



Ministry of Planning,
Economic Development & Investment

DOMINICA



NATIONAL PHYSICAL DEVELOPMENT PLAN



NOVEMBER 2016



November 1, 2016

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Regarding Submission of the NPDP

Dear Sirs and Mesdames:

Dillon Consulting, in collaboration with Eclipse Inc. and Acacia Consulting and Research, is pleased to submit the National Physical Development Plan ("NPDP") for Cabinet's approval.

The NPDP reflects the research and analysis of the consulting team, in addition to the significant input of stakeholders through the extensive consultation that was conducted, as well as feedback from the Project Steering Committee.

We trust that you will find everything in order. We would like to congratulate Dominica for achieving a National Physical Development Plan that will guide the country forward and position it as a leader in the eastern Caribbean.

Yours sincerely,

DILLON CONSULTING LIMITED

A blue ink handwritten signature, appearing to read "Rory Baksh", written over a blue horizontal line.

Mr. Rory Baksh, MCIP, RPP
Project Manager & Associate

Encl.

Our file: 14-8894

Dillon Consulting
Limited

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Preface

The National Physical Development Plan (NPDP) for the Commonwealth of Dominica (“Dominica”) acts together with the National Land Use Policy (NLUP) as the two core documents which fulfill the requirements of the *Physical Planning Act*. Together the NLUP and NPDP guide planning for future land use and development in Dominica.

The last national plan for Dominica, the Dominica National Structure Plan, was developed in 1976. During the creation of the NPDP, the 1976 National Structure Plan was used to provide historical context to the planning of Dominica in past decades. The Dominica National Structure Plan was also used to identify what investments planned for the country might still be relevant today. The following existing Local Area Plans were also used to inform the NPDP:

- Roseau Development Plan;
- Northeast Area Land Use Plan;
- Pont Casse and Environs Plan;
- Portsmouth and Cotton Hill Plan; and,
- Carib Territory Area Plan.

Use and Benefits of the National Physical Development Plan

The NPDP is intended as a tool to be used by multiple groups. The following list outlines some of the groups that should use the plan and how it will benefit them.

- Government Agencies:
 - Provides guidance on how to evaluate proposals for development;
 - Supports good decision making and helps to explain decision making process to developers, the public, and other stakeholders;
 - Provides guidance on how to prioritize funding and resources;
 - Provides information on appropriate locations for infrastructure;
- Landowners and Private Developers:
 - Provides clarity on what development is permitted and where development is permitted;
 - Provides clarity on the information that Government may require from developers before approving a development;
 - Ensures Government decisions are consistent and predictable;

- **Financing Organizations:**
 - Provides clarity on the priorities and long-term vision for Dominica;
 - Helps to explain how individual projects fit into the long-term vision for Dominica;
 - Provides assurance that private development and infrastructure investments will take into account risks from natural hazards and the impacts of climate change;
- **Citizens of Dominica:**
 - Shows how the Government is guiding development to reduce risks to public safety and public and private property;
 - Shows how the Government is planning for food security and environmental sustainability;
 - Shows how the Government is planning for improved quality of life by encouraging good development patterns and preventing land use conflicts; and,
 - Shows how the Government is encouraging development that supports future economic growth.

How to Read the National Physical Development Plan

The NPDP must be read in conjunction with the NLUP. Many policies in the NPDP are cross-referenced to the NLUP to help identify linkages; however, the NPDP and NLUP should be read and implemented in their entirety. When using the documents to guide future decision making, it should be understood that policies have broad application and decisions should be guided accordingly.

The NPDP is divided into seven parts as follows:

- **Part 1.0: Purpose**, explains the purpose of the NPDP including the statutory requirements and the policy context;
- **Part 2.0: Vision for Land Use**, describes the long term vision for land uses and physical development in Dominica;
- **Part 3.0: Existing Conditions**, explains the physical, social, economic and environmental characteristics of the country including the existing land use, population characteristics, infrastructure, and community services;
- **Part 4.0: Development Concept and Core Policies**, explains the overarching structure of the physical development concepts, as well as the key priorities and why they are important;
- **Part 5.0: Land Use Policies**, states the policies for land use and development that support the Vision for Land Use and spatially locates the policies of the NLUP;

- **Part 6.0: Implementation**, describes the planning processes and investment priorities required to realize the Vision for Land Use over the next twenty years; and,
- **Part 7.0: Monitoring and Reporting**, explains how the results of the NPDP should be tracked and how this should inform future updates to the NPDP.

Preparing the Plan

The NPDP was developed through:

- Analysis of the existing conditions to understand Dominica's assets and the gaps between the current situation and the vision for how best to undertake long-term physical planning and development within the fragile ecosystem of Dominica;
- A series of workshops with various Government departments linked to physical planning and development;
- Public and stakeholder consultation; and,
- Applying the principles of good planning, and regional and global best practices.

Two background reports were prepared as part of the process of developing the NPDP. They can be referred to for further details on the data and processes used to develop this plan. They are:

- **The NPDP Situation Analysis Report (May, 2014)**: This report outlines current development issues; provides a land use inventory and analysis of the various components of Dominica's spatial system; and, provides a high-level summary of current problems, constraints, and opportunities with regard to development and physical planning; and,
- **The NPDP Framework Report (March, 2016)**: This report updates and supplements the background information provided in the Situation Analysis; describes and assesses multiple options for the NPDP and formulates the basis for the plan; identifies constraints to development and lands suitable for development; and identifies investment planning and priority setting methodology, institutional strengthening recommendations, and monitoring and evaluation strategies.

The following section synthesizes the key information, analysis, and processes presented in the NPDP Situation Analysis Report and NPDP Framework Report. For additional details, please refer to these reports directly.

Existing Bio-Physical Conditions and Issues

Dominica's climate is classified as humid tropical marine, with average temperatures of 27°C (80°F). Dominica is a very high rainfall country, with an average rainfall of 175 inches per year. The high rainfall makes the country susceptible to landslides, particularly in the more mountainous regions.

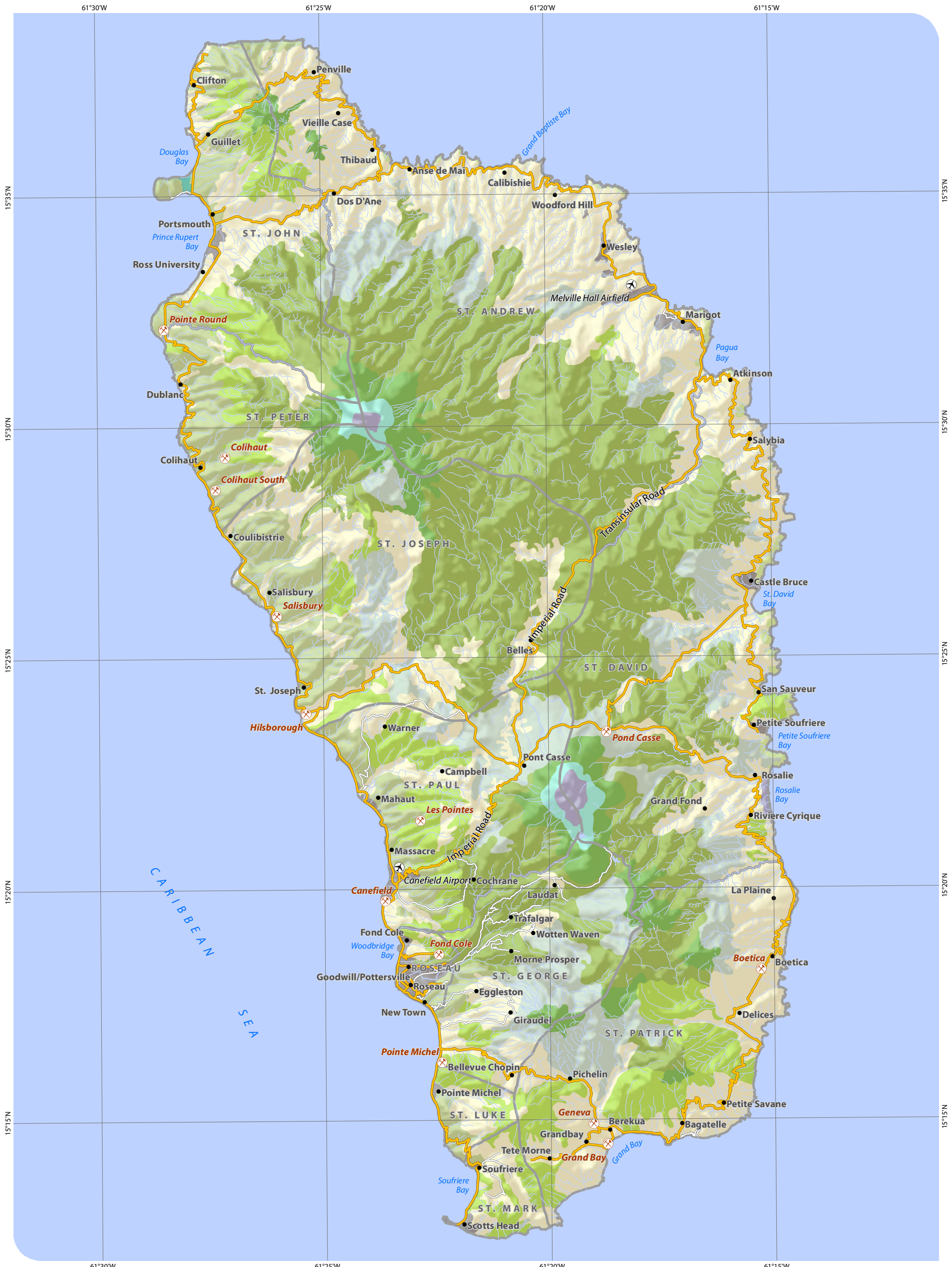
Sixty-five percent of Dominica's land cover is made up of natural vegetation composed of a variety of species (see **Figure A: Land Cover**). Dominica has seven watersheds, two lakes and a variety of rivers. Water is provided for local consumption, export to other Caribbean countries, and is also used to generate hydroelectric power. The surface of Dominica is made up of a range of soil types as shown on **Figure B: Soil Types**. Based on a report of major agricultural land types (Shillingford, 1972), the most fertile agricultural soils in Dominica are the Kandoid Latosolics Soils and the Protosol Soils.

