



National Spatial Development Strategy for Trinidad and Tobago

Method Statement and
Integrated Sustainability
Appraisal



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INTRODUCTION

The purpose of this document is to explain how the National Spatial Development Strategy (NSDS) was developed and, particularly, to explain the process of Integrated Sustainability Appraisal and how that method was used for evaluating objectives and identifying a preferred strategy approach.

Preparation of the NSDS was undertaken in two interconnected stages. The first stage involved:

- Situational Analysis, gathering and analysing the most up-to-date information and data available on relevant matters at a national level;
- a Project Realignment process, through which relevant proposals and information in the 14 regional development plans produced by the Municipal Corporations in Trinidad in 2009 / 2010 were analysed to identify any inconsistencies or conflicts and to suggest an appropriate approach to achieve harmonisation.

The reports produced through this first stage of work provided the core “evidence” on which the formulation of an appropriate strategy could be based.

The second stage involved consideration of the information gathered in stage one, using that evidence base to inform the development of the NSDS by:

- identifying key issues for the NSDS;
- formulating Sustainability Objectives against which the sustainability performance of the draft NSDS could subsequently be assessed (using a process of Integrated Sustainability Appraisal);
- developing a Vision and a set of Objectives on which to base the further development of the NSDS (these are set out and explained in the NSDS Core Strategy and Regional Guidance);
- consulting Key Stakeholders;
- formulating Alternative Spatial Development Options;
- appraising the Objectives and Alternative Spatial Development Options against the Sustainability Objectives;
- selecting and developing the Preferred Spatial Development Approach (see NSDS Core Strategy and Regional Guidance for details);
- formulating appropriate Policies (see NSDS Core Strategy and Regional Guidance for details);
- formulating Regional Planning Guidance (see NSDS Core Strategy and Regional Guidance for details).

The process through which the NSDS has been produced and will be monitored and reviewed is illustrated in Figure 1. It is an iterative, cyclical process of fact gathering, analysis, policy formulation, implementation, monitoring and review, with stakeholder participation at its core. In the diagram, the process is illustrated in the context of answering a sequence of four questions:

- What is happening?
- What matters most?
- What can be done about it?
- Is it working?

It is expected that a similar process will be undertaken as more detailed Spatial Development Plans for Tobago and the regions of Trinidad are reviewed and prepared, and that these in turn will feed back into the on-going monitoring and review of the NSDS.

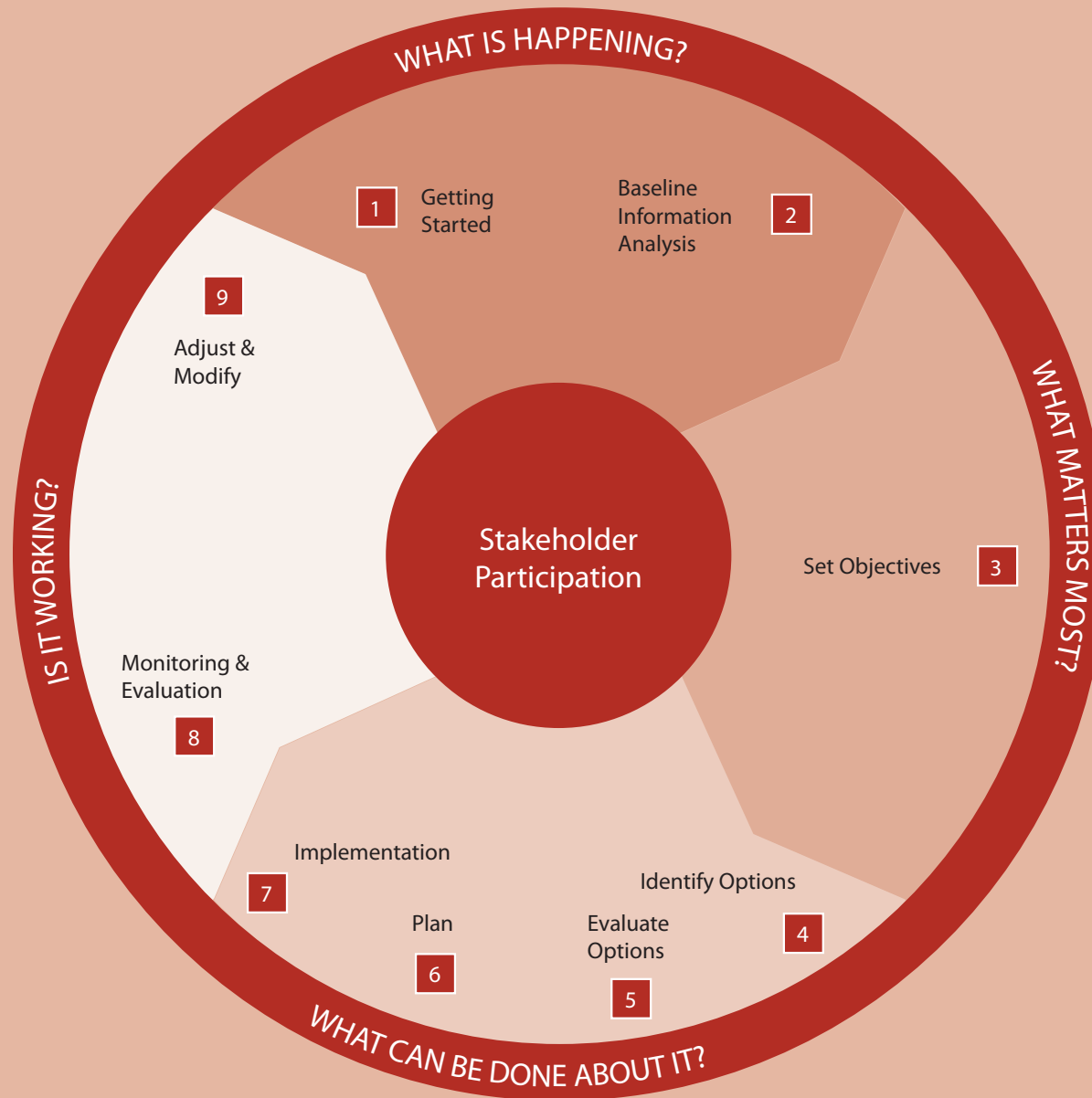


Figure 1: The plan making cycle

2. AN OVERVIEW OF THE CONCEPT OF SUSTAINABLE DEVELOPMENT

Sustainable development has been defined in many ways, but the most frequently quoted definition is from Our Common Future, also known as the Brundtland Report, published by the World Commission on Environment and Development in 1987. The Brundtland Report included the “classic” definition of sustainable development: “Development which meets the needs of the present without compromising the ability of future generations to meet their own needs”.

From this definition the concept of the three pillars of sustainable development emerged:

1. economic development;
2. social equity, and
3. environmental protection.

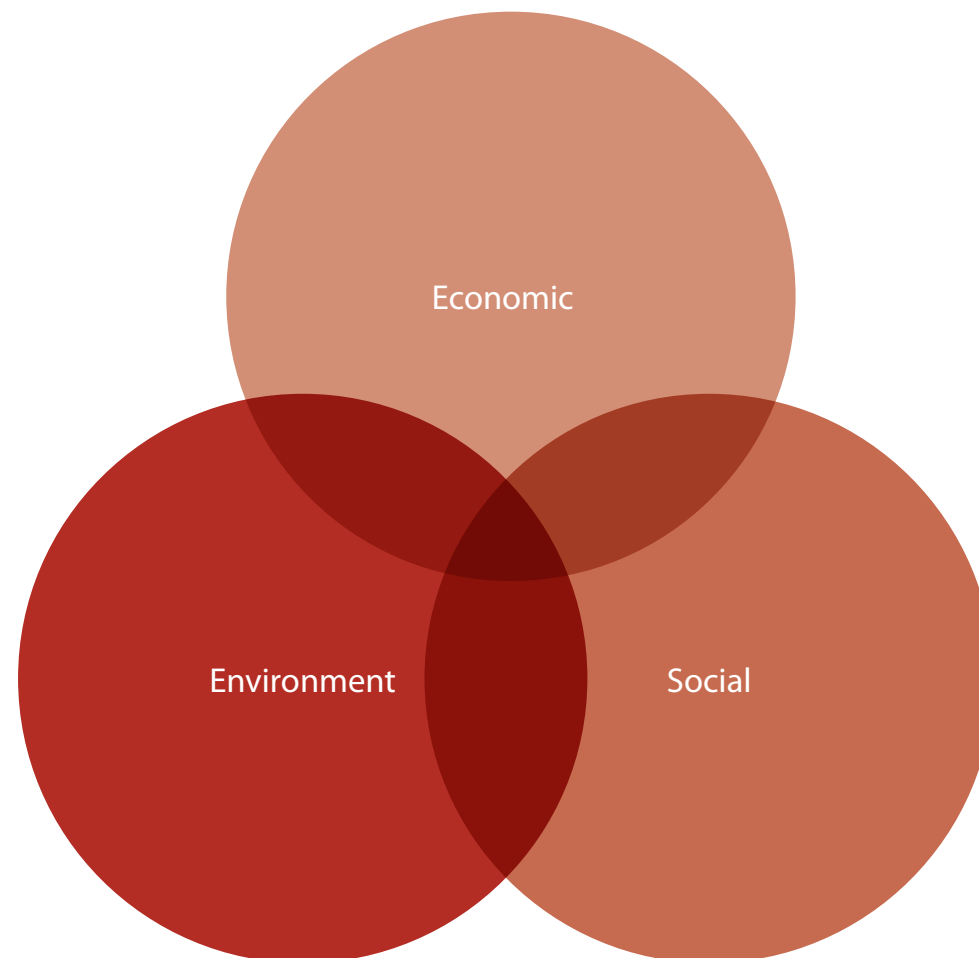


Figure 2: The three pillars of sustainable development

3. THE ROLE OF INTEGRATED SUSTAINABILITY APPRAISAL (ISA)

3.1 Overview

The purpose of the ISA process is to promote sustainable development through better integration of sustainability considerations into the preparation of Spatial Development Plans and strategies. The methodology has evolved from the framework established by the European Commission's Strategic Environmental Directive (SEA Directive), which requires an "assessment of the effects of certain plans and programmes on the environment" (emphasis added). ISA develops this methodology further and incorporates the two remaining pillars of sustainable development – economic development and social equity.

ISA is an iterative process that identifies and reports on the likely significant effects of the strategy and the extent to which implementation will achieve the social, environmental and economic objectives by which sustainable development can be defined. It provides a means of translating sustainability objectives for the area into sustainable planning policies and should reflect global, national, regional and local sustainability problems and issues. The process involves stages by which the content of the emerging strategy is appraised against a series of sustainability objectives.

ISA is underpinned by an acknowledgment that the environment and services provided by it – also referred to as ecosystems services – result in both economic and societal benefits. Some of these ecosystem services are well known, including food and fuel provision and the cultural services that provide benefit to people through recreation and appreciation of nature. Other services provided by ecosystems are not so well known and, generally, have rarely been incorporated into policy appraisal. These include the regulation of the climate, purification of air and water, flood protection, soil formation and nutrient cycling. The ISA methodology provides a broader framework, which allows a shift in emphasis from a focus mainly on valuing environmental damage caused by spatial strategies, to highlighting the potential changes in the services provided by the natural environment.

The main functions of ISA can be summarised as follows. ISA:

- plays an integral part in the spatial strategy preparation process;
- performs a key role in providing a sound evidence base for the spatial strategy;
- provides a framework to assess the objectives of the strategy against overarching Sustainability Objectives;
- informs the decision-making process and facilitates the evaluation of alternatives;
- helps to demonstrate that the strategy is the most appropriate given the reasonable alternatives; and,
- provides the foundations for a monitoring framework for the implementation and significant effects of the strategy.

3.2 Key Stages

The stages of the ISA process are summarised in the table that follows:

Stage A	<ol style="list-style-type: none">1. Setting the context2. Collecting and reviewing baseline information3. Identifying sustainability issues through stakeholder involvement4. Developing Sustainability Objectives and indicators5. Testing the emerging Sustainability Objectives against each other to identify any conflicts
Stage B	<ol style="list-style-type: none">1. Testing the NSDS objectives against the Sustainability Objectives established at Stage A2. Developing and refining the NSDS objectives where conflicts with the Sustainability Objectives have been identified
Stage C	<ol style="list-style-type: none">1. Appraising predicted effects of the alternative spatial development options against the Sustainability Objectives to identify a preferred option2. Considering ways to mitigate identified adverse effects and maximise beneficial impacts3. Proposing measures to monitor the effects of implementing the NSDS4. Consulting on the NSDS and appraising any changes against Sustainability Objectives
Stage D	<ol style="list-style-type: none">1. Monitoring and responding to the effects of the NSDS

Table 1: Key Stages of Integrated Sustainability Appraisal

4. STAGE A: DEVELOPING SUSTAINABILITY OBJECTIVES

4.1 Derivation of Sustainability Objectives

Sustainability issues can be any problems or uncertainties, which need to be understood and addressed before the plan can be confidently considered sustainable. These are commonly set out in a series of objectives – the Sustainability Objectives – that are used as a test of sustainability or prompts for questions about sustainability. Sustainability Objectives are a series of high-level objectives, which are measurable and linked to a number of indicators. They vary from the objectives of a plan or strategy, which typically are more specific and / or have a spatial element.

Sustainability Objectives should ensure that each of the three pillars of sustainability are reflected within the group of objectives and are derived from a number of key sources as shown in Figure 3.

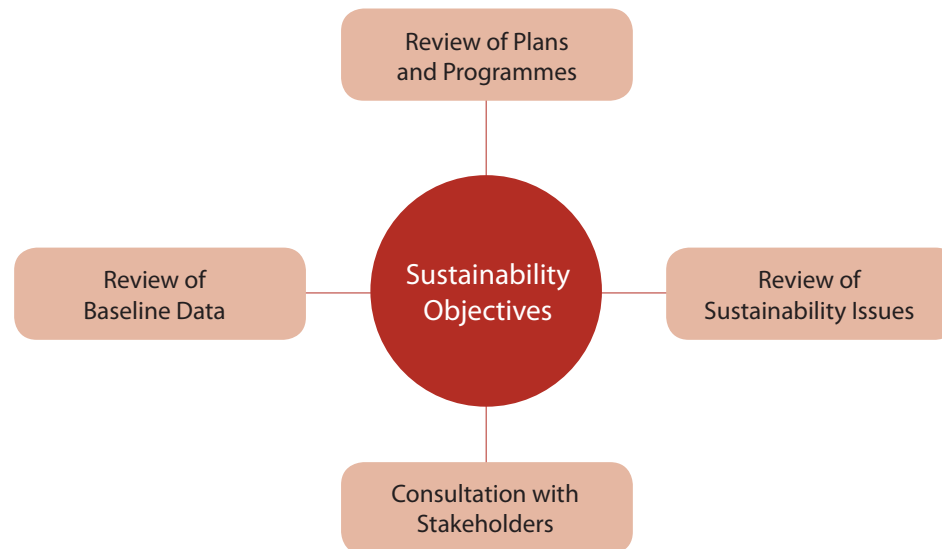


Figure 3: Sources informing the Sustainability Objectives

For consistency, the Sustainability Objectives relate to the main issues identified in Working for Sustainable Development in Trinidad and Tobago (June 2012, Ministry of Planning and the Economy). The concept of sustainable development is built into the Government’s underpinning policy framework, the Medium Term Policy Framework (MTPF), which sets out the seven pillars of development for the nation. The aim is to ensure linkages between the emerging Sustainability Objectives and the overarching seven pillars of development.

