management Authority and Institute, respectively.

Investment opportunities and projects # 3

An urban ensemble composed by the Mule Park, the bridge, the mouth of the river, the waterfront, the Battlefield park and Orange street

The idea of preserving and recreating this historical urban ensemble (where among others, the old market and port used to be located), is less about the existing buildings, and more about the

preservation and recreation of the historical activities and programs as well as of the atmosphere that may have occurred at one time at that site. For instance: it may be that at a certain point in history there were craftsmen and women (e.g., fisherman, boat building, etc) at work there. The spaces and buildings will be redesigned to allow users (residents and visitors) to see first-hand the work of the craftsmen and women, in terms of the actual crafts, the process of making the goods, right there in the public space. Currently the entire site feels as though it is split by the river. The formal concept integrates the two banks of the river, and, to make the public spaces feel like a series of large courtyards. (Figure 15a: artisan square)

Urban ensemble and Key Investment Projects 3	
Figure 15a (Artisan square)	Figure 15b (connecting the river and the mule plaza through the revitalization of an existing building)
<p>KEY INVESTMENT PROJECTS DOWNTOWN AT RIVER MOUTH</p> <p>The mule place as a public space Charles Betancourt chbetanc@msn.com carlosbetancourt.com</p>	<p>KEY INVESTMENT PROJECTS-1 DOWNTOWN AT RIVER MOUTH HERITAGE SITE PRESERVATION URBAN ENSEMBLE 1</p> <p>Charles Betancourt chbetanc@msn.com Cell: 633-3208</p>

(See, C.H.B. *Downtown at river-mouth heritage atmosphere preservation* . 2011)

Preservation. Beyond the retaining of the historic structures (many of which are not there any-longer), the low walls of the-to-be recreated buildings will be retained. Keeping the outlines of former structures will allow traces of the neighborhood history to remain intact and in view. On the top of these baselines, additional apartment housing, a Maya-weaving workshop, an open air market, restaurants, cafes, and a more diverse set of overnight stay options for tourists could be added. All of this will be done with building typologies that draw from the surrounding traditional and historical urban fabric (Figure 15a).

Reinterpretation. The first two floors of the existing building next to the bridge (a property of City Council) and that replaced the open air market, will be transformed into an open space with a grid of open columns that will reference the rhythms of a mangrove forest. Locally made colors could be used through-out the space. Steps will provide greater accessibility to the river. As the columns land on the ground they will expand to create a space to sit, sell, play, etc. The existing building could be redesigned as a multifunctional building with movie-theater, retail, residential and office space (figure 15b). The actual moving bridge will become entirely pedestrian; it could be reused and inhabited and opened so that it guarantees the continues flow of boats along the river (figure 15c, 15d)

Urban ensemble and Key Investment Projects 3	
Figure 15c Inhabited living bridge (the Ponte Vecchio in Florence)	Figure 15d (Inhabited bridge)
	
(See, C.H.B. Downtown at river-mouth heritage atmosphere preservation . 2011)	

This project (particularly the existing building owned by City Council) will be the **catalyst project for this third urban ensemble**. The existing historic mule plaza that today has been transformed into a traffic round-about will be recreated as a public-space. This entire urban ensemble (which includes the historic battlefield park and Orange-street) will be transformed into an Artisan's square. This square will articulate the business park proposed along the river waterfront (a new office park at the top of Collet canal, and a new convention center further north at the Belcan bridge. *Investment opportunities and projects # 1 above*), with the existing financial center at historical Albert and Regent street, as well as with the coastal water front that will be reconnecting the city with the port (*Investment opportunities and projects # 2 above*).