Dominica has high levels of biodiversity with a range of plant, terrestrial, and marine species. Despite the biodiversity, there are a number species under threat. Dominica's two endemic parrots – the imperial parrot (*Amazona imperialis*) and the red-necked parrot (*Amazona arausiaca*) are both considered threatened and are "specially protected" birds under Dominican law. Three species of sea turtle can also be found in Dominica, Green Sea Turtles, Leatherback Sea Turtles, and Hawksbill Sea Turtles. Known sea turtle nesting sites are shown in **Figure C: Sea Turtle Nesting Sites**.

There are three protected terrestrial areas in Dominica: Cabrits National Park in the northwest; the Northern Forest Reserve and Morne Diablotin National Park in the centre of the island; and, Morne Trois Pitons National Park in the southern interior of the island. A study has been completed by the Government that recommends adding lands to the southern portion of the Northern Forest Reserve as a new Forest Reserve for the Layou Watershed.

There are also two existing Marine Reserves – the Soufriere Scott's Head Marine Reserve (SSMR) in the south, and the Cabrits Marine Reserve (CMR) in the north adjacent to Cabrits National Park. There is a third proposed Marine Reserve that is awaiting legislative protection that would be known as the Salisbury Marine Reserve and would be located in the central area off the west coast.

Dominica is known for experiencing extreme weather conditions and earthquakes. The island is within the hurricane belt and has been impacted by hurricanes and tropical storms including in 1979 (Hurricane David), 1989 (Hurricane Hugo), 1995 (Hurricane Marilyn), 1999 (Hurricane Lenny), and 2015 (Tropical Storm Erika).



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NATIONAL PHYSICAL DEVELOPMENT PLAN

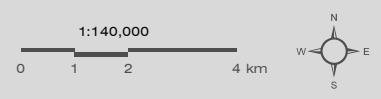
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|----------------|--------|--------------------|-----------------------|-----------------------|
| Airport | Parish | AGRICULTURE | MONTANE RAIN FOREST | SEMI-EVERGREEN FOREST |
| Quarry | Lakes | ALPINE MEADOW | MONTANE THICKET | SWAMP AND WETLANDS |
| Primary Road | | LITTORAL WOODLAND | SCRUB WOODLAND | URBAN |
| Secondary Road | | MATURE RAIN FOREST | SECONDARY RAIN FOREST | |
| Watercourse | | | | |

LAND COVER

FIGURE A
 (Figure 3 from NPDP Situation Analysis Report)

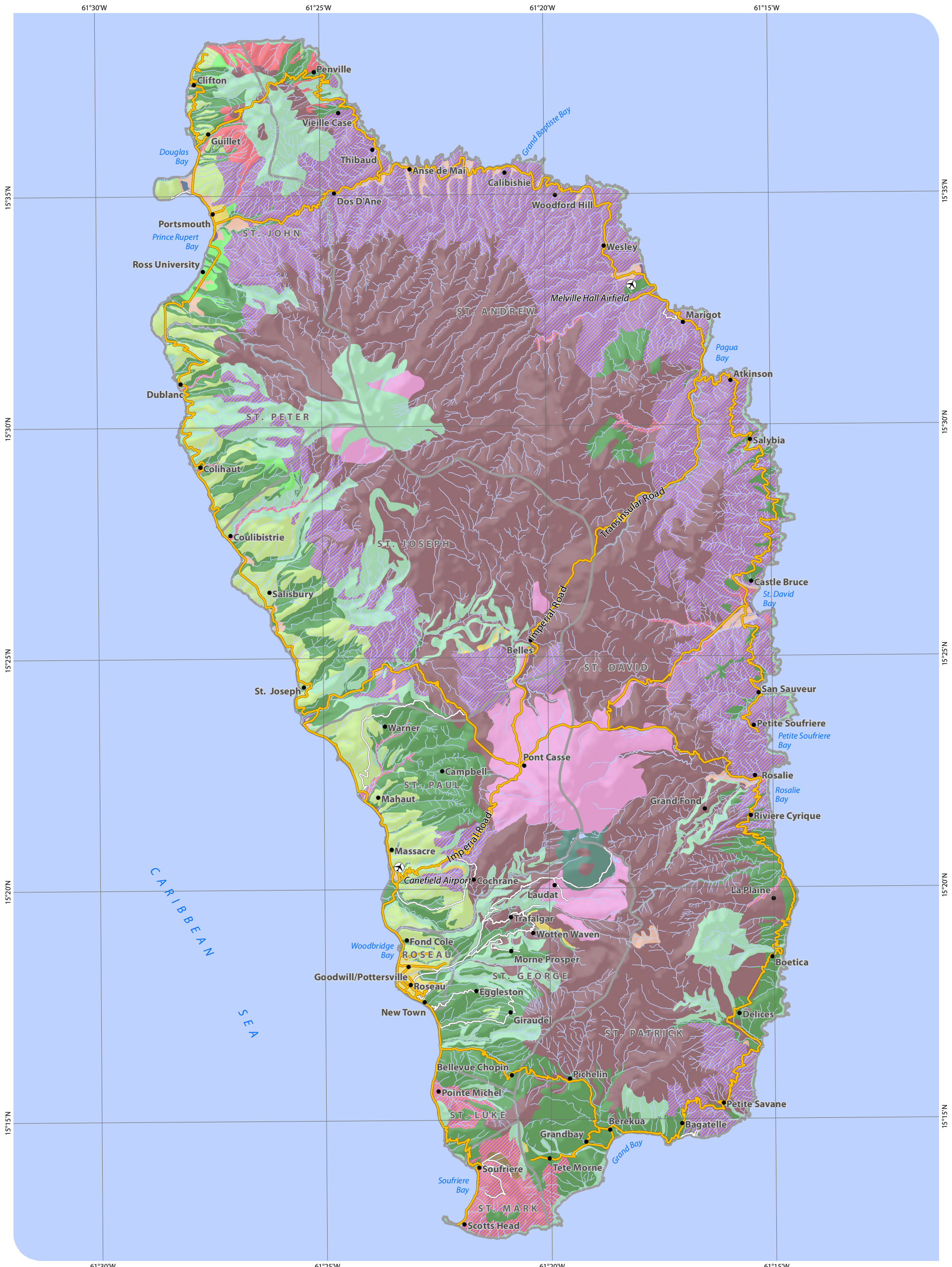


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


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
















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NATIONAL PHYSICAL DEVELOPMENT PLAN