Stage A of the ISA methodology involved a workshop, on 23 October 2012, for stakeholders who helped to identify challenges, issues and opportunities requiring consideration within the NSDS. These discussions were essential in establishing the baseline information from which the Sustainability Objectives have been defined and refined.

4.2 The Sustainability Objectives

The Sustainability Objectives for the ISA Framework are set out in Table 4. The objectives have been divided into economic, social and environmental themes in accordance with the three pillars of sustainable development.

The Sustainability Objectives have been paired with a series of decision-making criteria and indicators which will allow the objectives to be measured and the implementation of the NSDS to be monitored at a number of key stages following its publication. The proposed decision-making criteria and their partner indicators are included at Annex 1.

Economic

1. To encourage strong, diverse and sustainable economic growth;
2. To create high, stable and equitable levels of employment;
3. To enable all children, young people and adults to achieve their full potential and to maximise their skills levels;

Social

4. To ensure that everyone in Trinidad and Tobago has the opportunity of a decent and affordable home as part of a community;
5. To improve quality of life;
6. To improve equity and social justice and promote inclusion and access;
7. To create and maintain safer and more secure communities;
8. To ensure that development that meets the needs of today should not restrict the choices and opportunities for future generations;
9. To promote public transport and walking and cycling as realistic alternatives to the private car;
10. To improve health, reduce health inequalities and promote healthy lifestyles;

Environmental

11. To reduce vulnerability to natural and man-made disasters;
12. To address the causes and effects of climate change and minimise greenhouse gas emissions;
13. To minimise energy use, support renewable energy production and encourage the prudent use of natural resources;
14. To minimise the production of waste and to maximise opportunities for recycling;
15. To protect and enhance the built quality of urban areas, villages and the spaces within them;
16. To enhance the value of ecosystems services;
17. To protect and enhance the biodiversity and geodiversity of the natural environment;
18. To improve and/or retain the quality of watercourses, coastal and marine resources, air quality and soil quality and achieve sustainable use of water resources;

Table 2: Sustainability Objectives

4.3 Compatibility of the Sustainability Objectives

A compatibility assessment has been undertaken to highlight the incompatibilities or conflicts between the Sustainability Objectives, recognising that tensions will always exist between some (e.g. employment generation versus environmental protection). The aim of this exercise is to clarify these issues so that subsequent decisions are robust and mitigation or alternatives can be considered if necessary. A compatibility matrix is shown below in Table 3 and commentary on those objectives found to have a potential impact on each other follows.

		Sustainability Objectives																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	
Sustainability Objectives	1		✓	✓	✓	✓	✓	✓	✓	-	✓	✓	•	✓	-	-	•	•	•	
	2			✓	✓	✓	✓	✓	✓	✓	✓	-	-	✓	-	-	•	•	•	
	3				✓	✓	✓	✓	✓	-	✓	-	-	✓	-	-	-	-	-	
	4					✓	✓	✓	✓	✓	✓	✓	-	•	•	✓	-	-	-	
	5						✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	
	6							✓	✓	✓	✓	✓	-	-	-	✓	✓	✓	✓	
	7								✓	✓	✓	✓	✓	-	-	✓	-	-	-	
	8									✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	9										✓	•	✓	✓	-	✓	✓	✓	✓	
	10												-	✓	✓	-	✓	✓	-	✓
	11													✓	✓	✓	✓	-	✓	✓
	12														✓	✓	✓	-	✓	✓
	13															✓	-	✓	✓	✓
	14																-	✓	✓	✓
	15																	✓	✓	✓
	16																		✓	✓
	17																			✓
	18																			

•	Possible Inconsistency	✓	Complementing Objectives	-	No Impact/ Neutral
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Table 3: Compatibility Assessment of Sustainability Objectives

Objectives with inconsistencies	Comments
1 and 12	Establishing new businesses and employment areas may increase the use of the private car if not developed in sustainable locations and / or realistic alternatives to the private car are not easily accessible to the majority. To reduce greenhouse gas emissions and the wider impact on the environment, careful consideration should be given within the strategy to the location of new employment-generating development.
1 and 16	Trinidad and Tobago's rich and diverse natural environment provides a wide range of "ecosystem services" and the location of new development needs careful consideration to ensure that Trinidad and Tobago's natural resources and services provided by the ecosystem are not harmed by poorly planned and unsustainable development choices.
1 and 17	New development within rural areas has the potential to cause harm to biodiversity and geodiversity. Employment-generating development is likely to be particularly 'land hungry' and, therefore, the negative impacts on the environment exacerbated. The siting and location of new development warrants careful consideration and the use of previously developed land and / or the re-use of existing buildings should be encouraged where appropriate to mitigate any adverse impacts.
1 and 18	Potential inconsistencies caused by an expected increased use of private cars and the possible negative impacts on air quality. Exploiting the land for economic growth (e.g petrochemical industry, farming, yachting, ship building and maintenance, and dockyard services) could have a significant impact on the nation's water systems.
2 and 16	As with 1 and 16. Trinidad and Tobago's rich and diverse natural environment provides a wide range of "ecosystem services" and the location of new development needs careful consideration to ensure that Trinidad and Tobago's natural resources and services provided by the ecosystem are not harmed by poorly planned and unsustainable development choices.
2 and 17	As with 1 and 17. New development within rural areas has the potential to cause harm to biodiversity and geodiversity. Employment generating development is likely to be particularly 'land hungry' and, therefore, the negative impacts on the environment exacerbated. The siting and location of new development warrants careful consideration and the use of previously developed land and / or the re-use of existing buildings should be encouraged where appropriate to mitigate any adverse impacts.
2 and 18	Encouraging more jobs may attract more journeys via private car, therefore having a negative effect on the environment; air quality in particular. However encouraging more sustainable forms of transport will help mitigate the main negative environmental impacts.
4 and 13	Possible inconsistency as 'new build' housing may contribute to the use of more natural resources (depending on construction techniques, methods and use of materials), however if new build homes are energy-efficient then housing needs can be addressed in a sustainable way.
4 and 14	Increasing the number of new homes will lead to a rise in the amount of household waste produced. This could be mitigated by the increase of recycling initiatives.

Objectives with inconsistencies	Comments
9 and 11	Trinidad and Tobago, as a SIDS, is particularly vulnerable to severe consequences of climate change including, for example, sea level rise, increased flooding, increased frequency and intensity of hurricanes, hillside erosion, earthquakes and landslides. Coastal areas are particularly vulnerable yet these areas contain the largest concentrations of population and employment opportunities. Encouraging walking and cycling generally requires people to live within these areas and, therefore, a degree of risk will remain. Negative impacts can be reduced by Trinidad and Tobago's Comprehensive Disaster Management Policy Framework (CDMPF).

Table 4: Inconsistencies between Sustainability Objectives

Even though potential incompatibilities exist, it is not considered necessary to rewrite the Sustainability Objectives on these grounds alone. The above table confirms that many of these conflicts can be mitigated and it is important to emphasise that the strong compatibility between the majority of the objectives, significantly outweighs some of the minor inconsistencies that have been highlighted.

4.4 Assessment against the Sustainability Objectives

The established Sustainability Objectives provide the consistent basis for describing, analysing and comparing the sustainability effects of both the NSDS objectives and development approaches. The relationship and the significance of the interaction between each of these aspects and the Sustainability Objectives have been separately assessed on the basis of the conditions set out in the table below. A traffic light coding system has been adopted to give a clear visual reference to positive and negative impacts presented in the relevant compatibility matrix tables.

Assessment	Description	Symbol
Major Positive Impact	The proposed NSDS objective / approach contributes significantly to the achievement of the Sustainability Objective.	++
Minor Positive Impact	The proposed NSDS objective / approach contributes to the achievement of the Sustainability Objective but not significantly.	+
Neutral / No relationship	The proposed NSDS objective / approach does not have any effect on the achievement of the Sustainability Objective, the relationship is negligible or there is no clear relationship.	0
Minor Negative Impact	The proposed NSDS objective / approach detracts from the achievement of the Sustainability Objective but not significantly.	-
Major Negative Impact	The proposed NSDS objective / approach detracts significantly from the achievement of the Sustainability Objective.	--
Uncertain	The proposed NSDS objective / approach has an uncertain relationship to the Sustainability Objective or the relationship is dependent on the way in which the aspect is managed. In addition, insufficient information may be available to enable an assessment being made.	?

Table 5: Impact Assessment

The assessments have been based on the information available at the time and on the professional judgment of the panel of assessors. The assessment against each of the Sustainability Objectives is based on a weighting exercise where both positive and negative impacts are assessed in terms of probability, duration, frequency and reversibility. The following issues are considered:

- Effect: What is the overall impact when assessed against the individual Sustainability Objective?
- Likelihood: How likely is it that the effect will actually occur?
- Scale: What is the potential scale of the effect, considering the geographical area and size of the population likely to be affected?
- Duration: Are the potential effects likely to be permanent or temporary?
- Timing: Are the potential effects short, medium or long term?



5. STAGE B: TESTING OBJECTIVES OF THE NSDS AGAINST THE SUSTAINABILITY OBJECTIVES

5.1 Assessment of NSDS Objectives

The main output of Stage B of the ISA methodology is an assessment of the objectives of the NSDS against the Sustainability Objectives to establish the interrelated economic, social and environmental effects of the Strategy – this is known as the ISA Framework.

The objectives of the NSDS (Table 6) set out what it is aiming to achieve in spatial and land use planning terms. It is important that these objectives are in accordance with sustainability principles, so the aim of testing the NSDS objectives against the Sustainability Objectives is to check that this is the case. Where this exercise leads to the identification of possible sources of conflict, consideration can then be given to ways in which these potential sources of conflict could be avoided or mitigated. Table 7 shows the Compatibility Matrix.

		Sustainability Objectives																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
NSDS Objectives	1	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++	++
	2	0	0	+	-	++	0	0	++	++	+	++	++	++	++	+	++	++	++
	3	-	0	0	0	+	0	+	++	++	+	++	++	++	++	+	++	++	++
	4	+	++	++	++	++	++	++	++	++	++	+	++	++	+	++	++	+	+
	5	++	++	++	+	+	++	0	++	0	-	0	+	+	0	0	+	0	0
	6	++	++	++	+	+	+	0	++	+	+	++	++	++	+	0	++	++	++
	7	0	0	0	-	0	0	0	++	0	0	+	++	++	++	+	+	+	++
	8	++	++	++	+	++	+	+	++	+	0	+	+	+	0	-	-	-	-
	9	++	++	+	0	++	+	0	++	0	++	++	++	++	0	0	-	-	-
	10	++	++	++	++	++	++	++	++	++	++	+	++	++	0	0	-	-	-
	11	++	++	++	++	++	++	++	++	++	++	++	+	+	0	++	+	0	0
	12	++	++	++	++	++	++	++	++	++	++	+	+	0	-	++	-	-	-
	13	0	0	0	0	++	+	+	++	0	0	0	0	0	0	++	0	0	0

Table 6: Compatibility Matrix of the sustainability objectives and the NSDS objectives

NSDS Objective	Sustainability Objective
1. Aiming for sustainable development	1. To encourage strong, diverse and sustainable economic growth;
2. Using our natural resources sustainably	2. To create high, stable and equitable levels of employment;
3. Meeting the challenges of climate change	3. To enable all children, young people and adults to achieve their full potential and to maximise their skills levels;
4. Moving towards sustainable transport	4. To ensure that everyone in Trinidad and Tobago has the opportunity of a decent and affordable home as part of a community;
5. Making the most of information and communication technologies (ICT)	5. To improve quality of life;
6. Generating and using energy sustainably	6. To improve equity and social justice and promote inclusion and access;
7. Managing waste safely and efficiently	7. To create and maintain safer and more secure communities;
8. Building a competitive, innovation-driven economy	8. To ensure that development that meets the needs of today should not restrict the choices and opportunities for future generations;
9. Achieving food security	9. To promote public transport and walking and cycling as realistic alternatives to the private car;
10. Building strong, diverse regions	10. To improve health, reduce health inequalities and promote healthy lifestyles;
11. Building places for people	11. To reduce vulnerability to natural and man-made disasters;
12. Delivering the homes we need	12. To address the causes and effects of climate change and minimise greenhouse gas emissions;
13. Valuing our cultural heritage	13. To minimise energy use, support renewable energy production and encourage the prudent use of natural resources;
	14. To minimise the production of waste and to maximise opportunities for recycling;
	15. To protect and enhance the built quality of urban areas, villages and the spaces within them;
	16. To enhance the value of ecosystems services;
	17. To protect and enhance the biodiversity and geodiversity of the natural environment;
	18. To improve and/or retain the quality of watercourses, coastal and marine resources, air quality and soil quality and achieve sustainable use of water resources;

Table 7: The objectives of the National Spatial Development Strategy for Trinidad and Tobago



5.2 Review of identified inconsistencies between the Sustainability Objectives and NSDS Objectives

There were 19 potentially conflicting interactions identified. Table 8 briefly explains the rationale behind their identification and also sets out potential mitigation, which will reduce the conflict and the identified potential negative impacts. These possible conflicts have been taken into account in the development and refinement of the NSDS.