Investment opportunities and projects # 4

Redevelopment investment opportunities

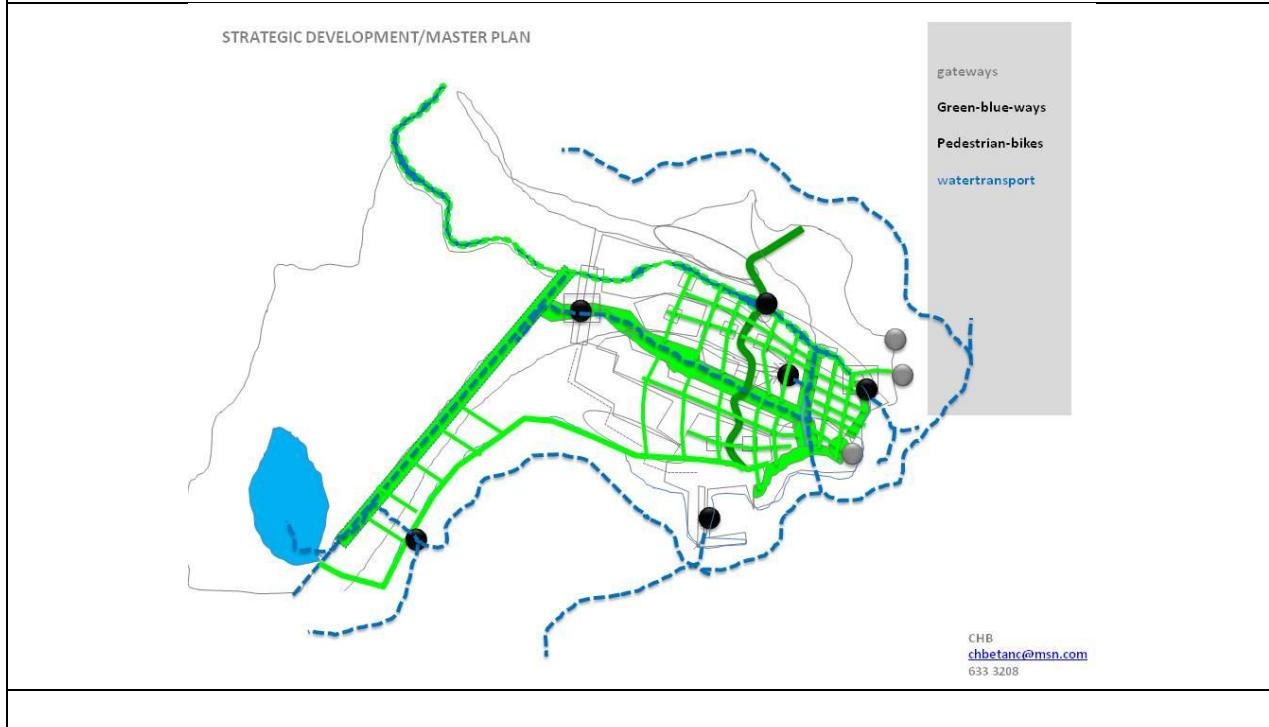
The most disadvantaged neighborhoods in the city (such as the ring of poverty composed by Port of Loyola, Collet and Lake Independence; figure 2) should be eligible for financial support through redevelopment partnerships. An important opportunity is to integrate the Port of Loyola neighborhood with the proposal for the Collet canal (*Investment opportunities and projects # 1*) as well as with the proposal for the port (*Investment opportunities and projects # 2*). A similar set of principles and concepts could be explored for this case, as the ones proposed in Figure 14 above. A basic re-building block will be a single cell that will serve to integrate the different land uses within a modular 800m by 800 and 400m by 400m grid. Educational institutions, commercial areas, workplaces and recreational areas are distributed within these Cells and located close to the residential areas to minimize commuting. This will be a special feature of the master plan (see *key inputs master plan: the movement skeleton*)

Investment opportunities and projects # 5

Improving downtown accessibility and mobility

As part of the accessibility, mobility and transport network (*investment priority # 4* above), it is important to redesign the bus-terminal at Collet canal **into a transfer bus station and gateway to Belize City downtown** (as a supplement to the proposed terminal station at Chetumal street). This transfer station should be supplemented with a multimodal system for accessibility to and mobility in downtown that includes in the following order: pedestrian and biking paths; local bus; taxis, and water taxis; other vehicles (see *key inputs master plan: the movement dynamics in downtown*) to provide superior access and transport facilities so as to start building the public transit system that is integral to the success of Greater Belize City and of Belize City downtown (Figure 16).