SOIL TYPE

FIGURE B
(Figure 3 from NPDP Framework Report)

-  Airport
-  Parish
-  Primary Road
-  Water Body
-  Secondary Road
-  Watercourse
-  Soil Type Proposed for Agricultural Protection (Kandoid latosolics, Protosols)

- SOIL TYPE**
-  Allophanoid Latosolics
 -  Allophanoid podzolics
 -  Beach Sand
 -  Beach Sand + Shingle
 -  Hydrogenic Group
 -  Kandoid latosolics
 -  Kandoid latosols
 -  Other Clay Latosolics
 -  Phytogenic Group
 -  Pond
 -  Protosols
 -  Shingle
 -  Skeletal
 -  Smectoid Clay Soils
 -  Soufriere
 -  Unclassified
 -  Young Soils



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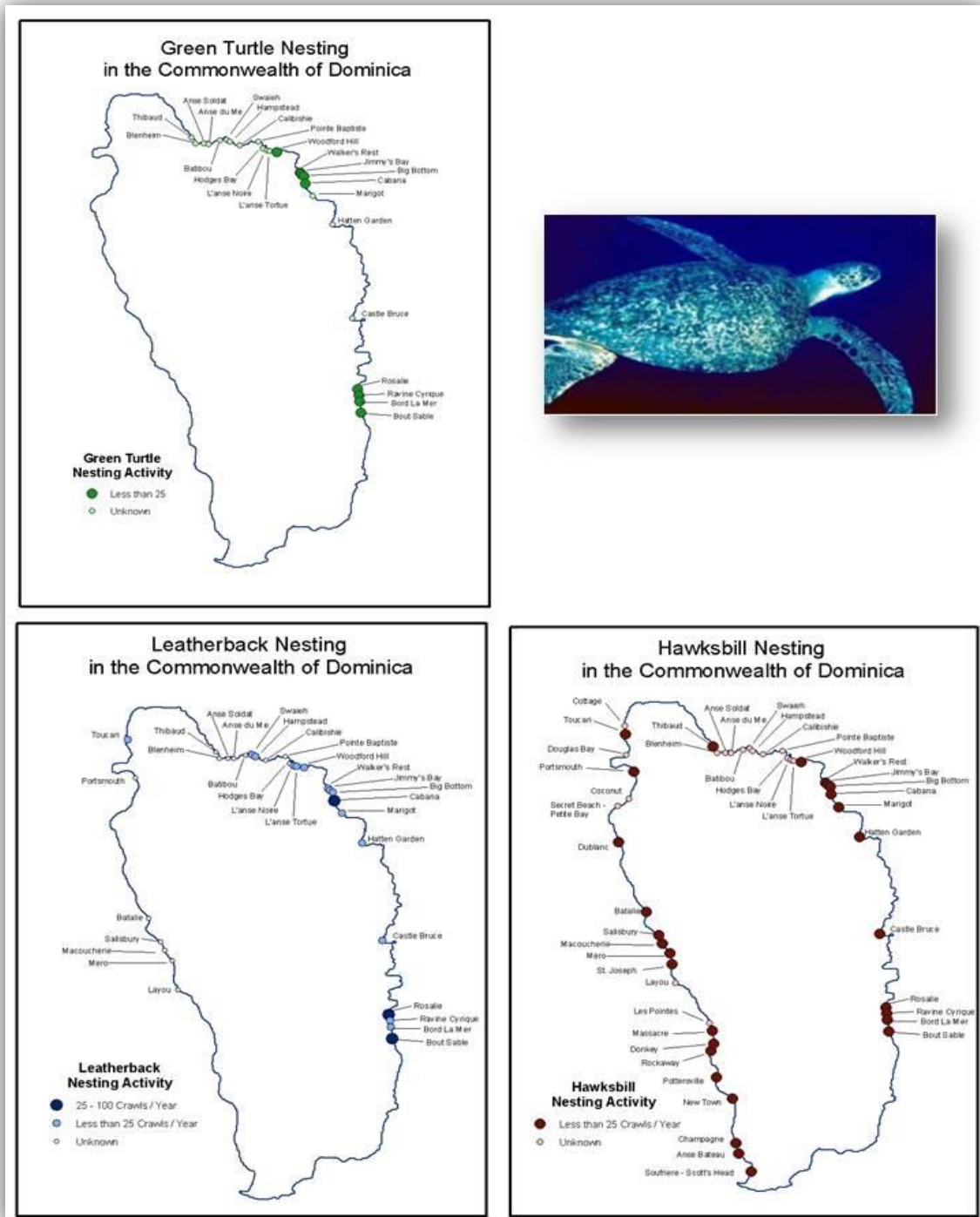


Figure C: Sea Turtle Nesting Sites (Figure 4, from NPDP Framework Report)

On August 27, 2015, Tropical Storm Erika hit Dominica. Approximately 380mm of rain was recorded at the Canefield Airport and it is likely more fell in the interior. The storm caused landslides and flash flooding throughout much of the country with the most severe damage on the west and south-east coasts. Tragically, 31 people died as a result of the storm and many more were displaced or had property lost/damaged. The total damage for TS Erika in Dominica is estimated at \$483 million USD.

The impacts to Dominica from Tropical Storm Erika that occurred in August 2015 emphasized the importance of hazard preparedness and climate change risk management. **Figure D: Composite Hazards USAID, 2006**, provides an overview of the composite hazardous areas (landslide, earthquake, volcano, flood, storm surge, wind) on the island from highest to lowest risk, as determined through a multi-hazard mapping project completed by USAID in 2006.

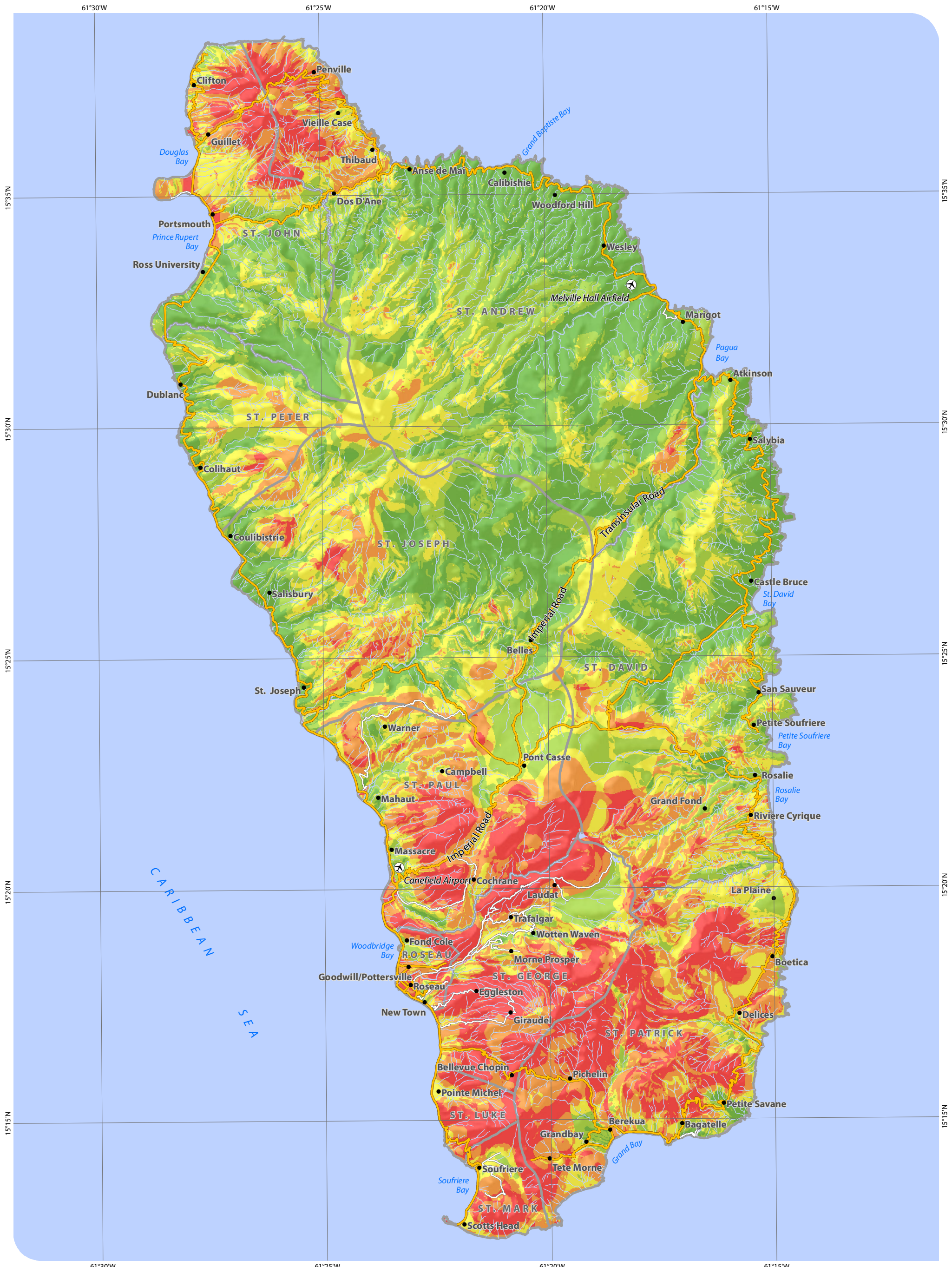
Updated mapping on flooding and landslides was prepared in 2014, as part of the Caribbean Handbook on Risk Information Management (CHRIM) program (<http://www.charim.net/>) (See **Figure E: Flash Flood Hazard and Landslide Susceptibility**). This mapping refines the mapping completed in 2006 by USAID but still has some limitations based on the data that was available.