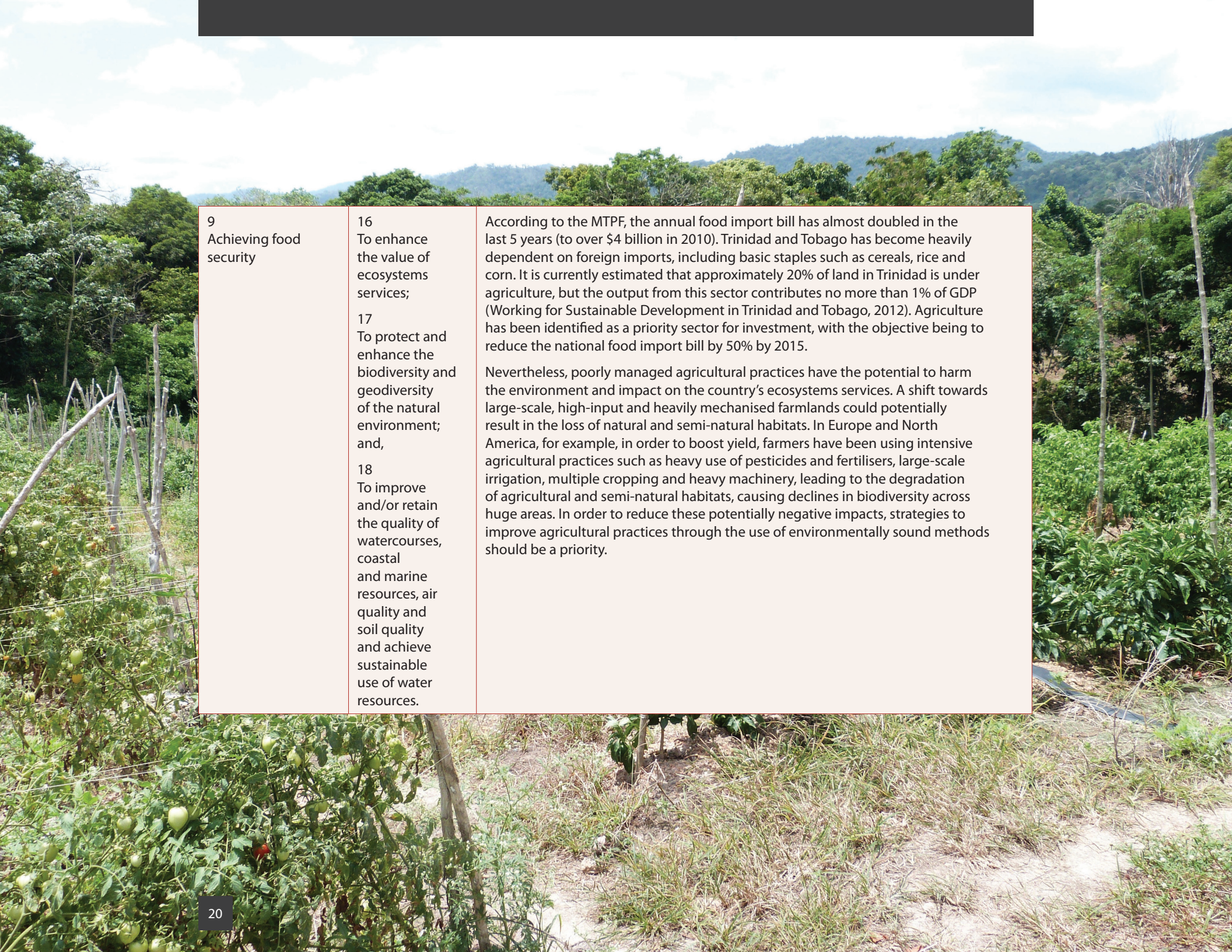
NSDS Objective	Sustainability Objective	Comments on inconsistencies
2 Using natural resources sustainably.	4 To ensure that everyone in Trinidad and Tobago has the opportunity of a decent and affordable home as part of a community.	Possible minor negative impact as the construction of new housing will contribute to the use of more natural resources. The impact on the natural resources and the Twin Island State's ecosystems will depend on construction techniques, methods and use of materials. Measures within the NSDS, which are underpinned by recognition of the value of natural resources and the services provided by our ecosystems, will be crucial in ensuring optimal and sustainable use of natural resources.
3 Meeting the challenges of climate change.	1 To encourage strong, diverse and sustainable economic growth.	<p>Although uncertainties remain in projecting the extent of both climate change and its impacts, it is clear that places and people will be exposed to significant climate change driven impacts. While the global community has committed itself to holding warming below 2°C to prevent "dangerous" climate change, Small Island Developing States (SIDS) and Least Developed Countries (LDCs) have identified an increase of above just 1.5°C as posing serious threats to their own development and, in some cases, survival. SIDs have characteristics which make them especially vulnerable to the effects of climate change, sea-level rise, and extreme events. According to the International Panel on Climate Change (IPCC) Third Assessment Report (2001) their limited size, proneness to natural hazards and external shocks intensify this vulnerability. Trinidad and Tobago is particularly vulnerable to the severe consequences of climate change and, as outlined in the MTPF, the National Climate Change Policy 2010 sets out a strategy for mitigating climate change and taking the steps to adapt to it.</p> <p>The impacts of climate change could potentially harm economic performance and, therefore, a minor negative impact has been identified in the Compatibility Assessment. Nevertheless, mitigation can overcome many of the problems envisaged. Such measures include: ensuring vulnerability to flooding is considered whenever development is proposed; preventing development on land which is unstable or likely to become unstable; ensuring storm resilient measures are incorporated into each development, for example.</p>

<p>5 Making the most of information and communication technologies (ICT).</p>	<p>10 To improve health, reduce health inequalities and promote healthy lifestyles.</p>	<p>Potential minor negative impact as improvements in ICT could result in less need for people to undertake daily activities through walking and cycling if services like online shopping and home delivery become readily available. Information and communications technologies have improved living standards around the world but the increased amount of time that people devote to using computers, watching TV and playing video games - so-called “screen time” - is a significant factor in the global rise of obesity¹.</p> <p>Nevertheless, the Compatibility Matrix has shown that, on balance, the objectives of the NSDS have a positive relationship with this Sustainability Objective and the strategy will help to improve health, reduce health inequalities and promote healthy lifestyles.</p>
<p>7 Managing waste safely and efficiently.</p>	<p>4 To ensure that everyone in Trinidad and Tobago has the opportunity of a decent and affordable home as part of a community.</p>	<p>Increasing the number of new homes will increase the amount of household waste produced. The strategies within the NSDS, which underpin the objective of managing waste safely and efficiently, will mitigate the impacts. Analysis has shown that household waste currently represents two thirds of the overall waste generated in Trinidad and well over 80% of this is recyclable (SWM Policy - Integrated Waste Management, Egarr & Associates, Feb 2012). Continuing dependence on landfill is not sustainable – or indeed viable – for the country. Accordingly, the NSDS and wider strategic waste management policies will seek to manage the generation, treatment and disposal of both solid and liquid waste in ways that safeguard human health and protect the environment.</p>



¹ See “Waistlines of the World: The Effect of Information and Communications Technology on Obesity” available at <http://www.milkeninstitute.org/publications/publications.taf?function=detail&ID=38801357&cat=resrep>

<p>8 Building a competitive, innovation-driven economy</p>	<p>15 To protect and enhance the built quality of urban areas, villages and the spaces within them;</p> <p>16 To enhance the value of ecosystems services;</p> <p>17 To protect and enhance the biodiversity and geodiversity of the natural environment; and,</p> <p>18 To improve and/or retain the quality of watercourses, coastal and marine resources, air quality and soil quality and achieve sustainable use of water resources.</p>	<p>These conflicts highlight the inherent tensions between economic and environmental themed objectives. However, if considered from the outset and in an integrated fashion, then the overall goals of environmental conservation and economic development are not inherently conflicting. Historically, much of the economic growth has been underpinned by the irreversible exhaustion of its finite natural resources. In 2011, the energy sector accounted for over 45% of the country's GDP with exploitation of its hydrocarbon resources allowing Trinidad and Tobago to become the most industrialized Caribbean nation. Economic transformation and diversification is strongly articulated in the MTPF and is also a recurring underpinning theme of the NSDS.</p> <p>Development and growth of the new strategic sectors should result in less harm to the environment and the country's ecosystems services than the continued heavy dependence on the country's finite natural resources to fuel economic growth. The Government has recognized the need to ensure better integration between the relationship between the economy and the environment and these aims will need to be reflected and underpinned by the NSDS. It is recognised that the development of a 'green economy' will further contribute to sustainable economic growth with reduced impacts on the environment.</p>
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<p>9 Achieving food security</p>	<p>16 To enhance the value of ecosystems services;</p> <p>17 To protect and enhance the biodiversity and geodiversity of the natural environment; and,</p> <p>18 To improve and/or retain the quality of watercourses, coastal and marine resources, air quality and soil quality and achieve sustainable use of water resources.</p>	<p>According to the MTPF, the annual food import bill has almost doubled in the last 5 years (to over \$4 billion in 2010). Trinidad and Tobago has become heavily dependent on foreign imports, including basic staples such as cereals, rice and corn. It is currently estimated that approximately 20% of land in Trinidad is under agriculture, but the output from this sector contributes no more than 1% of GDP (Working for Sustainable Development in Trinidad and Tobago, 2012). Agriculture has been identified as a priority sector for investment, with the objective being to reduce the national food import bill by 50% by 2015.</p> <p>Nevertheless, poorly managed agricultural practices have the potential to harm the environment and impact on the country's ecosystems services. A shift towards large-scale, high-input and heavily mechanised farmlands could potentially result in the loss of natural and semi-natural habitats. In Europe and North America, for example, in order to boost yield, farmers have been using intensive agricultural practices such as heavy use of pesticides and fertilisers, large-scale irrigation, multiple cropping and heavy machinery, leading to the degradation of agricultural and semi-natural habitats, causing declines in biodiversity across huge areas. In order to reduce these potentially negative impacts, strategies to improve agricultural practices through the use of environmentally sound methods should be a priority.</p>
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<p>10 Building strong, diverse regions</p>	<p>16 To enhance the value of ecosystems services;</p> <p>17 To protect and enhance the biodiversity and geodiversity of the natural environment; and,</p> <p>18 To improve and/or retain the quality of watercourses, coastal and marine resources, air quality and soil quality and achieve sustainable use of water resources.</p>	<p>In line with wider national policies, the NSDS must provide for economic and social growth and well-being in the planning of development across the nation. Additionally, It must ensure that the role of regional and local centres is recognized in planning and development decisions and provide for strengthening of those centres. To reduce the potential negative impact on biodiversity and the nation's ecosystems services, there has to be a wider appreciation of the need to balance the needs of the economy against those of the environment – this is a recurring theme of the NSDS.</p>
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<p>12 Delivering the homes we need</p>	<p>14 To minimise the production of waste and to maximise opportunities for recycling;</p> <p>16 To enhance the value of ecosystems services;</p> <p>17 To protect and enhance the biodiversity and geodiversity of the natural environment; and,</p> <p>18 To improve and/or retain the quality of watercourses, coastal and marine resources, air quality and soil quality and achieve sustainable use of water resources.</p>	<p>The Stage 1 Situational Analysis confirms that the projected need for approximately 90,000 units, as originally identified in the Vision 2020 subcommittee report on housing, remains relevant today. Delivering this amount of new units in an unchecked, unplanned and unsustainable manner could significantly harm the natural environment. Accordingly, the NSDS should seek to ensure that new housing development makes the land and resources relate well to services and infrastructure provision and, crucially, develops previously developed land and “infill” sites in existing urban areas first, where possible – limiting the development of “greenfield” sites.</p>
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Table 8: Review of Identified Inconsistencies

The assessment has demonstrated that the objectives of the NSDS and the Sustainability Objectives are largely compatible. Where inconsistencies and potentially negative impacts have been identified, measures have been recommended to reduce these impacts and these will be taken on board in refining the NSDS.

6. STAGE C: ASSESSING THE EFFECTS OF THE NSDS

6.1 Alternative Spatial Development Options

To explore alternative ways in which the Vision and Objectives might be achieved, three broad Spatial Development Options were formulated and then evaluated through Integrated Sustainability Appraisal so that an optimal approach could be identified.

The alternative Spatial Development Options were derived by considering, in combination:

- the overall direction and requirements of the Vision and Objectives;
- the spatial implications of key social, economic and environmental issues that need to be addressed; and,
- strategic spatial development approaches that have been pursued and / or recommended previously¹.

Through that process, the three alternative Spatial Development Options formulated and evaluated were:

- Concentrated Development;
- Dispersed Development; and,
- Harmonised Regional Development.

The opposing concepts of concentration and dispersal have been common themes throughout the history of development planning in Trinidad and Tobago and the dichotomy appears no less relevant today. They represent, to an extent, two extremes, each of which, when taken at face value, appears to have strengths and weaknesses. The third of the alternative options represents a different approach which, whilst it undoubtedly combines elements of each of the other two, takes cognisance of patterns of development that have happened, as distinct from patterns envisaged in previous plans and proposals, and development issues and challenges that are now of particular relevance.

The ISA process was used to explore those strengths and weaknesses in a structured way, considering in each case the extent to which the particular approach could be expected to deliver sustainable development overall.

A description of each follows, illustrated by map-based diagrams.

² Previous plans and strategies taken into account in formulating the alternative Spatial Development Options included:

- 1984 - National Physical Development Plan;
- 1991 - Tobago Region Physical Development Plan;
- 1999 - National Conceptual Development Plan (draft);
- 2007 - National Spatial Strategy;
- 2010 - Municipal Spatial Development Plans.

Option 1: Concentrated Development

1. Realise full development opportunities in the main urban corridors
 - a. Continue to concentrate most development within and immediately adjacent to the East/West and North/South urban corridors in Trinidad and in Scarborough and South West Tobago;
 - b. Develop “brownfield” and infill sites, densifying where appropriate;
 - c. Improve local environment and quality of life through “urban greening” initiatives;
 - d. Strengthen role and identity of each community (“urban village”) within corridors, promoting development of social, commercial and cultural “hubs,” functioning as community focal points; and,
 - e. Delineate urban settlement limits, outside which non-agricultural / non-essential development will only be permitted in exceptional circumstances.
2. Retain and improve transport infrastructure in the main urban corridors
 - a. Improve efficiency of main highway network, principally through active traffic management measures and junction improvement / rationalisation schemes, rather than by building further road space. Give priority to high-occupancy vehicles on these highways;
 - b. Maintain the Priority Bus Route;
 - c. Promote improved public transport provision; and,
 - d. Improve facilities and priorities for pedestrians (including people with restricted mobility) and cyclists on urban streets.
3. Strengthen role of existing main centres – e.g Port of Spain, Scarborough, San Fernando, Chaguana, Arima, Sangre Grande.
4. Strengthen port-based industrial areas (Point Lisas, La Brea etc.)
 - a. Provide for expansion and enhancement of existing and emergent ports;
 - b. Promote environmental and infrastructural improvements to reduce adverse external impacts, increasing attractiveness of these areas to investors and improving facilities and environmental quality for people who work there and live nearby;
 - c. Improve port and waterfront environments in San Fernando and Scarborough; and,
 - d. Develop maritime support industries further at Chaguaramas and in southern Trinidad.
5. Protect agricultural land and forests from development
 - a. Restrict development in all areas outside defined urban settlement limits to “non-urban” categories;
 - b. Prevent non-agricultural development involving loss of significant agricultural land; and,
 - c. Prevent development involving loss of / harm to Forest Reserves unless deemed essential development and accompanied by compensatory / remedial measures.
6. Restrain development in areas outside main urban corridors
 - a. Restrict development outside defined limits of all settlements outside main urban corridors; and,
 - b. Within urban and rural settlement limits, allow development to meet local needs only.
7. Allow some further development of hillside sites – where necessary to realise opportunities within East/West urban corridor.
8. Invest in upgrading existing infrastructure
 - a. Upgrade physical and social infrastructure serving main urban areas to support additional households and businesses; and,
 - b. Maintain existing physical and social infrastructure outside main urban areas, but only extend or enhance it where justified by special needs and circumstances.
9. Concentrate tourism development in South-West Tobago and Chaguaramas

Concentrated Development

- Major urban centres
- Other urban centres
- Main highway network
- Tourism focus
- Port and related industry
- Maritime services / industry
- Rural areas
- Concentrated urban zones