Figure 16: Key Investment Projects 5



As the new Chetumal street will free Central American Boulevard from heavy traffic originating at the sea port and moving towards the Northern highway, it is important to redesign Central American Boulevard as an important bike, pedestrian and local bus street that will integrate the two parts of the city it actually separates. We also recommend that connecting the Western Highway and the Northern Highway through the new Chetumal street and Faber's Road, be reconsidered given the impact of heavy port traffic on the residential and local character of Faber's Road area, as well as on the Krooman Lagoon reserve. It is important therefore to search for an alternative to Faber's Road as the route for heavy port traffic to bypass Central American Boulevard and the downtown area.

Figure 17: Key Investment Projects downtown area



Planning Policies and Programs to be treated as investment priorities in order to support the Key capital projects and physical works above at the scale of Central Belize City

These physical works above will be supported by planning, policy, programs, and initiatives that recognize the role private investment plays in the success of revitalization. These initiatives and strategic policies seek a positive response from the private sector and include:

Heritage conservation Significant pressures are being placed on Belize City's natural, cultural and built heritage assets, particularly in the downtown area. To better provide for the downtown heritage, conservation will be supported through a heritage grant and protection program that should include an inventory of historical buildings (and monuments), a heritage database, the listing of those historical monuments in the historical buildings protection act (labeling a building as a landmark or monument can be accepted as a momentary strategy against an immediate threat by speculative destruction), a city plan for protection and preservation of the heritage, as well as pursuing public-private partnerships (Heritage Trust) to promote the adaptive re-use of heritage structures. Advice is also needed on preventative measures as well as on the

inspection, conservation and repair of historic buildings after flooding. Conservation should be established as a principle of urban planning in Belize City downtown

Tourism The hospitality and tourism industry may become a mainstay of Central Belize City economy. The range and availability of tourist accommodation facilities in the central city (there are very few hotels, bars, cafes and restaurants in downtown) is important because of the economic spin-offs these visitors may create for other businesses. The city also suffers from a range of negative perceptions by visitors. Visitors may be looking for a vibrant urban experience that provides a counterweight to Belize's stunning physical beauty; thus for downtown Belize to be more than a transit hub and a transfer point, the central city must be a strong magnet providing a unique and memorable experience (See *key investment projects above*). For this it needs to offer a high quality of public space that it currently lacks. It also needs to offer good visitor's accommodation and a distinctive point of entry and gateway to the city (a better inter-city bus transfer facility); improve the quality of the retail offer, as well as of the access to the central city (including parking facilities and multimodal mobility). The Central City needs to have an attractive range of restaurants, bars, clubs, and other venues that encourage safe night-life activity. This programme should be integrated with the ongoing STP project.

Implementation of the transport concepts This includes: an integrated movement network of buses and water taxis, cycle lanes, ferry links, and pedestrian routes between downtown neighborhoods, and downtown and Greater Belize City, as well as the creation of gateways to downtown; and of a strategy for downtown parking. Pavements and road surfaces might also have to be changed, as Belize City's current road system has not been built to withstand high temperatures (see the urban heat island effect, in *the fourth challenge on infrastructure development for flood protection above*). Land subsidence may result in **buckling and potholing of the city streets** (a common occurrence in Belize City streets), cracked building foundations, and threatens infrastructure such as sewer and water lines, bridges and highways, and industrial facilities. As these infrastructures are constantly being maintained, providing protection against climate change and land subsidence can be built into the repair schedule. Flooding is the most serious of the likely effects of climate change (as it would cause most damage to vital infrastructure) that operates and needs to be addressed at the large scale (See Land subsidence, in *the fourth challenge on infrastructure development for flood protection above*. See figure 18).

Identity Belize City needs to build an identity that will distinguish Belize central city as a water and a green city spurring revitalization through environmental sustainability and leadership, to improve the management of risk flooding through multifunctional eco-infrastructures, their ecosystem services, and the historical landscape of aquatic areas (channels, etc) that could act as multifunctional infrastructures for storm water drainage, encouraging at the same time, biodiversity in downtown, the creation of new habitats, and areas of public open space.