New composite hazard mapping was created by overlaying the CHRIM mapping and USAID mapping. **Figure F: Composite Hazards** shows the resulting map including the flooding and landslide susceptibility mapping from the CHRIM and the USAID mapping for all other hazards. The new composite map only includes the highest risk areas for volcanoes, earthquakes, and winds. It shows all inland and coastal flooding areas, and it differentiates the high and moderate risk areas for landslide susceptibility.

Key Issues Related to the Bio-Physical Environment

Dominica's biodiversity is under threat from human activity and natural disasters. Major threats include:

- Impacts to significant species from:
 - Deforestation;
 - Sedimentation and erosion on the west coastal areas from quarrying; and,
 - Over-exploitation of wildlife;
- Encroachment;
- Unregulated development;
- Natural disasters;
- Impacts from climate change;
- Pollution; and,
- Weaknesses in some legal/institutional frameworks.



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COMPOSITE HAZARDS,
 USAID 2006
 FIGURE D
 (Figure 4 from NPDP Situation Analysis Report)

Airport	Parish	Composite Hazard Risk
Primary Road	Lakes	
Secondary Road		
Watercourse		
		Very High
		High
		Moderate
		Low
		Very Low

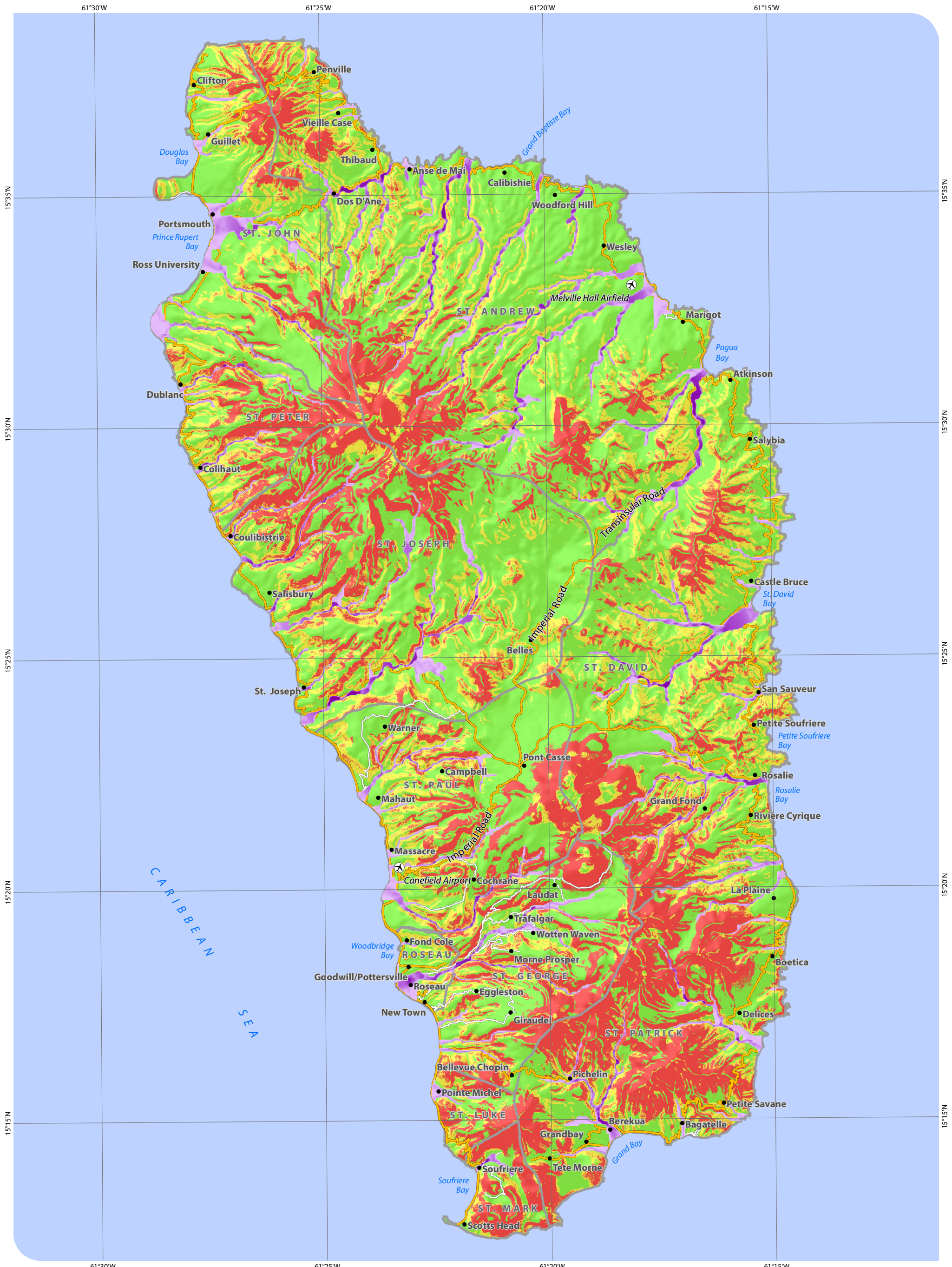


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FLASH FLOOD HAZARD AND LANDSLIDE SUSCEPTIBILITY

FIGURE E
 (Figure 1 from NPDP Framework Report)

- Airport
- Primary Road
- Secondary Road
- Parish
- 100 Year Flash Flood Hazard**
 4,209.68 m
 0 m
- Landslide Susceptibility**
 Low
 Moderate
 High