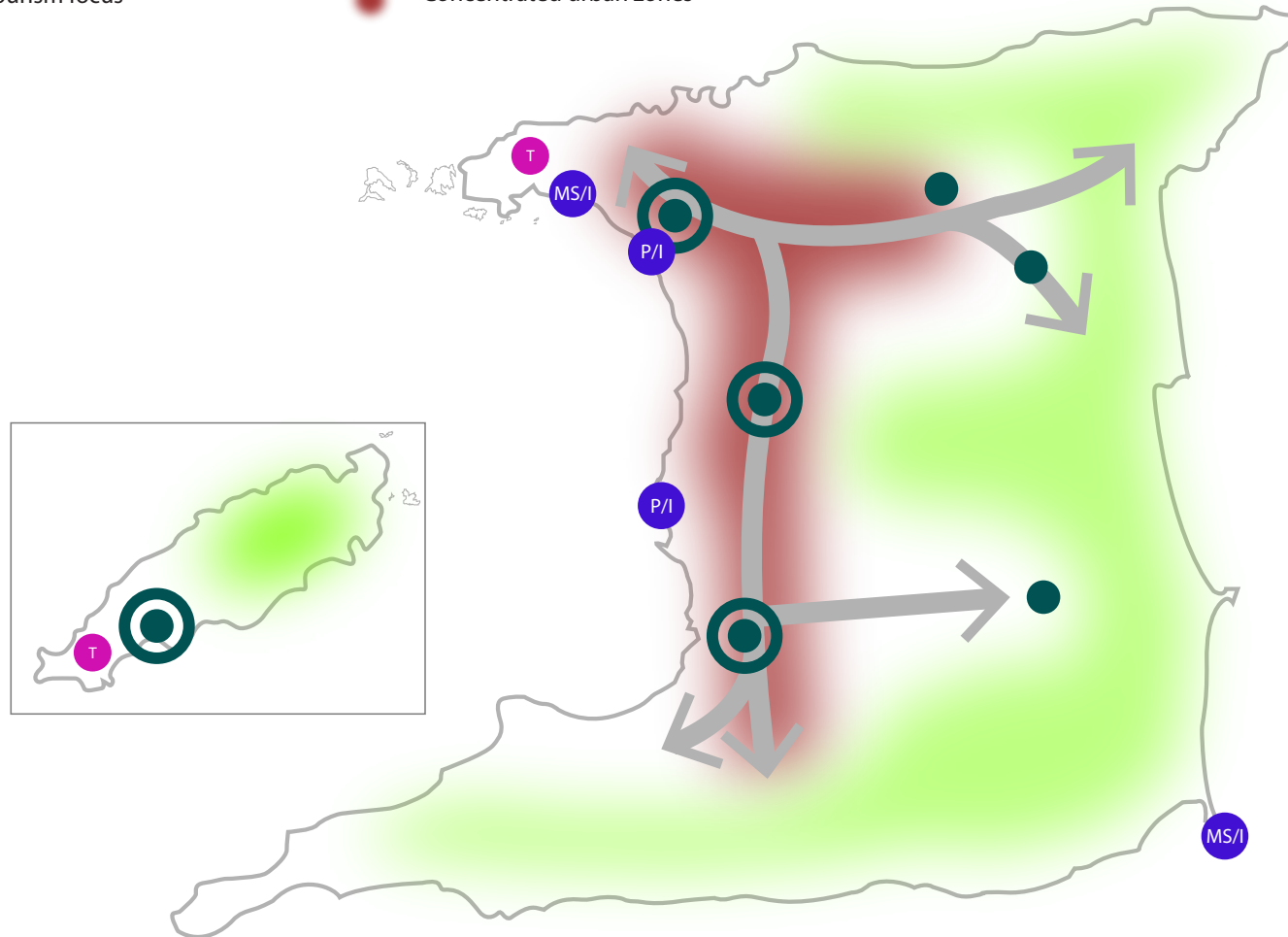



Figure 4: Concentrated development


Option 2: Dispersed Development

1. Restrict further development in existing main urban corridors
 - a. Within the East/West and North/South urban corridors, allow only infill and redevelopment with no increase in densities.
2. Direct further development to regional and local centres across the country
 - a. Establish Growth Poles in central, east and south-west parts of Trinidad and north-east Tobago;
 - b. Promote and provide for industrial, commercial, residential and other development in all settlements outside the main urban corridors, especially around defined Growth Poles; and,
 - c. Allow for substantial expansion of those settlements where adequate services are (or can be made) available.
3. Improve transport links between all centres
 - a. Increase the capacity and coverage of the main road network;
 - b. Prioritise extension of high capacity roads to urban and industrial / commercial centres outside the urban corridors – especially defined Growth Poles - and in other peripheral areas; and,
 - c. Support improved public transport provision where viable.
4. Disperse employment to regional centres
 - a. Disperse government offices and assist other organisations seeking to relocate away from the urban corridors;
 - b. Promote and provide for industrial, commercial, residential and other development in existing and new regional centres outside the main urban corridors, especially in defined Growth Poles; and,
 - c. Promote development of port and port-related development in suitable locations away from the main urban corridors, especially south-west and east coast locations in Trinidad.
5. Develop different tourism sectors dependent on strengths of each region
 - a. Promote tourism as an economic stimulant across Trinidad and Tobago, enabling each region to develop its own tourism niche.
6. Consider development of new towns in appropriate places
 - a. Where regional growth is to be encouraged (especially at defined Growth Poles) and existing settlements are unsuitable for expansion, develop new towns with a full range of uses and services.
7. Allow for planned development of some existing agricultural land and forest
 - a. To provide for settlement expansion and new settlements, allow urban development of agricultural land and forests where necessary.





Dispersed Development

 Concentrated urban area


 Urban growth centres

 Main highway network

 Tourism growth

 Port and related industry growth

 Growth pole

 Rural areas

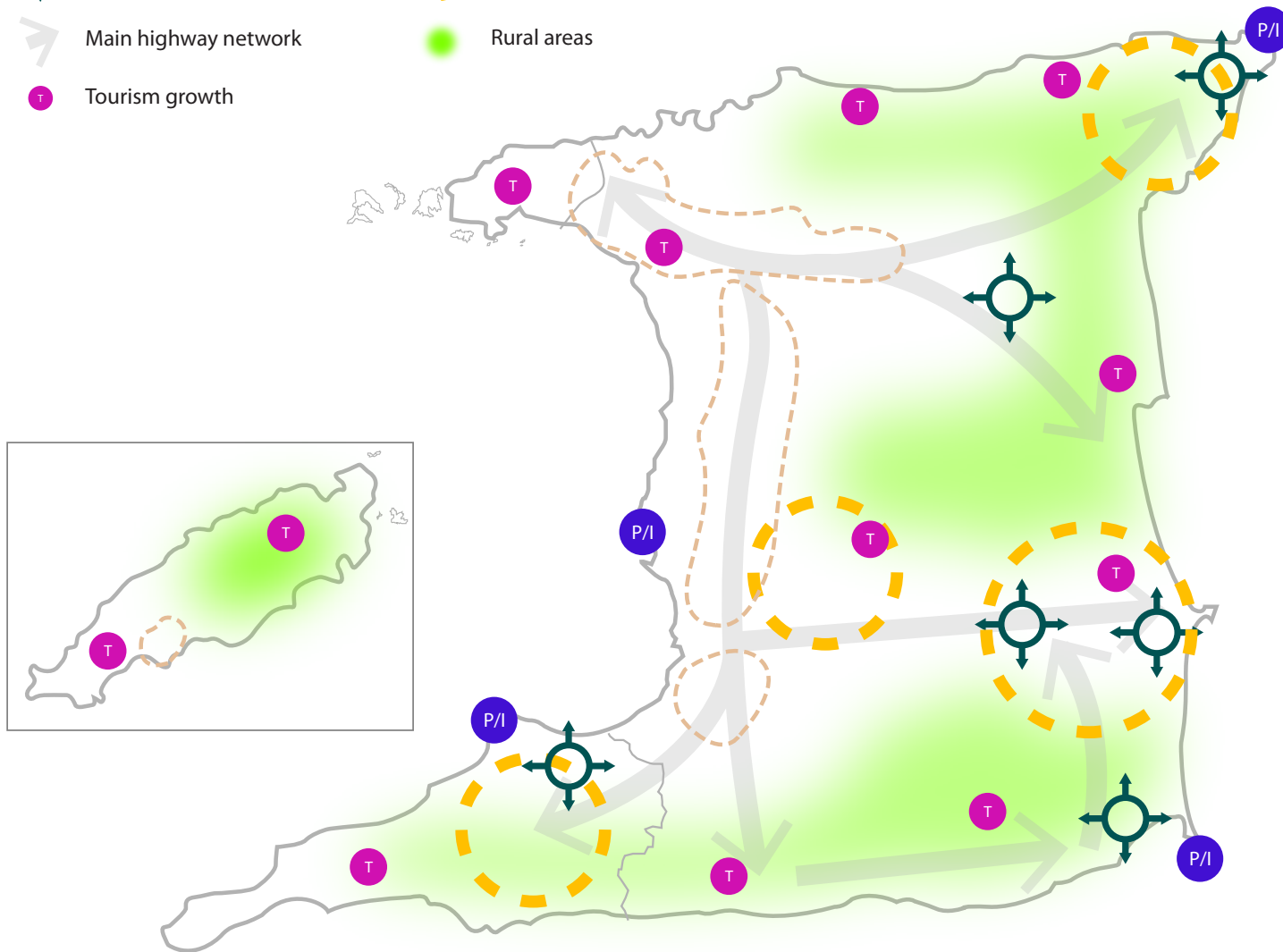













Figure 5: Dispersed Development

Option 3: Harmonised Regional Development

1. Improve the environmental quality and functional efficiency of existing major urban centres
 - a. Develop “brownfield” and infill sites, densifying where appropriate;
 - b. Improve local environment and quality of life through “urban greening” initiatives; and,
 - c. Strengthen role and identity of each community (“urban village”) within the urban corridors, promoting development of social, commercial and cultural “hubs,” functioning as community focal points.
2. Provide for development of a type and scale suited to each region’s particular strengths and social and economic needs
 - a. Identify locations where economic and social growth based on development of particular sectors can be promoted, designating Growth Poles as appropriate;
 - b. Promote and provide for development of appropriate scale and type at each of the identified Growth Poles and other key opportunity locations;
 - c. Delineate urban settlement limits, outside which non-agricultural / non-essential development is only to be permitted in exceptional circumstances; and
 - d. Restrict hillside development and development in areas at risk from flooding.
3. Promote and plan for development of selected regional urban centres, including possible new settlements in appropriate locations
 - a. Recognise the roles and potentials of existing regional urban centres and plan to improve their economic viability and the quality of life they provide; and,
 - b. In Trinidad, consider development of one or more new towns where this will benefit regional development without detracting from the viability and vitality of existing settlements.
4. Support development of additional / enhanced port and port-related facilities on the west, south-east and north-east coasts of Trinidad and at Scarborough.
 - a. Investigate options for further port and port-related development in other suitable locations, including east-coast locations where this would not conflict significantly with other economic diversification and environmental protection objectives; and,
 - b. Rationalise and relocate port and port-related activities in Port of Spain, seeking to reduce congestion and harmful environmental impacts and to open up opportunities for waterside regeneration to enhance the national capital’s environmental quality, its attraction to investors, and the standard of life it provides to residents and visitors.
5. Concentrate development on existing settlements dependent on their role within the existing service hierarchy
 - a. Recognise the national role of Port of Spain and the adjacent Capital Region and promote and provide for its sustainable development as a potential world-class city, maximising the benefits this can bring to the nation as a whole;
 - b. Promote and provide for sustainable development of Scarborough and its environs as the primary urban focus of Tobago;
 - c. Promote and provide for sustainable development of appropriate form and scale in Trinidad’s regional and lower order urban centres, developing their ability to serve more of their regional communities’ needs locally; and,
 - d. Delineate urban settlement limits, outside which non-agricultural / non-essential development is only to be permitted in exceptional circumstances.
6. Protect most productive agricultural land and forest from further development
 - a. Identify and designate the land of significant agricultural value (current or potential);
 - b. Allow only agricultural use and development of designated agricultural land; and,
 - c. Prohibit development that will involve loss of / harm to forests unless accompanied by appropriate compensatory and restoration measures.
7. Develop different tourism sectors dependent on strengths of each region
 - a. Promote sustainable development to support eco-tourism in Tobago and Trinidad, protecting natural environmental assets accordingly;
 - b. Promote sustainable development and management of Chaguaramas as both a key national environmental and cultural asset and a tourism attraction of international importance; and,
 - c. Promote tourism as an economic stimulant across Trinidad and Tobago, enabling each region to develop its own tourism offer based on its cultural, natural, and built environment assets.

8. Make selective improvements to transport links and facilitate planned development
 - a. Promote substantial modal shift away from cars and towards alternatives;
 - b. Promote high-quality, high-efficiency bus services linking the main community hubs;
 - c. Integrate with improved maxi-taxi services, linking local communities with hubs;
 - d. Retain and enhance the Priority Bus Route and develop a similar route linking North/South corridor hubs; and,
 - e. Improve facilities and priorities for pedestrians (including people with restricted mobility) and cyclists on urban streets.

Harmonised Regional Development

-  Major urban centres
-  Regional urban centres
-  Linked "urban villages"
-  Integrated transport network
-  Water transport routes
-  Tourism growth
-  Port and related industry growth zone
-  Maritime services / industry
-  Growth pole
-  Potential for port to be explored
-  Rural areas

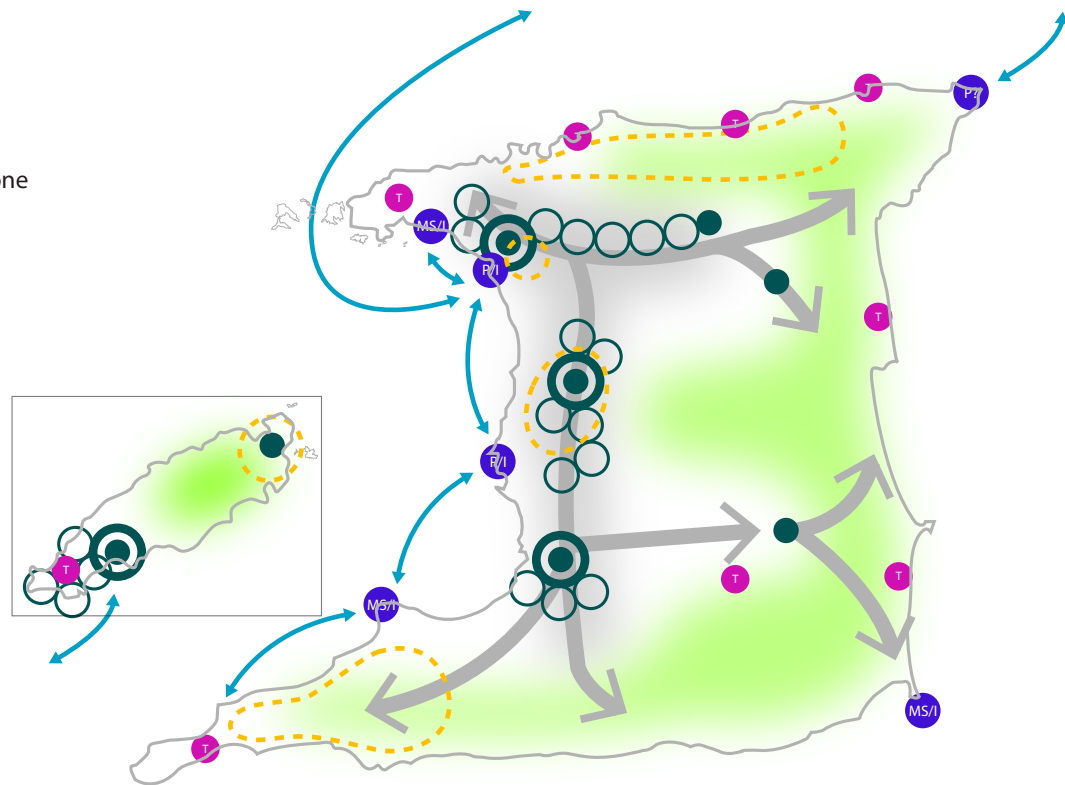


Figure 6: Harmonised Regional Development

6.2 Sustainability Appraisal of the Alternative Spatial Development Options

Integrated Sustainability Appraisal (ISA) has been fully incorporated from an early stage in the development of the NSDS. This process has helped to shape the vision, objectives and policies by providing a methodological framework for ensuring that sustainability considerations are properly integrated into strategic decision-making.