Figure 18: Land subsidence



Source: C.H.Betancourth, 2011

The city should begin to create a green and blue network through a comprehensive landscaping and tree planting program. Sustainability could be maximized across downtown through the use of living roofs that supplements and revitalizes the old tradition for water harvesting in wooden “vats” that is in danger of disappearing (Figure 19).

Figure 19: revitalizing the old tradition of rain harvesting with green living roofs



Source: C.H.Betancourth, 2011

Precinct development It is important to develop programs and policies for precinct development, particularly the south side areas of the central city. The *South Side Poverty Alleviation project: Phase 2 Infrastructure works* (under Ministry of works), and its 10 roads and canals projects should be redesigned as an accessibility and mobility multimodal network system; and residential development should be encouraged and developed around this network (for an illustration, see the concept proposal for Collet canal in, *Investment opportunities and projects # 1 above*).

Precinct planning will bring together national government agencies and the local City Council to consider a precinct’s development potential (Say the proposals above for new urban lands along Chetumal street, as well as the proposals for Collect canal) and coordinate efficient delivery of key infrastructure for water, sewerage, power, roads, public transport, education and

other services. The National Government will work with City Council to decide the future zoning and development controls for those precincts by looking at factors such as conservation, housing, employment areas and key transport routes

Business Retention and Development Program A Program should be established that encourages the location of new businesses to downtown Belize City and fosters the retention of those that are already there (for instance: in Albert and Regent-streets). Projects under this Program may include: examining the distribution of office space; exploring the creation of a downtown development advocate and authority; a new retail improvement program; a marketing campaign focusing on international and national businesses clients using the master plan as a promotional tool.

Building institutional Capacity for Urban Planning

As Belize experiences continued growth and urbanization, there is a realization of the need for integrated and collaborative urban and regional planning. Virtually every city and town in Belize is in need of comprehensive planning to address the challenges above (such as growth and change, energy production, natural disasters, and climate change). The Belize National Government should (in partnership with The Inter-American Development Bank (IDB)) advance the planning movement and build sustainable communities of lasting value in Belize, and in Belize City in particular. It should promote urban planning as a tool to foster sustainable, climate-proof development across the country. It should lead activities and programs designed to advance institutional capacity and improve long-term access to planning expertise and technical assistance.

The Government urban planning initiative should be designed to mobilize support for planning as a means of addressing the challenges above and build a foundation for improving long-term access to planning expertise and technical assistance through developing institutional capacity. The specific goals of the urban planning initiative are to:

- Build urban planning capacity for government officials in Belize City;
- Provide technical and educational support;
- Identify useful and transferable programs and projects and
- Continue engaging officials with effective knowledge-sharing strategies;
- Support and develop governmental, non-governmental, and academic civil society and planning institutions.

This project to build institutional capacity in urban planning may focus on institutional development and capacity-building of the Urban Planning component of the local government of Belize City. The objectives of the project are to:

- Support the process of the implementation of the master plan;
- Train and build the capacity of the staff in improved urban development and management and GIS and 3D technologies;

- Specify the basic planning standards in cooperation with the national authorities and revise planning laws as well as ordinances to include participatory approaches to ensure sustainable development.

Some of the activities may include:

- Evaluation and implementation of the 2010-2030 draft master-plan
- Setting-up of operational geographical information management systems (GIS) in the planning main office and familiarizing the staff with the operation of the equipment.
- Support to the launching of the master plan, which will be executed nationally and locally.
- Update urban planning approaches utilizing participatory decision-making and planning techniques.

This downtown revitalization project is deemed to be one of the most significant steps taken in the metropolitan area (Greater Belize City) to promote urban consolidation in Belize City.