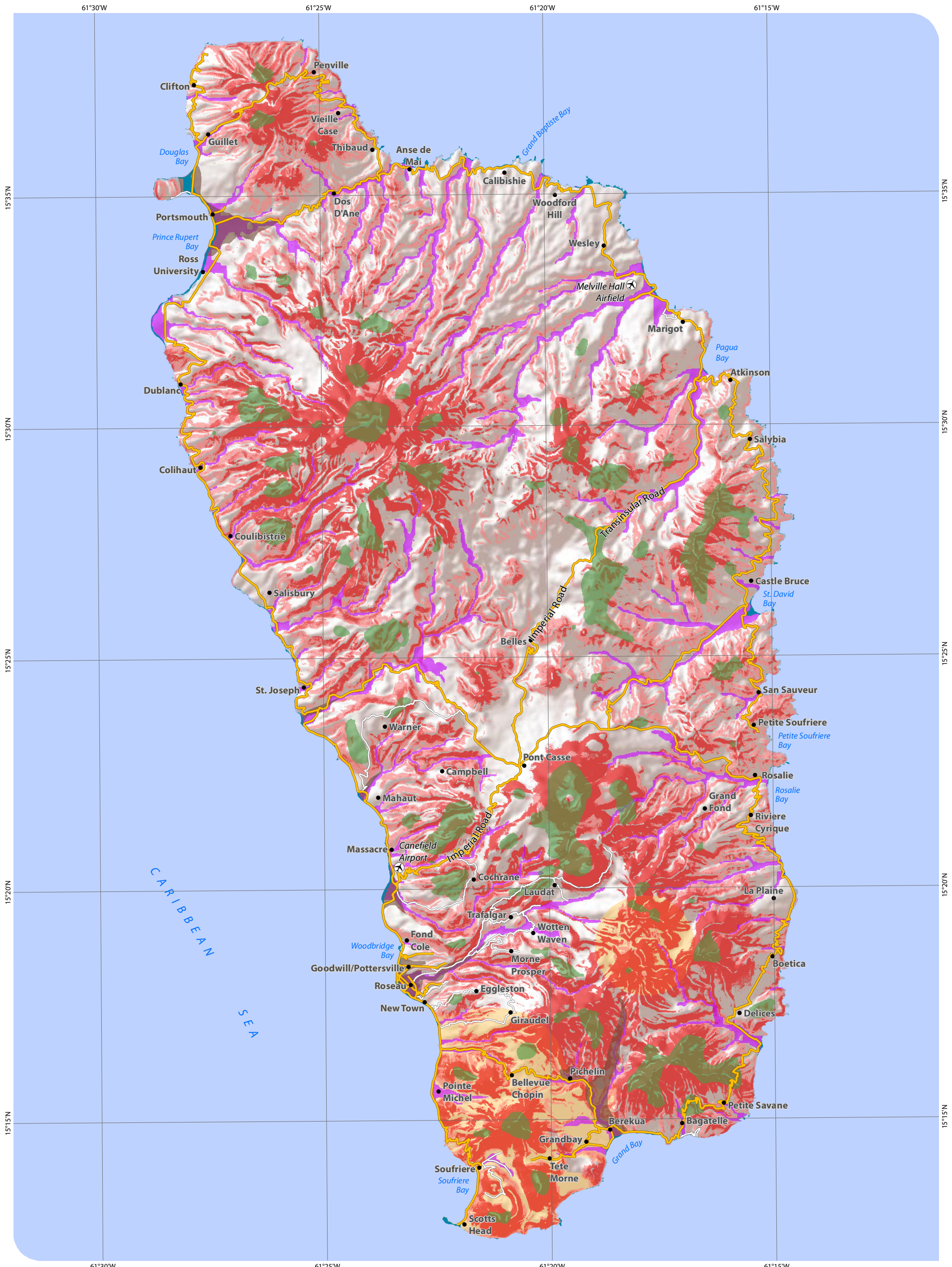


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- Airport
- Primary Road
- Secondary Road
- Coastal Flooding Risk
- High Earthquake Risk
- Very High Wind Risk
- Flood Risk
- High Risk of Landslide
- Moderate Risk of Landslide
- Very High Volcanic Risk

COMPOSITE RISK

FIGURE F
 (Figure 2 from NPDP Framework Report)



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With respect to natural hazards, some of the island's existing development falls within areas of significant risk, and there is a risk that new development may occur in areas of significant risk of natural hazards.

Existing Socio-Economic Conditions and Issues

Dominica has a population of 71,293 people (2011, Census) settled across ten parishes. Settlements are mostly concentrated along coastal areas of Dominica with the major settlements being the City of Roseau (population of 14,725) and Town of Portsmouth (population of 4,167). Dominica has a slow growing population, and has been experiencing a combination of inter- and intra-migration. In 2015, the GDP per capita was \$7,400 US (or \$11,300 US, taking into account purchasing power parity, PPP). Dominica's economy suffered during the global recession but growth rates were recovering in 2014 (3.88%) and 2015 (2.76%).¹

Dominica is a country in pursuit of economic growth, increased quality of life, and a decrease in poverty. The public sector is a major component of the economy contributing to 20 percent of the gross domestic product (GDP) in 2009 and 2010 (GSPS, 2008). There is a strong focus on developing Dominica's tourism product, and increasing agricultural (including value-added) production, as well as a focus on attracting private investment and taking on an entrepreneurial approach to support public-private arrangements. Dominica's existing socio-economic conditions demonstrate a need to grow the economy and develop climate-focused, sustainable communities.

Tourism is a priority sector for Dominica, and makes up approximately 16% of Dominica's GDP. The Tourism Master Plan 2012-2022 forecasts an increase to 23% of the GDP by 2022. Tourism activity on the island consists of cruise line and yacht operations, natural tourist attractions (i.e., waterfalls, parks) and several hotels. In 2012, Dominica hosted approximately 79,000 stay-over visitors, 266,200 cruise visitors, 11,760 yacht visitors, and 1,500 excursionists (day trips from neighbouring islands).

The Tourism Master Plan forecasts the number of direct jobs in tourism to grow to 3,000 people by 2022. The Tourism Master Plan Tourism Development Areas and Nodes (see **Figure G: Tourism Development Areas and Nodes**) as priority areas for tourism development. Some of the opportunities identified in the Tourism Master Plan include:

- Tourism attractions that include National Parks (including the UNESCO World Heritage Site) the Waitukubuli National Trail, and other natural and historical and cultural sites;

¹ GDP and growth rate numbers from: data.worldbank.org



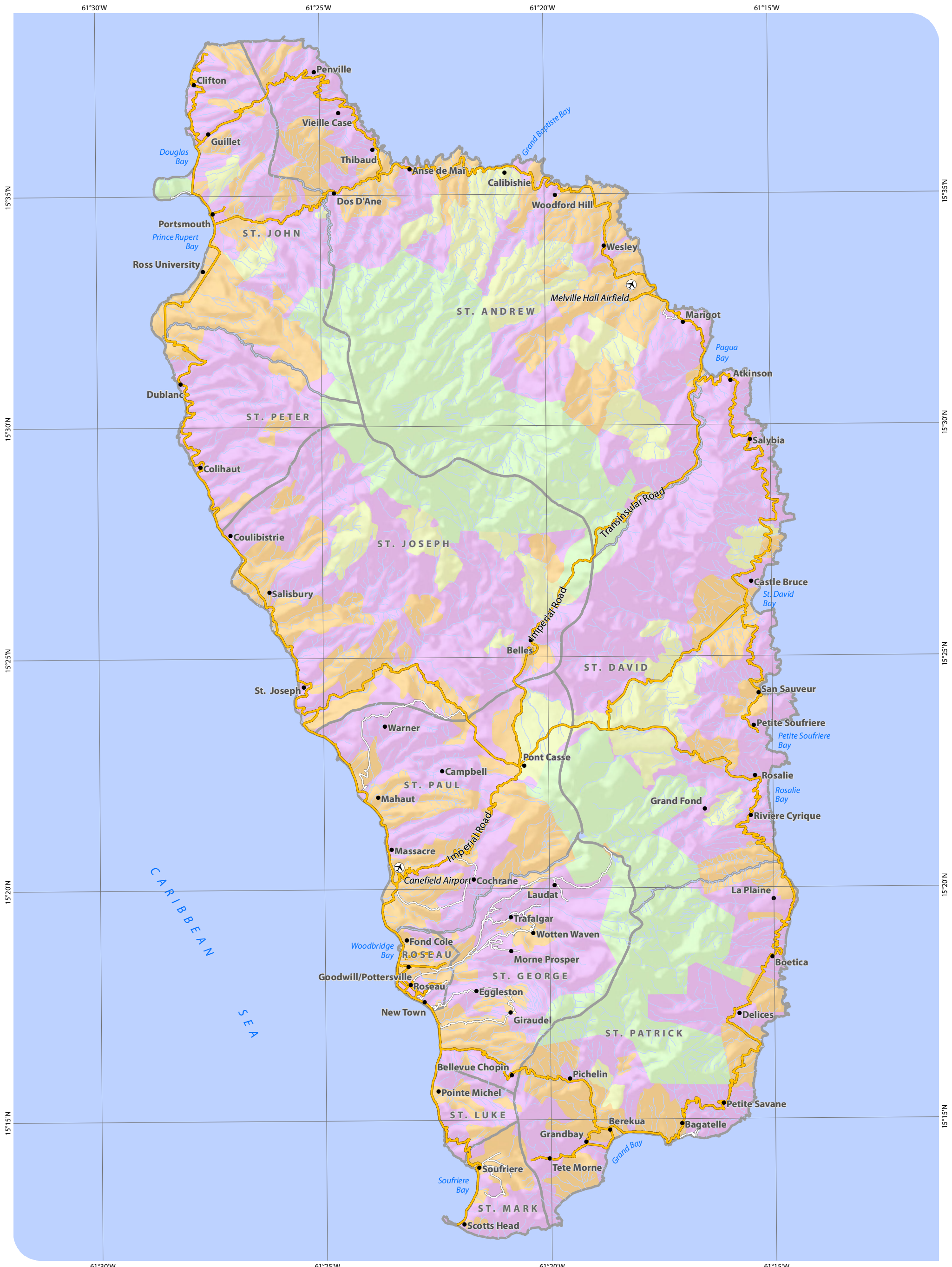
Figure G: Tourism Development Areas and Nodes (Map 20.1, from Tourism Master Plan)

- Niche tourism areas in scuba diving and eco-tourism that could be expanded; and,
- An expanding market for international travel to and within the Caribbean.