Following the identification of alternative Spatial Development Options, each has been appraised against the eighteen (18) Sustainability Objectives to determine the degree to which it would be likely to enhance or detract from the social, economic and environmental well-being of the people of Trinidad and Tobago. Inevitably, all the options would produce a mixture of positive and negative impacts, so the aim has been to identify the option that would deliver the most sustainable balance overall. Through that process a preferred option has been identified and it is that option that has been developed as the basis of the NSDS.

A detailed Compatibility Matrix has been prepared for each of the broad spatial development options and these are included as Annex 2. A summary table is set out in Table 9.

6.3 Summary and Recommendations

The summary table and detailed appraisal tables for each of the spatial development options indicate that the 'Harmonized Regional Development' option achieves greatest compliance with the Sustainability Objectives. This spatial option has therefore been taken forward and integrated into the NSDS. Commentary on the key issues and outcomes of each of the spatial option appraisals is set out below.

Dispersed Development

The option achieves positive overall impacts, but the forecast cumulative effect of these impacts is significantly less than those forecast for the Harmonised Regional Development option. This option would be likely to see growth in regional and local centres across the country (as well as potential new towns) with restricted growth within the East/West and North/South urban corridors. Furthermore, dispersal of employment to new regional centres could potentially result in the weakening of Port-of-Spain as a major economic powerhouse in the Caribbean region. The effect of this dispersal away from the main areas could result in urban blight and a spiral of decline in certain neighbourhoods, causing social and crime-related issues within areas which already suffer from deprivation.

Positively, a more balanced and equitable spread of services and employment opportunities across the nation would reduce commuting distances and therefore have the potential to promote opportunities for

more sustainable forms of transport, thereby reducing reliance on the private car. Investment in public transport links along the urban corridors would be made more viable and would go some way towards supporting behaviour change. Walking and cycling could become more attractive as the travel distances are reduced, which itself would lead to healthier communities in general.

However, the compatibility matrix identifies inconsistencies between this spatial option and a number of the environmental themed Sustainability Objectives. The potential planned development of some existing farmland and forest could result in irreversible damage to ecosystems services and threaten the revival of the agricultural sector. The development of new settlements and the expansion of local and regional centres could result in a continued legacy of urban sprawl and the loss of finite environmental resources.

As a result of these inconsistencies, this option has been rejected.

Concentrated Development

Whilst some positive benefits have been identified for this spatial option, a number of fundamental tensions and negative impacts are associated with it. Concentrated Development is forecast to result in economic growth in existing centres and key corridors, but restrained development outside the main urban centres is predicted to lead to marginal and concentrated growth with exclusion and decline in other areas.

Harmonised Regional Development	Dispersed Development	Concentrated Development	
++	0	0	To encourage strong, diverse and sustainable economic growth
+	0	0	To create high, stable and equitable levels of employment
++	+	-	To enable all children, young people and adults to achieve their full potential and maximise the skills levels of the residents of Trinidad and
+	++	--	To ensure that everyone in Trinidad and Tobago has the opportunity for a decent and affordable home in the community they want to live
++	0	-	To improve the quality of life of the residents of Trinidad and Tobago
++	-	--	To improve equity and social justice and promote inclusion and access
++	0	+	To create and maintain safer and more secure communities
+	-	0	To ensure that development that meets the needs of today should not restrict the choices and opportunities for future generations
+	++	0	To promote public transport and walking and cycling as realistic alternatives to the private car
+	++	-	To improve health, reduce health inequalities and promote healthy lifestyles
+	+	--	To reduce vulnerability to natural and man-made disasters
+	+	-	To address the causes and effects of climate change and minimize greenhouse gas emissions
+	0	+	To minimise energy use, support renewable energy production and encourage the prudent use of natural resources
+	+	+	To minimise the production of waste and to maximise opportunities for recycling
++	0	+	To protect and enhance the built quality of urban areas, villages and the spaces within them
+	-	+	To enhance the value of ecosystems services
-	-	+	To protect and enhance biodiversity and geodiversity of the natural environment
-	+	-	To improve and / or retain the quality of water courses, coastal and marine resources, air quality and soil quality and achieve sustainable use of water resources
+20	+7	-4	Total

Table 9: Compatibility Matrix of the Broad Spatial Development Options against the Sustainability Objectives

This spatial option is unlikely to maximise the potential of key emerging strategic sectors. Furthermore, it is likely to exacerbate existing inequalities in job opportunities and unemployment. Employment opportunities will be concentrated in existing urban areas. People living in rural areas and smaller communities will continue to rely on the car and face lengthy daily commutes to access employment opportunities.

The assessment also shows significant tensions between social-themed Sustainability Objectives. A significant proportion of new housing required to meet changing demographic circumstances would be concentrated in main urban areas, resulting in a lack of new housing in smaller settlements and rural areas to meet local needs. This spatial option potentially marginalises poor and vulnerable members of society who live outside the main centres and urban corridors as a result of restrained development elsewhere, with these areas suffering decline and underinvestment.

Although it is forecast that this spatial option will, overall, lead to environmental improvements over the plan period, these do not outweigh the significant conflicts with economic and social-themed Sustainability Objectives and therefore, this spatial development option was deemed to be unsatisfactory.

Harmonised Regional Development

This option achieves significant compliance with the economic-themed Sustainability Objectives as it is forecast to facilitate strong, sustainable and

equitable levels of economic growth and employment across both islands. It is considered that this spatial development option will best aid the diversification of the economy away from reliance on hydrocarbon based sectors and towards the priority strategic sectors such as maritime, tourism and agriculture.

This option also performs well when assessed against the social-themed Sustainability Objectives. Development is focused on responding to regional strengths and socio-economic needs, leading to general improvement in quality of life. Disparities between rich and poor are expected to reduce as access to employment opportunities improves and the root problems of social exclusion begin to be confronted.

The compatibility assessment indicates some potential minor conflict with Sustainability Objectives 17 and 18, largely due to potential environmental consequences of the spatial development option's support of additional / enhanced port and port-related facilities on the west, south-east and north-east coasts of Trinidad and at Scarborough. However, it would be expected that these significant infrastructure proposals would be accompanied by detailed environmental impact assessment studies which would focus on mitigating any adverse impacts on the environment and marine ecosystems services.

Harmonised Regional Development proposes a policy framework which would delineate urban settlement limits, outside of which non-agricultural / non-essential development would only be permitted in exceptional

circumstances. Such an approach would safeguard valuable agricultural land and ecosystems services from the harmful impacts of unplanned and unchecked urban sprawl.

In view of the dominance of positive outcomes, this spatial option is the preferred choice and has been integrated into the National Spatial Development Strategy.



7. STAGE D: MONITORING

ISA is an iterative process and, therefore, Stage D of the ISA methodology requires that the significant environmental, social and economic effects of implementing a plan or programme be monitored against measurable indicators. This allows any unforeseen adverse effects to be identified at an early stage, and provides opportunities to undertake appropriate remedial action.

The key indicators for each Sustainability Objective identified in Annex 1 have been drawn from existing sources so the baseline conditions can be easily established. These indicators should be monitored and the relevant conclusions and datasets included in the form of an annual monitoring report. This report should be produced to review the impacts of the implementation of the NSDS and to assess whether the underpinning objectives and vision are being successfully met.



8. CONCLUSIONS

The ISA has been integral to the development of the NSDS and has been fully incorporated from an early stage. This iterative process has helped to shape the underpinning vision, objectives and policies of the NSDS so that options and alternatives can be revised and, if necessary rejected, in favour of the preferred option, which achieves the greatest long-term social, economic and environmental benefits for the people of Trinidad and Tobago.

The appraisal illustrates that the NSDS and the preferred Harmonized Regional Development option is overwhelmingly positive in terms of its contribution to sustainability and the interconnected three pillars of sustainable development.

Successful implementation of the NSDS will see particular benefits for the most deprived communities, with the potential for increased opportunities in life, raised aspirations and improved quality of life across both islands. The NSDS successfully achieves a balance between often competing economic, social and environmental impacts and its policies will ensure that the environment and our nation's ecosystems services are not merely an afterthought – instead, their protection (and ultimate enhancement) forms an integral part of the Strategy.

ANNEX 1: SUSTAINABILITY OBJECTIVES AND INDICATORS

	Sustainability Objective	Decision-Making Criteria	Potential Indicators and Sources
1.	To encourage strong, diverse and sustainable economic growth	<p>Will it achieve economic transformation in terms of repositioning Trinidad and Tobago from depending on hydrocarbon resources?</p> <p>Will it allow existing opportunities in the energy sector to be optimised?</p> <p>Will it revitalise traditional sectors of the economy?</p> <p>Will it lead to an information technology-driven, knowledge-based and globally connected economy?</p> <p>Will it allow the development of new strategic sectors?</p> <p>Will it support the sustainable development of the tourism sector as a key driver for economic transformation, boosting economic diversification and competitiveness?</p>	<p>Gross Domestic Product (Real Growth Rate);</p> <p>Gross Domestic Product - per capita (PPP);</p> <p>Labour Force Reports – Persons with Jobs by Type of Worker;</p> <p>Contribution of energy sector to GDP and Government Revenue;</p> <p>Number of international visitors and tourist stay nights;</p> <p>Industrial production growth rate;</p> <p>Number of companies securing ISO 14001 certification by year;</p>
2.	To create high, stable and equitable levels of employment	<p>Will it allow a more equitable spread of employment opportunities, creating jobs in areas where unemployment is high?</p> <p>Will it foster the support of investment in new and traditional sectors to create employment opportunities generally?</p> <p>Will it create a culture of innovation and entrepreneurship?</p> <p>Will it create jobs across all sectors and, therefore, reduce unemployment over the plan period?</p>	<p>Distribution of business establishments by Administrative Area;</p> <p>Household income per capita by Administrative Area;</p> <p>Employment Rate;</p> <p>Unemployment Rate;</p> <p>Employment-to-population ratio, both sexes, percentage;</p> <p>Poorest quintile's share in national income or consumption, percentage;</p> <p>Ratio of youth unemployment rate to adult unemployment rate;</p>

	Sustainability Objective	Decision-Making Criteria	Potential Indicators and Sources
3.	To enable all children, young people and adults to achieve their full potential and maximise the skills levels of the residents of Trinidad and Tobago	<p>Will it help increase economic inclusion and participation?</p> <p>Will it help people raise themselves out of poverty?</p> <p>Will it increase the levels of attainment and participation in education?</p> <p>Will it encourage lifelong learning and training to meet the workforce needs of the emerging sectors of the economy?</p>	<p>Education performance indicators (Caribbean Advanced Proficiency Examinations (CAPE) and (CSEC) Caribbean Secondary Education Certificate (CSEC) attainment levels)</p> <p>School life expectancy (primary to tertiary education);</p> <p>Number of young people not in education and / or employment;</p> <p>Number of working age population with no qualifications;</p> <p>Gender Inequality Index by Administrative Area;</p>
4.	To ensure that everyone in Trinidad and Tobago has the opportunity of a decent and affordable home as part of a community.	<p>Will it ensure the balance of supply and demand in the housing stock is met in the most sustainable locations?</p> <p>Will it ensure that the residents of Trinidad and Tobago have access to a good quality choice of housing that meets their needs and aspirations?</p> <p>Will access to affordable housing improve for the poorer members of society?</p>	<p>New homes completed per Administrative Area;</p> <p>Homelessness and rough sleeping indicators;</p> <p>Locations of HDC public housing projects and squatter settlements by urbanized zones / Administrative Area;</p> <p>Household density (Overcrowding)</p> <p>Density of new housing schemes;</p>
5.	To improve the quality of life of the residents of Trinidad and Tobago	<p>Will it ensure that basic needs are met and that overall well-being is fostered for all members at the group and community level?</p> <p>Will it lead to improvements in citizens' health and wellness generally?</p> <p>Will it help achieve poverty eradication?</p>	<p>National Human Development Index by Administrative Area;</p> <p>Inequality Adjusted National Human Development Index;</p> <p>Percentage of people living in poverty;</p> <p>Multidimensional Poverty Index (2006) by Administrative Area;</p> <p>Hospital bed density;</p> <p>Percentage of Children under the age of 5 years underweight;</p> <p>Proportion of employed living in households with a household per capita income or consumption of less than US\$1 per day classified by paid employees and self-employed;</p> <p>Proportion of unemployed living in households with a household per capita income or consumption of less than US\$1 per day.</p>

	Sustainability Objective	Decision-Making Criteria	Potential Indicators and Sources
6.	To improve equity and social justice and promote inclusion and access	<p>Will it reduce disparities between the rich and poor?</p> <p>Will it ensure that particular groups, whether because of gender, race, birthplace or sexual orientation are not systematically disadvantaged?</p> <p>Will it tackle the root problems of social exclusion?</p> <p>Will it improve accessibility and quality of key services and facilities and improve access to jobs?</p> <p>Will it improve access to culture, leisure and recreational facilities?</p> <p>Will it create community ownership, participation and engagement?</p>	<p>Gender Parity Index in primary level enrolment;</p> <p>Gender Parity Index in secondary level enrolment;</p> <p>Gender Parity Index in tertiary level enrolment;</p> <p>Share of women in wage employment in the non-agricultural sector;</p> <p>Proportion of men and women in different sectors of the labour market;</p> <p>Disparity between sex specific occupational wages;</p> <p>Women to men parity index, as ratio of literacy rates, 15-24 years old;</p> <p>Percentage of pupils starting standard 1 who reach last standard of primary education;</p> <p>Percentage of households with convenient access to the Internet.</p>
7.	Create and maintain safer and more secure communities	<p>Will it lead to a reduction in crime, violence, disorder and anti-social behaviour?</p> <p>Will it lead to a reduction in the fear of crime?</p> <p>Will it contribute to achieving more useable areas of public space, particularly after dark?</p> <p>Will it create more useable streets, which encourage walking and improved informal surveillance?</p>	<p>Serious Crimes recorded by Police Division;</p> <p>Actual Victimization recorded by Police Division;</p> <p>Extent of Crime and Frequency of Violent Crimes in the Community recorded by Police Division;</p> <p>Existence of Criminal Gangs recorded by Police Division;</p> <p>Fear of Crime in Past Year recorded by Police Division;</p>
8.	To ensure that development that meets the needs of today should not restrict the choices and opportunities for future generations	<p>Will its outcomes be beneficial to future generations?</p> <p>Will it ensure that the choices of future generations are not restricted?</p> <p>Will it ensure environmental security, economic stability and a good quality of life for future generations?</p>	<p>National Human Development Index by Administrative Area;</p> <p>Inequality Adjusted National Human Development Index;</p>