SECTION 11

The Implementation agenda

It is necessary to determine which of the main four development areas above (section 8) are experiencing the most important transformations (with premises slowly but surely making way for a mix of housing and smaller-scale enterprises that have ties with the city center) and then determine how this process can be supported (e.g., through improved connections to the transport network to the west and to the north, as well as with the multimodal network proposed for downtown high quality accessibility and mobility), and how it could serve as a model for the other development areas.

The implementation agenda will set out the urban cohesion of these projects and their feasibility. It will be used as a basis to strike agreements with regard to the phasing and scale of projects. It will make a distinction between plans and projects that can be realized over the coming decade and those plans and projects that only come into play thereafter. In the latter case it also concerns plans with a relatively long preparation time, as is often the case with major infrastructure projects or the relocation of urban functions and activities.

The reason for one development following on the tails of another is usually rooted in the nature of those developments. For example, it is preferable to lay out the infrastructure first, followed by actual construction of residential development. The pace of restructuring and transformation is also dependent on many factors, not least the prevailing economic circumstances. It is therefore sometimes necessary to prioritize the transformation of one site before another, but factors such as accessibility and availability of sites for relocating urban functions and activity may also play a part. The mixing of business activity with residential use is in certain cases only possible after the repositioning of environmental contours or taking noise-limiting measures.

Some instruments for implementation

One of the tasks that the recommended vision scenario poses to Belize City is to **intensify land use within the city while at the same time keeping the surrounding landscape open**. This leads to some important basic principles: the green and blue spaces in and around the city require robust protection, while other parts of the city are optimally developed. Densification also leads to transformation (often gradual) and a greater mix of functions. That places demands on the existing infrastructure and public space. Respecting Belize City's wealth of natural-cultural-historical treasures is an important precondition in this equation.

Instrument for the preservation of open spaces and green and blue landscape networks

The green and blue landscapes in and around the city contributes significantly to the quality of Belize City's living and working environment. It is one of the reasons why Belize City will become more popular as a place of residence and as a business location. It is important to prescribe in a document (***The Main green and blue infrastructure for Belize City***) the minimum amount of green and blue spaces that Belize City wants to safeguard.

The green and blue zones, spaces and landscapes to be included within this document will acquire a certain status. The ambition is to make additional investments in these areas over the coming years. Over against this, the construction or surfacing over (e.g. for roads) the green and blue spaces within this document will be subject to strict rules.

Densification

There few tall buildings and constructions in Belize City (along Coney drive and around the area of the Radisson hotel; as well as around the mule park and along Orange street; some high blocks are also appearing in the area of Collet canal). The city now features a number of tall building clusters, which people may use for orientation when approaching the city from the surrounding landscape. Besides being a means to intensify land use, tall buildings are also a powerful urban development instrument. For example, it could be employed along the river and waterfront, where towers on either side of the river may enhance the spatial relationship between the two parts of the city (See, proposal *business-park, section 10, investment projects #1*).

An important instrument is a ***tall building map*** where one can see **where high-rise is being encouraged** from the viewpoint of optimum land use or because there is reason for a hefty landscape-related or urban development accent (as it may be the case in the highly visible zones alongside the northern highway). The map would also allow one to see where tall buildings may be discouraged, and some smaller buildings encouraged. For instance: in areas where there is the danger of a negative impact on the areas of exceptional value, such as the city center's protected historical cityscape and the sections of the historical ring of canals. The tall building policy may be strict, especially in these zones, yet with some degree of flexibility attached to it

Thus the recommended vision scenario is not just the source of inspiration; it is an attempt to organize well the city's entire territory and functional area from a spatial planning perspective. The recommended combination of scenarios constitutes a vision scenario for the future of the city, as well as a framework for the evaluation and analysis of ongoing National spatial and infrastructures plans and projects; and, the basis for setting the city's investment agendas. It also

should incorporate-in these implementation instruments-, **the joint agreements** about its realization as well, in terms of a timeline as well as in terms of legislation and joint agreements.

As noted, it is impossible to do everything everywhere all at once. Sometimes it is necessary to curb activities at one location in order to offer them a good chance of attaining their full development elsewhere, thus encouraging the right function in the right place at the right time

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