For many years Dominica's economy has been based on agriculture. Agriculture is an important contributor to the economy because of its role in employment, food security, foreign exchange, and potential to fuel agribusiness and dollar value contribution to GDP. Bananas are the dominant export crop, though this has declined in recent. **Figure H: Land Tenure** shows the large estates where banana production was concentrated (large estates are shown in orange on **Figure H**).

Key Issues Related to Socio-Economic Conditions

- Stagnant/slow growing national population;
- An increasing number of households and shortage of housing;
- Migration between parishes and de-population of some parts of the island;
- Tourism industry issues:
 - improve accessibility to the Island by sea and air;
 - improve the experience of travelers moving from the airport to their final destination (“poor state of some roads, inadequate directional signage”);
 - improve quality and quantity of accommodations (there are only 460 “international standard ‘market ready’ rooms available”); and,
 - rehabilitate the urban environment to be more welcoming to tourists, “particularly Roseau’s streets, sidewalks, streetscapes”.
- Agricultural industry issues:
 - poor agricultural practices and land degradation;
 - urban encroachment;
 - water supply use and management;
 - poorly managed mineral/aggregate mining and quarry activity;
 - unplanned and or poorly planned infrastructure development;
 - loss of biodiversity;
 - climate change impacts;
 - major landslides;
- Area specific issues:
 - The Kalinago territory - faces risk of landslides and erosion with continued cultivation of root crops encouraging that risk; and,
 - Carholme – over one hundred (100) acres of land was lost through land slippage with the risk of further land slippage remaining for the neighbouring lands.



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- Airport
- Primary Road
- Secondary Road
- Watercourse
- Parish
- Lakes
- Large Estates
- Other Lands
- Protected Areas
- State Land Settlement

LAND TENURE
 FIGURE H
 (Figure 7 from NPDP Situation Analysis Report)



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Existing Physical Land Use & Infrastructure Conditions and Issues

Housing

The 2011 Census recorded a total of 26,085 households in Dominica. The demand for new and replacement housing, for all income groups, is estimated to average 400 units a year, but housing starts account for less than 35% of this, mainly because of relatively high construction costs and difficulties in obtaining financing (GSPS, 2008). Over the past years, a number of programs have targeted provision of housing and shelter through a package of measures that has become known as the “Housing Revolution”. The Government’s approach encourages people to build their own homes, with Government involvement focusing on the utilisation of Government-owned lands and delivering serviced lots (GSPS, 2008).

Transportation

Dominica’s main road network runs 905 km along the perimeter of the island, meeting at the nexus point of Pont Casse. The extent of the road network is made up of 320 km of main roads and 585 km of secondary roads (feeder or urban). In 2009, a 10-year Road Sector Program was launched in order to assess and manage unsatisfactory road conditions in Dominica.

Dominica’s main seaport is located at Woodbridge Bay and is the location of sea imports for the country. Dominica also operates a cruise ship terminal and ferry ship terminal in the capital of Roseau, and other smaller ports (e.g., Fort Shirley).

Dominica has two airports, Douglas-Charles, the largest airport, and a second air strip located in Canefield. A Government appointed International Airport Task Force continues to work on examining all the available options for an international airport for Dominica.

Utilities

The Dominica Water and Sewerage Company (DOWASCO) is responsible for the management of water and has exclusive rights to use water resources in the country (GSPS, 2008). DOWASCO extracts over 10 million imperial gallons per day from 43 river intakes to satisfy potable water demands. DOWASCO provides service for over 90% of the total population with 16,000 customer connections. Sewerage collection and treatment is provided for the entire capital city of Roseau and environs. There are on-going efforts to service Portsmouth with a new sewerage collection and treatment system since the conditions in Portsmouth make the present use of septic tank and soak-away systems less than desirable.

The Dominica Solid Waste Management Corporation (DSWMC) manages solid waste collection and the country’s solid waste site is near the capital.

Key Issues Related to Physical Land Use & Infrastructure

Housing

- The quantity, quality, and adequacy of housing to meet demand remain a challenge.

Transportation

- Renewal and rehabilitation is needed for the country's road network.
- Dominica's terrain is particularly difficult and expensive from a road construction standpoint — earth cutting, retaining walls and bridges are very costly.
- The Government faces a challenge of maintaining an extensive road network – including feeder roads, village roads, internal community roads, and street lights – serving a relatively low density of population.

Utilities

- The small population size and topography make it difficult to locate and extend services.
- Portsmouth is reaching environmental carrying capacity and needs a centralised collection and treatment system for sewerage.
- The Roseau landfill needs an imminent expansion. New solid waste sites may be required elsewhere on the island to appropriately manage solid waste and minimise illegal dumping.

Constraint Mapping for the National Physical Development Plan

The basic approach to land use planning is to define areas of constraint for development, which in turn helps determine what areas are most suitable for development. With regards to the constraints, the following ones necessarily shape the mapping for the NPDP. These are:

- National Parks and Waitukubuli National Trail;
- Agricultural Protection Areas; and,
- Natural Hazard Risk Areas.

An additional constraint is that development is restricted in the DOWASCO Water Catchment Areas as a way to protect the quality and quantity of potable water.

The national parks and trail are protected under existing frameworks in Dominica and are clearly delineated. In accordance with the National Land Use Policy, the most important areas for agricultural production will be designated as agricultural land use and protected for the long-term in the NPDP. The most important agricultural areas are a combination of:

- The large estates, and areas where the existing land use is agriculture (**Figure A and Figure H**); and,
- The areas with the most fertile soil types (refer to **Figure B** in this report).

As seen on the Composite Hazard Map (Figure F), much of Dominica's land mass is subject to natural hazards. To manage the risks from natural hazards, all of the areas shown on the Composite Hazard Map will be designated as natural hazard areas in the NPDP and future settlement will generally be directed away from these areas. Preventing development in risk prone areas will help to minimize the risks to human safety in the event of natural disasters and increase the resiliency of Dominica to the impacts of climate change. Preventing development in areas prone to natural hazards is also important as a way to protect the investments of the Government and funding agencies by choosing safe locations for expensive infrastructure.