	Sustainability Objective	Decision-Making Criteria	Potential Indicators and Sources
9.	To promote public transport and walking and cycling as realistic alternatives to the private car	<p>Will it lead to a more balanced and equitable spread of services and employment opportunities across the nation?</p> <p>Will it support the location of new development and provision of services that reduce the need to travel?</p> <p>Will it lead to the development of walkable communities and liveable cities?</p> <p>Will it encourage more sustainable modes of travel, particularly in urban areas?</p> <p>Will it increase personal security and safety while travelling, particularly on foot?</p> <p>Will it maintain and improve local air quality and seek to reduce the transport emissions that contribute to climate change?</p>	<p>Percentage of people who walk or cycle to work;</p> <p>Vehicle population change and trends;</p> <p>Total mileage of bus routes;</p> <p>Number of bus services by Administrative Area;</p>
10.	To improve health, reduce health inequalities and promote healthy lifestyles	<p>Will it improve access to healthcare and health promoting facilities and services?</p> <p>Will it provide opportunities to promote healthier lifestyles?</p> <p>Will it provide public open space and increase access to the countryside and the coastline?</p> <p>Will it promote the use of existing facilities and open-air recreation?</p> <p>Will it provide opportunities to participate in sport and active recreation?</p> <p>Will it reduce poverty and health inequalities?</p> <p>Will it encourage walking and exercise as part of daily living?</p>	<p>All Age, All Cause Mortality – Males and Females;</p> <p>Life Expectancy at birth;</p> <p>Percentage of the adult population (age 16 years and over) who participate in sport and active recreation;</p> <p>Percentage of the young population (under 16 years of age) who participate in sport and active recreation;</p>
11.	Reduce vulnerability to natural and man-made disasters	<p>Will it help decrease the risks of natural disasters, particularly for the poor?</p> <p>Will it ensure that buildings and homes are designed to respond to the impacts of climate change and located in areas where the future risk is minimised?</p> <p>Will it ensure that the nation's food security is improved to reduce vulnerability to extreme global climatic effects which may affect the supply of food and natural resources?</p> <p>Will it ensure that new homes and facilities are located away from areas which are at risk from man-made hazards?</p>	<p>Number of new homes built in flood risk areas;</p> <p>Hazard Impact by Administrative Area;</p> <p>Landslide Susceptibility (area);</p> <p>Flood Susceptibility (area);</p>

	Sustainability Objective	Decision-Making Criteria	Potential Indicators and Sources
12.	To address the causes and effects of climate change and minimise greenhouse gas emissions	<p>Will it encourage prudent use of natural resources?</p> <p>Will it lead to a reduction in CO2 emissions?</p> <p>Will it increase emphasis on the issue of climate change and global warming effects, such as rising sea levels and the impact of additional development?</p> <p>Will it enable the natural and/or built environment to cope with the anticipated effects of climate change and sea-level rise?</p> <p>Will it ensure that flood management takes a sustainable approach?</p> <p>Will it prevent and/or reduce the risk of flooding?</p> <p>Will it tackle the risks associated with hillside erosion?</p> <p>Will it tackle global sustainability issues?</p>	<p>Installed capacity of renewable energy sources in new developments per annum;</p> <p>Carbon dioxide emissions (CO2), kg CO2 per \$1 GDP;</p> <p>Carbon dioxide emissions (CO2), thousand metric tons of CO2;</p> <p>Carbon dioxide emissions (CO2), metric tons of CO2 per capita;</p> <p>Consumption of all Ozone-Depleting Substances in ODP metric tons;</p>
13.	To minimise energy use, support renewable energy production and encourage the prudent use of natural resources	<p>Will it minimise energy use through sustainable, efficient and effective use of buildings and land?</p> <p>Will it support or promote the increasing use of renewable energy resources in sustainable locations?</p> <p>Will it reduce demand for natural resources?</p> <p>Will it encourage the prudent and efficient use of natural resources?</p>	<p>Electricity – production (annual);</p> <p>Electricity – consumption;</p> <p>Electricity – production by source;</p> <p>Energy use (kg oil equivalent) per \$1,000 GDP</p>
14.	To minimise the production of waste and to maximise opportunities for recycling	<p>Will it minimise the generation of household and commercial waste?</p> <p>Will it ensure that waste is dealt with as close to the source as feasible?</p> <p>Will it maximise the opportunities for recycling waste materials and reduce reliance on landfill?</p> <p>Will it ensure that waste is dealt with in a sustainable manner?</p> <p>Does it make provision for an adequate supply of minerals?</p> <p>Will it help change behavioural patterns and attitudes about waste amongst the nation's citizens?</p>	<p>Tonnage of domestic waste that is land filled;</p> <p>Percentage of household waste recycled;</p> <p>Percentage of municipal waste land filled;</p> <p>Percentage of municipal waste recycled;</p>

	Sustainability Objective	Decision-Making Criteria	Potential Indicators and Sources
15.	To protect and enhance the built quality of urban areas, villages and the spaces within them	<p>Will it enhance the quality, character and local distinctiveness of urban areas and villages?</p> <p>Will it encourage high quality design of buildings and urban design?</p> <p>Will it ensure the protection of the nation's historic sites and buildings?</p> <p>Will it provide sufficient open space in new development?</p> <p>Will it encourage walking and people to spend time outdoors through well-designed places?</p>	<p>Area and percentage of open space delivered by new development;</p> <p>Percentage of open space within the main urbanized zones;</p> <p>National Built Heritage Trust Listing</p>
16.	To enhance the value of ecosystems services	<p>Will it prevent the unsustainable utilisation, overuse and degradation of the country's land resources?</p> <p>Will it prevent inappropriate urban sprawl and intrusion into the countryside and sensitive natural environments?</p> <p>Will it aid a step change in food production, food security and sustainable agricultural development?</p> <p>Will it prevent inappropriate deforestation and loss of forested environments?</p>	<p>Proportion of total water resources used, percentage;</p> <p>Total area of forests and woodland;</p> <p>Total area of wetlands;</p> <p>Land use: arable land;</p> <p>Land use: permanent crops;</p> <p>Agriculture as a percentage of GDP;</p> <p>Food Import Bill;</p> <p>Percentage of new development on Brownfield land;</p> <p>Percentage of new homes built on Brownfield land;</p>
17.	To protect and enhance the biodiversity and geodiversity of the natural environment	<p>Will it help reduce society's growing consumption of natural resources?</p> <p>Will it preserve or enhance designated Protected Areas?</p> <p>Will it, where appropriate, improve public access and public enjoyment of the natural environment?</p> <p>Will it help achieve the maintenance and recovery of rare or threatened species in their natural environment?</p>	<p>Proportion of land area covered by forest, percentage;</p> <p>Annual national deforestation rate;</p> <p>Terrestrial and marine areas protected, sq. km;</p> <p>Terrestrial areas protected, sq. km.</p>
18.	To improve and/or retain the quality of watercourses, coastal and marine resources, air quality and soil quality and achieve sustainable use of water resources	<p>Will it help to achieve sustainable use of water resources?</p> <p>Will it protect or improve local air quality?</p> <p>Will it minimise atmospheric, noise, land, soil and water pollution?</p> <p>Will it protect or improve the quality of controlled waters?</p> <p>Will it ensure that areas identified for population growth do not pressurise the sensitive marine and coastal environments?</p>	<p>NOx emissions per populated area;</p> <p>SO2 emissions per populated area;</p> <p>Irrigated land (area);</p> <p>Total renewable water resources;</p> <p>Quantity and quality of marine fish catch;</p>

ANNEX 2: COMPATIBILITY MATRIX OF THE BROAD SPATIAL DEVELOPMENT OPTIONS AGAINST THE SUSTAINABILITY OBJECTIVES

Annex 2.1

Concentrated Development

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
1	To encourage strong, diverse and sustainable economic growth	<p>Will it achieve economic transformation in terms of repositioning Trinidad and Tobago from depending on hydrocarbon resources?</p> <p>Will it allow existing opportunities in the energy sector to be optimised?</p> <p>Will it revitalise traditional sectors of the economy?</p> <p>Will it lead to an information technology-driven, knowledge-based and globally connected economy?</p> <p>Will it allow the development of new strategic sectors?</p> <p>Will it support the sustainable development of the tourism sector as a key driver for economic transformation, boosting economic diversification and competitiveness?</p>	0	Neutral impact overall. Concentrated Development is forecast to result in economic growth in existing centres and key corridors, but restrained development outside the main urban centres is predicted to lead to marginal and concentrated growth with exclusion and decline in other areas. Unlikely to maximize the potential of key emerging strategic sectors.

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
2	To create high, stable and equitable levels of employment	<p>Will it allow a more equitable spread of employment opportunities, creating jobs in areas where unemployment is high?</p> <p>Will it foster the support of investment in new and traditional sectors to create employment opportunities generally?</p> <p>Will it create a culture of innovation and entrepreneurship?</p> <p>Will it create jobs across all sectors and, therefore, reduce unemployment over the plan period?</p>	0	Likely to exacerbate existing inequalities in job opportunities and unemployment. Employment opportunities will be concentrated in existing urban areas. People living in rural areas and smaller communities will continue to rely on the car and face lengthy daily commutes to access employment opportunities.
3	To enable all children, young people and adults to achieve their full potential and maximise the skills levels of the residents of Trinidad and Tobago	<p>Will it help increase economic inclusion and participation?</p> <p>Will it help people raise themselves out of poverty?</p> <p>Will it increase the levels of attainment and participation in education?</p> <p>Will it encourage lifelong learning and training to meet the workforce needs of the emerging sectors of the economy?</p>	-	Option likely to increase car dependence, which will have a negative impact on the young and those unable to drive.
4	To ensure that everyone in Trinidad and Tobago has the opportunity of a decent and affordable home as part of a community.	<p>Will it ensure the balance of supply and demand in the housing stock is met in the most sustainable locations?</p> <p>Will it ensure that the residents of Trinidad and Tobago have access to a good quality choice of housing that meets their needs and aspirations?</p> <p>Will access to affordable housing improve for the poorer members of society?</p>	--	New housing to meet changing demographics will be concentrated in main urban areas resulting in lack of new housing in smaller settlements and rural areas to meet local needs.
5	To improve the quality of life of the residents of Trinidad and Tobago	<p>Will it ensure that basic needs are met and that overall well-being is fostered for all members at the group and community level?</p> <p>Will it lead to improvements in Trinidad and Tobago's Human Development Index rating?</p> <p>Will it lead to improvements in citizens' health and wellness generally?</p> <p>Will it help achieve poverty eradication?</p>	-	Likely to increase inequalities and deepen gaps between rich and poor. The poor in rural areas will become increasingly marginalized and those without access to a car will find it increasingly more difficult to access key services.

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
6	To improve equity and social justice and promote inclusion and access	<p>Will it reduce disparities between the rich and poor?</p> <p>Will it ensure that particular groups, whether because of gender, race, birthplace or sexual orientation are not systematically disadvantaged?</p> <p>Will it tackle the root problems of social exclusion?</p> <p>Will it improve accessibility and quality of key services and facilities and improve access to jobs?</p> <p>Will it improve access to culture, leisure and recreational facilities?</p> <p>Will it create community ownership, participation and engagement?</p>	-	Potentially marginalises poor and vulnerable members of society who live outside the main centres.
7	To create and maintain safer and more secure communities	<p>Will it lead to a reduction in crime, violence, disorder and anti-social behaviour?</p> <p>Will it lead to a reduction in the fear of crime?</p> <p>Will it contribute to achieving more useable areas of public space, particularly after dark?</p> <p>Will it create more useable streets which encourage walking and improved informal surveillance?</p>	+	<p>Some benefit as trends show that crime and the fear of crime are stronger in urban areas so investing in regeneration could weaken this association as the urban poor feel the benefit of development.</p> <p>Strong benefits for main centres but some negative impact for more isolated communities as their deprivation is furthered and, as a consequence, issues of crime and fear of crime.</p>
8	To ensure that development that meets the needs of today should not restrict the choices and opportunities for future generations	<p>Will its outcomes be beneficial to future generations?</p> <p>Will it ensure that the choices of future generations are not restricted?</p> <p>Will it ensure environmental security, economic stability and a good quality of life for future generations?</p> <p>Will it ensure the protection of valuable agricultural land and improve the nation's food security?</p>	0	<p>Potential for benefit depending on circumstances and location.</p> <p>Puts Environmental Sustainability at risk as concentrated development requires development in 'protected' areas.</p> <p>Does not cause significant environmental harm in rural areas – high proportion of brownfield development.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
9	To promote public transport and walking and cycling as realistic alternatives to the private car	<p>Will it lead to a more balanced and equitable spread of services and employment opportunities across the nation?</p> <p>Will it support the location of new development and provision of services that reduce the need to travel?</p> <p>Will it lead to the development of walkable communities and liveable cities?</p> <p>Will it encourage more sustainable modes of travel, particularly in urban areas?</p> <p>Will it increase personal security and safety while travelling, particularly on foot?</p> <p>Will it maintain and improve local air quality and seek to reduce the transport emissions that contribute to climate change?</p>	0	<p>Achieves this in urban areas and makes them more sustainable.</p> <p>Concentrated Development presents opportunities for modal shift in terms of alternative transport.</p> <p>More opportunities for walkable neighbourhoods.</p> <p>Lack of opportunity in rural areas means that car-use will still be high unless there is significant investment in public transport.</p> <p>Viability of investment in alternative transport modes in rural areas is substantially reduced as a result of critical mass.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
10	To improve health, reduce health inequalities and promote healthy lifestyles	<p>Will it improve access to healthcare and health promoting facilities and services?</p> <p>Will it provide opportunities to promote healthier lifestyles?</p> <p>Will it provide public open space and increase access to the countryside and the coastline?</p> <p>Will it promote the use of existing facilities and open-air recreation?</p> <p>Will it provide opportunities to participate in sport and active recreation?</p> <p>Will it reduce poverty and health inequalities?</p> <p>Will it encourage walking and exercise as part of daily living?</p>	-	Health inequalities: poor and vulnerable being deprived in outer-areas through lack of key health care facilities.
11	To reduce vulnerability to natural and man-made disasters	<p>Will it help decrease the risks of natural disasters, particularly for the poor?</p> <p>Will it ensure that buildings and homes are designed to respond to the impacts of climate change and located in areas where the future risk is minimised?</p> <p>Will it ensure that nation's food security is improved to reduce vulnerability to extreme global climatic effects which may affect the supply of food and natural resources?</p> <p>Will it ensure that new homes and facilities are located away from areas which are at risk from man-made hazards?</p>	--	<p>Strong correlation between zones of high-levels of flooding with concentrated development of urban corridors.</p> <p>Risk of landslide / hillside erosion due to some hillside development.</p> <p>Protected agricultural / forest areas are valuable assets which assist in achieving food security.</p> <p>Vulnerability to man-made disasters (oil leaks / explosions etc).</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
12	To address the causes and effects of climate change and minimise greenhouse gas emissions	<p>Will it encourage prudent use of natural resources?</p> <p>Will it lead to a reduction in CO2 emissions?</p> <p>Will it increase emphasis on the issue of climate change and global warming effects, such as rising sea levels and the impact of additional development?</p> <p>Will it enable the natural and/or built environment to cope with the anticipated effects of climate change and sea-level rise?</p> <p>Will it ensure that flood management takes a sustainable approach?</p> <p>Will it prevent and/or reduce the risk of flooding?</p> <p>Will it tackle the risks associated with hillside erosion?</p> <p>Will it tackle global sustainability issues?</p>	-	Main centres may generate fewer emissions but lack of development in rural areas will ensure that reliance on cars is maintained. However, more people may live in main centres and therefore have shorter journey-times.
13	To minimise energy use, support renewable energy production and encourage the prudent use of natural resources	<p>Will it minimise energy use through sustainable, efficient and effective use of buildings and land?</p> <p>Will it support or promote the increasing use of renewable energy resources in sustainable locations?</p> <p>Will it reduce demand for natural resources?</p> <p>Will it encourage the prudent and efficient use of natural resources?</p>	+	<p>Potential to reduce demand on gasoline and diesel.</p> <p>Protecting agriculture and forest.</p>
14	To minimise the production of waste and to maximise opportunities for recycling	<p>Will it minimise the generation of household and commercial waste?</p> <p>Will it ensure that waste is dealt with as close to the source as feasible?</p> <p>Will it maximise the opportunities for recycling waste materials and reduce reliance on landfill?</p> <p>Will it ensure that waste is dealt with in a sustainable manner?</p> <p>Does it make provision for an adequate supply of minerals?</p> <p>Will it help change behavioural patterns and attitudes about waste amongst the nation's citizens?</p>	+	Higher critical mass for developing a recycling model.

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
15	To protect and enhance the built quality of urban areas, villages and the spaces within them	<p>Will it enhance the quality, character and local distinctiveness of urban areas and villages?</p> <p>Will it encourage high quality design of buildings and urban design?</p> <p>Will it ensure the protection of the nation's historic sites and buildings?</p> <p>Will it provide sufficient open space in new development?</p> <p>Will it encourage walking and people to spend time outdoors through well designed places?</p>	+	<p>Strengthening centres will increase land values and make restoration of historic buildings more viable.</p> <p>Could pressurize historic sites for more viable uses in their redevelopment.</p> <p>Would facilitate investment in public realm in main urban areas and encourage people to walk and to spend more time in public spaces and outdoors.</p>
16	To enhance the value of ecosystems services	<p>Will it prevent the unsustainable utilisation, overuse and degradation of the country's land resources?</p> <p>Will it prevent inappropriate urban sprawl and intrusion into the countryside and sensitive natural environments?</p> <p>Will it aid a step change in food production, food security and sustainable agricultural development?</p> <p>Will it prevent inappropriate deforestation and loss of forested environments?</p>	+	<p>Tourism is concentrated in only 2 main locations – potential negative effect on ecosystem services in these areas.</p> <p>Restricts urban sprawl and safeguards most of natural environment from inappropriate and unchecked development.</p>
17	To protect and enhance the biodiversity and geodiversity of the natural environment	<p>Will it help reduce society's growing consumption of natural resources?</p> <p>Will it preserve or enhance designated Protected Areas?</p> <p>Will it, where appropriate, improve public access and public enjoyment of the natural environment?</p> <p>Will it help achieve the maintenance and recovery of rare or threatened species in their natural environment?</p>	+	All achieved to some degree except 'access' to natural environment.

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
18	To improve and/or retain the quality of watercourses, coastal and marine resources, air quality and soil quality and achieve sustainable use of water resources	<p>Will it help to achieve sustainable use of water resources?</p> <p>Will it protect or improve local air quality?</p> <p>Will it minimise atmospheric, noise, land, soil and water pollution?</p> <p>Will it protect or improve the quality of controlled waters?</p> <p>Will it ensure that areas identified for population growth do not pressurise the sensitive marine and coastal environments?</p>	–	<p>Opportunities to decrease car journeys in main urban areas will lead to improvement in air quality.</p> <p>Impact on marine environment could be negative with regards to pressure from tourism in South West region.</p> <p>Economic development and use of coast will further pressurize marine environment through pollution from ships.</p>

Annex 2.2

Dispersed Development

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
1	To encourage strong, diverse and sustainable economic growth	<p>Will it achieve economic transformation in terms of repositioning Trinidad and Tobago from depending on Hydrocarbon resources?</p> <p>Will it allow existing opportunities in the energy sector to be optimised?</p> <p>Will it revitalise traditional sectors of the economy?</p> <p>Will it lead to an information technology-driven, knowledge-based and globally connected economy?</p> <p>Will it allow the development of new strategic sectors?</p> <p>Will it support the sustainable development of the tourism sector as a key driver for economic transformation, boosting economic diversification and competitiveness?</p>	0	<p>Development is dispersed but as a consequence of this the competitiveness of the main centres could be weakened – impacts on wider economy (within Caribbean region and Internationally). Opening new economic centres. Diversifying economy and the country's offer.</p>
2	To create high, stable and equitable levels of employment	<p>Will it allow a more equitable spread of employment opportunities, creating jobs in areas where unemployment is high?</p> <p>Will it foster the support of investment in new and traditional sectors to create employment opportunities generally?</p> <p>Will it create a culture of innovation and entrepreneurship?</p> <p>Will it create jobs across all sectors and, therefore, reduce unemployment over the plan period?</p>	0	<p>Potential to create jobs in outer-settlements although unemployment may then become higher in existing centres including Port of Spain.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
3	To enable all children, young people and adults to achieve their full potential and maximise the skills levels of the residents of Trinidad and Tobago	<p>Will it help increase economic inclusion and participation?</p> <p>Will it help people raise themselves out of poverty?</p> <p>Will it increase the levels of attainment and participation in education?</p> <p>Will it encourage lifelong learning and training to meet the workforce needs of the emerging sectors of the economy?</p>	+	More equal opportunities for young people as access is improved – goes some way to reducing trends of having a more deprived Eastern half of the country.
4	To ensure that everyone in Trinidad and Tobago has the opportunity of a decent and affordable home as part of a community.	<p>Will it ensure the balance of supply and demand in the housing stock is met in the most sustainable locations?</p> <p>Will it ensure that the residents of Trinidad and Tobago have access to a good quality choice of housing that meets their needs and aspirations?</p> <p>Will access to affordable housing improve for the poorer members of society?</p>	++	Positive effect on housing. Even the smallest of centres will experience some growth which will create increased opportunities for people to live in areas they want to live in (for example, their hometowns).
5	To improve the quality of life of the residents of Trinidad and Tobago	<p>Will it ensure that basic needs are met and that overall well-being is fostered for all members at the group and community level?</p> <p>Will it lead to improvements in Trinidad and Tobago's Human Development Index rating?</p> <p>Will it lead to improvements in citizens' health and wellness generally?</p> <p>Will it help achieve poverty eradication?</p>	0	Quality of life in larger urban areas may reduce slightly as employment levels (and associated consequences) drop Improves quality of life for people in other regions

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
6	To improve equity and social justice and promote inclusion and access	<p>Will it reduce disparities between the rich and poor?</p> <p>Will it ensure that particular groups, whether because of gender, race, birthplace or sexual orientation are not systematically disadvantaged?</p> <p>Will it tackle the root problems of social exclusion?</p> <p>Will it improve accessibility and quality of key services and facilities and improve access to jobs?</p> <p>Will it improve access to culture, leisure and recreational facilities?</p> <p>Will it create community ownership, participation and engagement?</p>	-	<p>Will promote inclusion and access in rural communities</p> <p>People living in existing main urban areas may become disadvantaged leading to a switch in trend from rural exclusion to urban exclusion</p>
7	To create and maintain safer and more secure communities	<p>Will it lead to a reduction in crime, violence, disorder and anti-social behaviour?</p> <p>Will it lead to a reduction in the fear of crime?</p> <p>Will it contribute to achieving more useable areas of public space, particularly after dark?</p> <p>Will it create more useable streets which encourage walking and improved informal surveillance?</p>	0	<p>Crime hotspots tend to be in urban areas. By restricting development in these areas, crime, violence, disorder and anti-social behaviour could be heightened rather than reduced.</p> <p>Likely to lead to some improvement in smaller communities (although crime may not be as much of an issue here).</p> <p>Growth in smaller communities will increase presence of people, promoting informal surveillance and general community wellbeing.</p> <p>Fewer people living in main centres may balance things out.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
8	To ensure that development that meets the needs of today should not restrict the choices and opportunities for future generations	<p>Will its outcomes be beneficial to future generations?</p> <p>Will it ensure that the choices of future generations are not restricted?</p> <p>Will it ensure environmental security, economic stability and a good quality of life for future generations?</p> <p>Will it ensure the protection of valuable agricultural land and improve the nation's food security?</p>	-	<p>Greater equity of resources and development across the country gives future generations a more 'level playing field' to work on.</p> <p>Greater environmental consequences than if development was concentrated on existing settlements.</p> <p>Increased urban-footprint.</p> <p>Reduced opportunities for use of derelict urban land.</p> <p>Could pressurize the country's valuable ecosystem services and compromise their long-term wellbeing.</p>
9	To promote public transport and walking and cycling as realistic alternatives to the private car	<p>Will it lead to a more balanced and equitable spread of services and employment opportunities across the nation?</p> <p>Will it support the location of new development and provision of services that reduce the need to travel?</p> <p>Will it lead to the development of walkable communities and liveable cities?</p> <p>Will it encourage more sustainable modes of travel, particularly in urban areas?</p> <p>Will it increase personal security and safety while travelling, particularly on foot?</p> <p>Will it maintain and improve local air quality and seek to reduce the transport emissions that contribute to climate change?</p>	++	<p>Will lead to a more balanced and equitable spread of services and employment opportunities across the nation which, in turn, will reduce reliance on the private car, promoting opportunities for more sustainable forms of transport.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
10	To improve health, reduce health inequalities and promote healthy lifestyles	<p>Will it improve access to healthcare and health promoting facilities and services?</p> <p>Will it provide opportunities to promote healthier lifestyles?</p> <p>Will it provide public open space and increase access to the countryside and the coastline?</p> <p>Will it promote the use of existing facilities and open-air recreation?</p> <p>Will it provide opportunities to participate in sport and active recreation?</p> <p>Will it reduce poverty and health inequalities?</p> <p>Will it encourage walking and exercise as part of daily living?</p>	++	<p>Would lead to more equitable spread of key healthcare facilities and services across the nation.</p> <p>Delivery of more localized services will encourage people to walk and cycle thus promoting more healthy lifestyles</p> <p>Increased development in smaller settlements will provide opportunities to participate in sport and active recreation</p> <p>Poverty inequalities will be reduced due to more even development – job creation, improved infrastructure, improved lifestyle opportunities etc.</p>
11	To reduce vulnerability to natural and man-made disasters	<p>Will it help decrease the risks of natural disasters, particularly for the poor?</p> <p>Will it ensure that buildings and homes are designed to respond to the impacts of climate change and located in areas where the future risk is minimised?</p> <p>Will it ensure that nation's food security is improved to reduce vulnerability to extreme global climatic effects which may affect the supply of food and natural resources?</p> <p>Will it ensure that new homes and facilities are located away from areas which are at risk from man-made hazards?</p>	+	<p>More dispersed growth in settlements which are less vulnerable to natural and man-made disasters.</p> <p>Development on productive agricultural land could compromise food security.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
12	To address the causes and effects of climate change and minimise greenhouse gas emissions	<p>Will it encourage prudent use of natural resources?</p> <p>Will it lead to a reduction in CO2 emissions?</p> <p>Will it increase emphasis on the issue of climate change and global warming effects, such as rising sea levels and the impact of additional development?</p> <p>Will it enable the natural and/or built environment to cope with the anticipated effects of climate change and sea-level rise?</p> <p>Will it ensure that flood management takes a sustainable approach?</p> <p>Will it prevent and/or reduce the risk of flooding?</p> <p>Will it tackle the risks associated with hillside erosion?</p> <p>Will it tackle global sustainability issues?</p>	+	<p>Car travel will be reduced as more people choose to walk or cycle – decrease in car emissions.</p> <p>Development on forest lands reduces the opportunity for ‘carbon sinks’ to absorb remaining CO2.</p> <p>Potentially reduces issues associated with hillside development and the susceptibility of these developments to landslides as a result of more frequent and intense rainfall.</p> <p>Development would be steered away from vulnerable areas (i.e high risk of flooding).</p> <p>Opportunities to take an integrated approach to surface water management through new developments</p>
13	To minimise energy use, support renewable energy production and encourage the prudent use of natural resources	<p>Will it minimise energy use through sustainable, efficient and effective use of buildings and land?</p> <p>Will it support or promote the increasing use of renewable energy resources in sustainable locations?</p> <p>Will it reduce demand for natural resources?</p> <p>Will it encourage the prudent and efficient use of natural resources?</p>	0	<p>Reduced opportunities for reuse of brownfield sites in urban areas, pressurizing undeveloped sites in more rural locations.</p> <p>Wind sources would be utilized more effectively.</p> <p>Increased opportunities for walking and cycling will reduce demand on finite hydrocarbon resources.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
14	To minimise the production of waste and to maximise opportunities for recycling	<p>Will it minimise the generation of household and commercial waste?</p> <p>Will it ensure that waste is dealt with as close to the source as feasible?</p> <p>Will it maximise the opportunities for recycling waste materials and reduce reliance on landfill?</p> <p>Will it ensure that waste is dealt with in a sustainable manner?</p> <p>Does it make provision for an adequate supply of minerals?</p> <p>Will it help change behavioural patterns and attitudes about waste amongst the nation's citizens?</p>	+	<p>More localized treatment centres.</p> <p>More dispersed spread of waste management and recycling opportunities will increase potential for recycling and ensure that waste is dealt with closer to its source.</p>
15	To protect and enhance the built quality of urban areas, villages and the spaces within them	<p>Will it enhance the quality, character and local distinctiveness of urban areas and villages?</p> <p>Will it encourage high quality design of buildings and urban design?</p> <p>Will it ensure the protection of the nation's historic sites and buildings?</p> <p>Will it provide sufficient open space in new development?</p> <p>Will it encourage walking and people to spend time outdoors through well designed places?</p>	0	<p>New development has the potential to improve the character of the settlements identified for development but not in those that are restricted.</p>
16	To enhance the value of ecosystems services	<p>Will it prevent the unsustainable utilisation, overuse and degradation of the country's land resources?</p> <p>Will it prevent inappropriate urban sprawl and intrusion into the countryside and sensitive natural environments?</p> <p>Will it aid a step change in food production, food security and sustainable agricultural development?</p> <p>Will it prevent inappropriate deforestation and loss of forested environments?</p>	-	<p>Could result in loss of agricultural land, thus harming food production.</p> <p>Development of forested areas would result in irreversible damage to ecosystem services.</p> <p>Inappropriate urban sprawl could further harm sensitive natural environments.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
17	To protect and enhance the biodiversity and geodiversity of the natural environment	<p>Will it help reduce society's growing consumption of natural resources?</p> <p>Will it preserve or enhance designated Protected Areas?</p> <p>Will it, where appropriate, improve public access and public enjoyment of the natural environment?</p> <p>Will it help achieve the maintenance and recovery of rare or threatened species in their natural environment?</p>	-	Would result in developments on undeveloped areas, pressurizing natural environments on and adjacent to these sites/areas.
18	To improve and/or retain the quality of watercourses, coastal and marine resources, air quality and soil quality and achieve sustainable use of water resources	<p>Will it help to achieve sustainable use of water resources?</p> <p>Will it protect or improve local air quality?</p> <p>Will it minimise atmospheric, noise, land, soil and water pollution?</p> <p>Will it protect or improve the quality of controlled waters?</p> <p>Will it ensure that areas identified for population growth do not pressurise the sensitive marine and coastal environments?</p>	0	Relieves pressures on marine environment on the western side of Trinidad and south-west Tobago but would result in increased pressures on other coastlines. Potential for localized improvement in air quality through reduced dependency on the private car.