Resultant Constraint Mapping

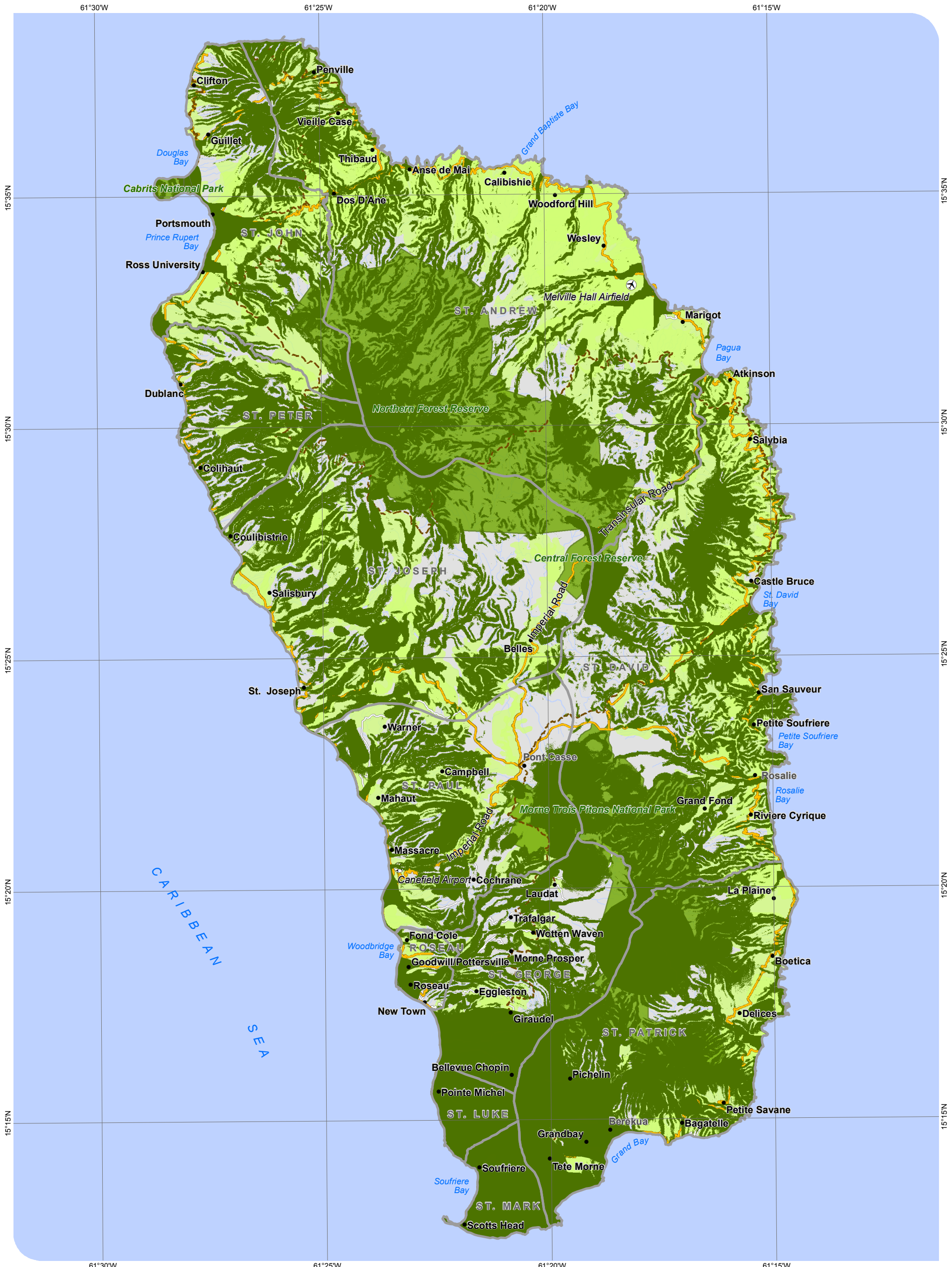
Figure I: Constraint Map shows the constraint mapping for the NPDP, which includes the national parks, natural hazard areas, and agricultural protection areas.

The proportional areas of the Country that are constrained break down approximately as follows:

- National Parks: 21%
- Agricultural Areas: 51%
- Natural Hazard Areas: 58%²
- Total lands constrained for development: 88%
- Lands unconstrained for development: 12%

With only 12% of land unconstrained for development, decisions about how land is used must be made with great diligence and care.

² Note that some of the Natural Hazards overlap with the Agricultural Areas and National Parks.



COMMONWEALTH OF
DOMINICA
NATIONAL PHYSICAL
DEVELOPMENT PLAN

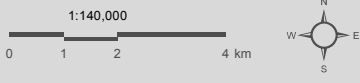
- Waitukubuli National Trail
- Airport
- Primary Road
- Secondary Road
- Natural Hazard
- National Park or Reserve
- Agriculture
- Parish

CONSTRAINT MAP

FIGURE I
(Figure 14 from NPDP Frame-
work Report)

MAP DRAWING INFORMATION:
DATA PROVIDED BY GOCD/PPD/Dominode

MAP CREATED BY: CH
MAP CHECKED BY: RB
MAP PROJECTION: NAD 1983 UTM Zone 20N



Future Outlook

Planning for physical development depends on understanding future population and economic outlooks. If population increases then additional housing, community facilities, infrastructure, and support services must be planned to accommodate the new population. Physical planning incorporates economic outlooks by protecting resources that are crucial for economic drivers and prioritizing those economic drivers if there is land use conflict. Population growth in Dominica has been stagnant – notwithstanding a relatively strong rate of natural increase (i.e., births outnumber deaths) – due to persons of working age leaving the island to earn their livelihood elsewhere. If there are more opportunities for employment in Dominica, the population will grow based on the rate of natural increase as people choose to stay on the island. It is understood that agriculture and tourism will be key drivers of the country's future economy. The future outlook for population growth is based on understanding potential economic and employment growth in the agriculture and tourism sectors, and tying employment growth in these sectors to the retention of the working age population, thereby leading to a turn-around in the economy and a positive population outlook over the long-term.

Employment in the agricultural and tourism sectors for the NPDP's base year of 2015 are as follows:

- The 5,350 jobs in the agriculture sector with a base year of 2014 from a forecast development by L.Prevoist for the NPDP has been carried forward for the NPDP's base year of 2015 as a conservative approach; and,
- The 1,700 jobs in the tourism sector with a base year of 2012 in the Tourism Master Plan has been adjusted by the presumed constant growth rate³ and factored up, resulting in 2,090 jobs in the tourism sector for the NPDP's base year of 2015.

Anticipated employment growth in the agricultural and tourism sectors is summarized in **Table A**.

³ Growth of 1,300 jobs in the tourism sector over 10 years gives a constant growth rate of 130 jobs/year.

Table A: Employment Base Adjustments and Tourism Growth Forecast, 2015-2035

Employment Sectors	Base Year	Forecast Years and % Increase for Each 5 Year Period							
	2015	2020	% Inc.	2025	% Inc.	2030	% Inc.	2035	% Inc.
Tourism employment	2,090	2,740	31	3,390	24	4,040	19	4,690	16
Agriculture employment	6,665	7,333	10	7,480	2	7,629	2	7,629	0
Total Employment	8,755	10,073	15	10,870	8	11,669	7	12,319	6

The population of Dominica for the NPDP's base year of 2015 was determined as follows: the population of 71,293 with a base year of 2011 from the most recent Census was carried forward for the NPDP's base year of 2015 on the assumption that both the agricultural and tourism sectors are still slowly advancing and population may continue to be relatively stagnant.

Population growth forecasting was developed based on the projections for growth in employment in the agricultural and tourism sector. This assumes that increases to employment opportunities will lead to increases in population. Using the economic sector-driven approach to forecasting, it is assumed that the current proportion of population employed in agriculture and tourism will remain constant at 12.28% (8,755 jobs in tourism and agriculture for a population of 71,293), and that growth in these sectors lead to population growth. Based on this approach, the expected population forecast to the year 2035 is shown in **Table B**.

Table B: Population Forecast in 5-Year Increments, 2015-2035

	Base Year	Population Forecast Growth and % Increase for Each 5 Year Period							
	2015	2020	%	2025	%	2030	%	2035	%
Population Growth for 5 year period	-	10,733	-	6,490	-	6,506	-	5,293	-
Population Growth	71,293	82,026	15	88,516	8	95,022	7	100,315	6

The above forecast envisions a prosperous, growing Dominica, with a total increase of approximately 29,000 persons from 2015 to 2035, to a total population of 100,315 in 2035. This

represents a 41% increase in population over the twenty-year period or an average annual increase of 2.04%.

Public and Stakeholder Consultations

NPDP Stakeholder Workshop (November 2015)

In November 2015, Dillon Consulting Limited in collaboration with Eclipse Inc. facilitated a three day workshop to support the development of the NPDP for Dominica.

The goals of the three day workshop were two-fold:

- 1) To develop a strong framework for the NPDP that reflects local knowledge and is based on inputs from a wide group of internal stakeholders; and,
- 2) To train Physical Planning staff so that they will have the capacity to complete future national and local area land use plans without the need for outside consultants.

The three day workshop for the NPDP was structured around a series of discussions, presentations, activities and worksheets.

Through the workshop, the participants developed three thematic options for the NPDP. This component of the workshop allowed the team to begin building an understanding of physical planning and the interdisciplinary considerations and trade-offs that need to be considered. The three thematic options are distinct, but represent overlapping priorities.