Annex 2.3

Harmonised Regional Development

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
1	To encourage strong, diverse and sustainable economic growth	<p>Will it achieve economic transformation in terms of repositioning Trinidad and Tobago from depending on hydrocarbon resources?</p> <p>Will it allow existing opportunities in the energy sector to be optimised?</p> <p>Will it revitalise traditional sectors of the economy?</p> <p>Will it lead to an information technology-driven, knowledge-based and globally connected economy?</p> <p>Will it allow the development of new strategic sectors?</p> <p>Will it support the sustainable development of the tourism sector as a key driver for economic transformation, boosting economic diversification and competitiveness?</p>	++	<p>Will provide development and employment opportunities throughout Trinidad and Tobago, harnessing the unique strengths of the regions.</p> <p>Will further the diversification of the economy away from hydrocarbon based sectors towards the new strategic sectors.</p> <p>Will facilitate the growth of the majority of settlements proportionate to their role and function within the existing service hierarchy.</p> <p>Selective improvements in transport infrastructure should allow for improved regional performances.</p>
2	To create high, stable and equitable levels of employment	<p>Will it allow a more equitable spread of employment opportunities, creating jobs in areas where unemployment is high?</p> <p>Will it foster the support of investment in new and traditional sectors to create employment opportunities generally?</p> <p>Will it create a culture of innovation and entrepreneurship?</p> <p>Will it create jobs across all sectors and, therefore, reducing unemployment over the plan period?</p>	+	<p>Local employment opportunities are likely to be generated by more dispersed development in accordance with identified regional strengths.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
3	To enable all children, young people and adults to achieve their full potential and maximise the skills levels of the residents of Trinidad and Tobago	<p>Will it help increase economic inclusion and participation?</p> <p>Will it help people raise themselves out of poverty?</p> <p>Will it increase the levels of attainment and participation in education?</p> <p>Will it encourage lifelong learning and training to meet the workforce needs of the emerging sectors of the economy?</p>	++	Potential to increase economic inclusion and reduce inequalities across the nation as a whole by harmonised regional development. Access to jobs and local education is likely to increase. Therefore, people's prospects post-education are likely to be greater.
4	To ensure that everyone in Trinidad and Tobago has the opportunity of a decent and affordable home as part of a community.	<p>Will it ensure the balance of supply and demand in the housing stock is met in the most sustainable locations?</p> <p>Will it ensure that the residents of Trinidad and Tobago have access to a good quality choice of housing that meets their needs and aspirations?</p> <p>Will access to affordable housing improve for the poorer members of society?</p>	+	<p>Development in appropriate locations is likely to result in greater choice of housing to meet the needs of local people. Development of purpose-built, new settlements has the potential to facilitate a step change in the quality of new housing being developed.</p> <p>Levels of development will be dependent on the settlement's role within the existing service hierarchy, therefore there will be more limited development in the smaller settlements compared to that envisaged in the Dispersed Development scenario.</p>
5	To improve the quality of life of the residents of Trinidad and Tobago	<p>Will it ensure that basic needs are met and that overall well-being is fostered for all members at the group and community level?</p> <p>Will it lead to improvements in Trinidad and Tobago's Human Development Index rating?</p> <p>Will it lead to improvements in citizens' health and wellness generally?</p> <p>Will it help achieve poverty eradication?</p>	++	Development opportunities will respond to regional strengths and social and economic needs, leading to the general improvement of the quality of life across Trinidad and Tobago.

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
6	To improve equity and social justice and promote inclusion and access	<p>Will it reduce disparities between the rich and poor?</p> <p>Will it ensure that particular groups, whether because of gender, race, birthplace or sexual orientation, are not systematically disadvantaged?</p> <p>Will it tackle the root problems of social exclusion?</p> <p>Will it improve accessibility and quality of key services and facilities and improve access to jobs?</p> <p>Will it improve access to culture, leisure and recreational facilities?</p> <p>Will it create community ownership, participation and engagement?</p>	++	<p>Harmonised development should reduce disparities between the rich and the poor and help tackle the root problems of social exclusion.</p> <p>Likely to improve accessibility to jobs, including those in the new strategic sectors, and also to key services.</p>
7	To create and maintain safer and more secure communities	<p>Will it lead to a reduction in crime, violence, disorder and anti-social behaviour?</p> <p>Will it lead to a reduction in the fear of crime?</p> <p>Will it contribute to achieving more useable areas of public space, particularly after dark?</p> <p>Will it create more useable streets which encourage walking and improved informal surveillance?</p>	++	<p>Aims to improve the environmental quality and functional efficiency of existing major centres which should in-turn lead to a reduction in instances of crime and also fear of crime.</p> <p>New settlements will be underpinned by sound urban design principles, helping to design-out crime from the outset.</p>
8	To ensure that development that meets the needs of today should not restrict the choices and opportunities for future generations	<p>Will its outcomes be beneficial to future generations?</p> <p>Will it ensure that the choices of future generations are not restricted?</p> <p>Will it ensure environmental security, economic stability and a good quality of life for future generations?</p> <p>Will it ensure the protection of valuable agricultural land and improve the nation's food security?</p>	+	<p>Development which is planned and informed by regional strengths and social and economic needs is most likely to provide wider long-term benefits for the residents of Trinidad and Tobago as a whole. Recognises the importance of protecting the most valuable agricultural land and the key role this can play in improving the nation's food security.</p> <p>Could pressurize the country's valuable ecosystem services and compromise their long-term well-being.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
9	To promote public transport and walking and cycling as realistic alternatives to the private car	<p>Will it lead to a more balanced and equitable spread of services and employment opportunities across the nation?</p> <p>Will it support the location of new development and provision of services that reduce the need to travel?</p> <p>Will it lead to the development of walkable communities and liveable cities?</p> <p>Will it encourage more sustainable modes of travel, particularly in urban areas?</p> <p>Will it increase personal security and safety while travelling, particularly on foot?</p> <p>Will it maintain and improve local air quality and seek to reduce the transport emissions that contribute to climate change?</p>	+	<p>Will lead to a more balanced and equitable spread of services and employment opportunities across the nation which, in turn, will reduce reliance on the private car, promoting opportunities for more sustainable forms of transport.</p> <p>Further opportunities for walking and cycling through the development of new settlements.</p> <p>Smaller settlements may see fairly limited growth resulting in continued dependence on the car to access everyday services.</p>
10	To improve health, reduce health inequalities and promote healthy lifestyles	<p>Will it improve access to healthcare and health promoting facilities and services?</p> <p>Will it provide opportunities to promote healthier lifestyles?</p> <p>Will it provide public open space and increase access to the countryside and the coastline?</p> <p>Will it promote the use of existing facilities and open-air recreation?</p> <p>Will it provide opportunities to participate in sport and active recreation?</p> <p>Will it reduce poverty and health inequalities?</p> <p>Will it encourage walking and exercise as part of daily living?</p>	+	<p>Would lead to greater spread of key healthcare facilities and services across the nation.</p> <p>Delivery of more localized services will encourage people to walk and cycle thus promoting more healthy lifestyles although some dependency on the car may remain.</p> <p>Poverty inequalities will be reduced due to more balanced development – job creation, improved infrastructure, improved lifestyle opportunities etc.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
11	To reduce vulnerability to natural and man-made disasters	<p>Will it help decrease the risks of natural disasters, particularly for the poor?</p> <p>Will it ensure that buildings and homes are designed to respond to the impacts of climate change and located in areas where the future risk is minimised?</p> <p>Will it ensure that nation's food security is improved to reduce vulnerability to extreme global climatic effects which may affect the supply of food and natural resources?</p> <p>Will it ensure that new homes and facilities are located away from areas which are at risk from man-made hazards?</p>	+	<p>More dispersed growth in settlements which are less vulnerable to natural and man-made disasters.</p> <p>Nevertheless continued growth and development in the main urban areas, such as Port of Spain will ensure that there still remains risk and vulnerability to natural and man-made disasters.</p> <p>Opportunities to design buildings within new settlements which are specifically designed to withstand many of the impacts associated with natural and man-made disasters.</p> <p>This broad spatial development option also seeks to protect the most productive agricultural land from further development – reducing vulnerability to extreme global climatic events which may affect the supply of food.</p>
12	To address the causes and effects of climate change and minimise greenhouse gas emissions	<p>Will it encourage prudent use of natural resources?</p> <p>Will it lead to a reduction in CO2 emissions?</p> <p>Will it increase emphasis on the issue of climate change and global warming effects, such as rising sea levels and the impact of additional development?</p> <p>Will it enable the natural and/or built environment to cope with the anticipated effects of climate change and sea-level rise?</p> <p>Will it ensure that flood management takes a sustainable approach?</p> <p>Will it prevent and/or reduce the risk of flooding?</p> <p>Will it tackle the risks associated with hillside erosion?</p> <p>Will it tackle global sustainability issues?</p>	+	<p>Car travel will be reduced as more people choose to walk or cycle – decrease in car emissions.</p> <p>The majority of forested land will be protected which will help ensure the nation's carbon sinks are protected.</p> <p>Potentially reduces issues associated with hillside development and the susceptibility of these developments to landslides as a result of more frequent and intense rainfall.</p> <p>Some development would be steered away from vulnerable areas (i.e high risk of flooding).</p> <p>Opportunities to take an integrated approach to surface water management through new developments.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
13	To minimise energy use, support renewable energy production and encourage the prudent use of natural resources	<p>Will it minimise energy use through sustainable, efficient and effective use of buildings and land?</p> <p>Will it support or promote the increasing use of renewable energy resources in sustainable locations?</p> <p>Will it reduce demand for natural resources?</p> <p>Will it encourage the prudent and efficient use of natural resources?</p>	+	<p>Redevelopment and growth of existing urban areas will help to achieve re-use of previously developed urban land.</p> <p>Opportunities for new settlements to be designed to a high environmental standard, harnessing natural resources sustainably and reducing the need for energy use.</p> <p>Increased opportunities for walking and cycling will reduce demand for hydrocarbon resources.</p>
14	To minimise the production of waste and to maximise opportunities for recycling	<p>Will it minimise the generation of household and commercial waste?</p> <p>Will it ensure that waste is dealt with as close to the source as feasible?</p> <p>Will it maximise the opportunities for recycling waste materials and reduce reliance on landfill?</p> <p>Will it ensure that waste is dealt with in a sustainable manner?</p> <p>Does it make provision for an adequate supply of minerals?</p> <p>Will it help change behavioural patterns and attitudes about waste amongst the nation's citizens?</p>	+	<p>More dispersed spread of waste management and recycling opportunities will increase potential for recycling and ensure that waste is dealt with closer to its source.</p>
15	To protect and enhance the built quality of urban areas, villages and the spaces within them	<p>Will it enhance the quality, character and local distinctiveness of urban areas and villages?</p> <p>Will it encourage high quality design of buildings and urban design?</p> <p>Will it ensure the protection of the nation's historic sites and buildings?</p> <p>Will it provide sufficient open space in new development?</p> <p>Will it encourage walking and people to spend time outdoors through well designed places?</p>	++	<p>Development opportunities spread across the nation will provide opportunity for urban renewal and regeneration resulting in an improved quality of the built environment.</p> <p>Opportunities for new settlements to raise the bar and act as exemplars in terms of urban design and open-space provision within new development.</p>

	Sustainability Objective	Decision-Making Criteria	Compliance	Notes
16	To enhance the value of ecosystems services	<p>Will it prevent the unsustainable utilisation, overuse and degradation of the country's land resources?</p> <p>Will it prevent inappropriate urban sprawl and intrusion into the countryside and sensitive natural environments?</p> <p>Will it aid a step change in food production, food security and sustainable agricultural development?</p> <p>Will it prevent inappropriate deforestation and loss of forested environments?</p>	+	<p>Protection of agricultural land will help aid a step-change in food production, food security and sustainable agricultural development.</p> <p>Protection of forested areas will result in the preservation of their valuable ecosystem services.</p> <p>Inappropriate urban sprawl and development of new settlements in rural areas could harm sensitive natural environments.</p>
17	To protect and enhance the biodiversity and geodiversity of the natural environment	<p>Will it help reduce society's growing consumption of natural resources?</p> <p>Will it preserve or enhance designated Protected Areas?</p> <p>Will it, where appropriate, improve public access and public enjoyment of the natural environment?</p> <p>Will it help achieve the maintenance and recovery of rare or threatened species in their natural environment?</p>	-	<p>Would result in developments on undeveloped areas, pressurizing natural environments on and adjacent to these sites /areas.</p>
18	To improve and/or retain the quality of watercourses, coastal and marine resources, air quality and soil quality and achieve sustainable use of water resources.	<p>Will it help to achieve sustainable use of water resources?</p> <p>Will it protect or improve local air quality?</p> <p>Will it minimise atmospheric, noise, land, soil and water pollution?</p> <p>Will it protect or improve the quality of controlled waters?</p> <p>Will it ensure that areas identified for population growth do not pressurise the sensitive marine and coastal environments?</p>	-	<p>Potential for localized improvement in air quality through reduced dependency on the private car</p> <p>Development of port facilities along the west and north-eastern coasts of Trinidad could result in harm to marine and coastal environments.</p> <p>Further tourism growth in south-west Tobago could result in increased pressure on the sensitive marine environment.</p>