Option 1: Investment Focus	Option 2: Social Sustainability Focus	Option 3: Environmental Protection & Tourism Focus
<ul style="list-style-type: none"> • Access • Industrial Zones • Environmental Protection Enforcement • Job Creation • Foreign Exchange 	<ul style="list-style-type: none"> • Planned Development • Empowerment • Environmental Protection • Population Growth • Workforce • Poverty Reduction • Attractive • Sustainable • Integrated • Community Tourism 	<ul style="list-style-type: none"> • National Resources Protected • Boost Economy • Boost Tourism • Boost Industry • Reduce Imports • Increase Exports • Stronger Infrastructure • Increase Income • Low Capacity / High Volume

Through an evaluation process, the Environmental Protection & Tourism Option was identified as the preferred option. This emphasis most closely reflects the long-term priority of the Government to promote Dominica as the “Nature Island” through environmental protection and builds on the existing strong protection for the National Parks/Forest Reserves. A tourism focus balanced with a focus on environmental protection is expected to enable sustainable economic development. In addition, environmental protection can be mutually supportive of meeting climate resiliency goals which is another overarching priority. The workshop also established a list of the strategic investments that would be needed in order to implement the NPDP.

Public Consultations on the NPDP Framework Report (January 2016)

In January 2016, public consultations were undertaken on the contents of the NPDP Framework Report. The following groups were engaged during the period from January 25 to 27, 2016:



- The Project Steering Committee;
- Participants of the November 2015 NPDP workshop;
- Citizens of the Roseau community;
- Post-Tropical Storm Erika Reconstruction Committee and Resettlement Committee;
- Citizens of the Portsmouth community;
- Representatives from banks, insurance companies, architects, engineers, surveyors, and real estate agents;
- Citizens of the Marigot community; and,
- The Rotary Club of Dominica.

Throughout the consultations, participants expressed significant support for the base considerations of the schematic land use plan (i.e., protecting agricultural lands, directing development away from risky areas). They also expressed support for the physical planning aspects such as the growth centres and evacuation jetties. Participants engaged in meaningful discussion about Dominica’s challenges and needs for the future, as they reflected on the land use schematic. This discussion led to various ideas for improving aspects of the plan which were incorporated into the first draft of the NPDP.

Public Consultations on the NPDP, Draft 1 (April/May 2016)

In April of 2016, Draft 1 of the National Physical Development Plan was presented to stakeholder groups and citizens for feedback and comment. Consultation sessions were held with public sector personnel, government working groups, and the general public. In addition to

the discussions that took place during the consultation sessions, written comments were provided by a number of stakeholders and members of the public. The National Physical Development Plan was revised to incorporate the comments and feedback received.

Investment Planning and Priority Setting Methodology

A key function of the NPDP is to suggest priorities for investment by the Government of Dominica, international donor agencies, financial institutions, and private project proponents, based on a transparent and comprehensive investment framework. Establishing priorities based on relevant, transparent and credible criteria can increase investor confidence and implements guiding land use decisions as envisaged by the NLUP and NPDP.

The following methodology was used to establish the prioritized list of investments. A preliminary long list of 133 investment projects was compiled in November 2015, during the NPDP workshop which involved representatives from multiple government sectors. The project long list was reviewed and revised for duplication and consistency with the National Land Use Policy and NPDP land use planning framework, and existing public sector investment priorities identified in several key documents, including:

- Budget Address 2015-2016 (July 2015), including the Public Sector Investment Plan (2015-2016);⁴
- Growth and Social Protection Strategy (GSPS) 2014 – 2018;⁵ and,
- Rapid Damage and Impact Assessment Tropical Storm Erika (August 27, 2015).⁶

“Order of magnitude” cost estimates associated with each project were reviewed and revised based on comparable projects, where available. Finally, a project rating tool was used to rate projects based on a number of priority setting criteria.

Institutional Strengthening

The long-term success of the Plan will rely on the coordinated efforts of the Physical Planning Division (PPD), other public sector departments and agencies, private sector stakeholders, and

⁴ Government of the Commonwealth of Dominica. Budget Address 2015-2016. Keeping it Real. By Honorable Roosevelt Skerrit. July 24, 2015. <http://finance.gov.dm/index.php/budget/budget-addresses/file/22-budget-address-2015-2016-keeping-it-real-by-honourable-roosevelt-skerrit-july-24-2015>

⁵ Government of the Commonwealth of Dominica. Fourth Medium-Term Growth and Social Protection Strategy (GSPS). 2014 – 2018.

http://www.nationalplanningcycles.org/sites/default/files/country_docs/Dominica/gspg_2014-2018.pdf

⁶ Commonwealth of Dominica. Rapid Damage and Impact Assessment Tropical Storm Erika – August 27, 2015. http://www.dominica.gov.dm/images/documents/rapid_damage_impact_assessment_dominica.pdf

civil society. The institutional challenge facing the Government is to build and sustain public and stakeholder support for the principles and directions laid out in the NLUP and NPDP, and to establish the necessary capacity to guide physical development accordingly. Cooperation from the private sector and from the general public is crucial since the majority of land in Dominica is privately owned. The following recommendations identify specific actions that will strengthen Dominica's institutional capacity and enable the Government to better achieve the goals and intended outcomes of the NLUP and NPDP:

- Approving the National Physical Development Plan, building on the formal endorsement of the NLUP by Cabinet in May, 2015;
- Investing in inter-agency coordination through a coordinating mechanism to manage the complexity of stakeholder involvement in the planning and development of land;
- Investing in public education on the NPDP, land use planning, and development permitting requirements;
- Continuous capacity building and training for the Planning Authority and other key stakeholders such as the private sector, local governments and the Kalinago Territory Authority;
- Amending the existing legislation to require planning consent as part of the transfer and subdivision of land; and,
- Continuing to build an evidence base for decision making through access to open data.

Monitoring and Reviewing the NLUP and the NPDP

The NPDP will serve as the primary implementation tool of the policies and direction outlined in the NLUP. Performance indicators to be integrated into the NPDP will enable monitoring of the implementation of policies and direction outlined in the NLUP.⁷ While the *Physical Planning Act* does not specify a time frame for reviewing or updating a national land use policy, the NLUP should be reviewed by the Planning Authority every five to ten years to identify any required revisions. The review and subsequent update of the NLUP should take place in advance of an update to the NPDP. Monitoring and review of the NPDP is based on a Monitoring and Reporting framework developed using the following best practices for evaluating policy:

- Evidence-based;
- Transparent and consistent;
- Collaborative accountability; and,
- Reflects organizational capacity.

⁷ See Recommended Framework for a NPDP Monitoring and Reporting System.

Acknowledgements

This Plan would not have been possible without contributions from:

- The Prime Minister's Office;
- The Physical Planning Division;
- The Ministry of Public Works and Ports;
- The Division of Agriculture;
- The Division of Forestry, Wildlife, and Parks;
- The Fisheries Division;
- The Valuation Unit;
- The Environmental Coordinating Unit;
- The Dominica Water and Sewerage Company;
- The Solid Waste Management Corporation;
- Discover Dominica Authority;
- Invest Dominica Authority;
- The Dominica Hotel and Tourism Association; and,
- The citizens of Dominica.

The following Government staff that directly influenced the process are sincerely thanked:

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- Annie Edwards, Physical Planner and Senior Project Co-ordinator;
- Shari-Anne Gregoire, Project Co-ordinator; and,
- Lyn Baron, GIS Specialist.

The contributions of the following international partners and organizations are also recognized:

- The Caribbean Development Bank (CBD) that funded the development of the NLUP and NPDP;
- The Organization of Eastern Caribbean States (OECS) / Global Climate Change Alliance (GCCA) Sustainable Land Management project that funded the Policy Dialogue and Training;
- The Global Climate Change Alliance of the European Union led by Dr. Hans-Peter Winkleman, Climate Change Specialist, that funded the mainstreaming of climate change for the NPDP;

- The World Bank-funded Caribbean Risk Information Program, Caribbean Handbook for Risk Information Management (maps produced by University of Twente and available from <http://www.charim.net/dominica/maps>);
- The United States Agency for International Development (USAID) Vulnerability Maps (2007); and,
- The Government of Dominica Physical Planning Division Data Repository (<http://www.dominode.dm>).

Part 1.0: Purpose

The NPDP will facilitate rational, integrated long-term planning of all uses of land in the country. There are many constraints to development in Dominica, so it is vitally important that physical development decisions are made with great diligence and care. The NPDP makes it possible to optimize the use of land by minimizing land use conflicts and helps guide decisions when there are land use trade-offs. The NPDP also helps guide land use decisions that support environmental protection and enhancement, as well as decisions that support social and economic development.

The NPDP is the partner document to the NLUP, which is the Cabinet-approved policy to guide the use of land and growth/development. All the policies in the NPDP are consistent with the NLUP. Both the NLUP and the NPDP are enabled through the *Physical Planning Act (2002)*. Under the *Act*, the Planning Authority may prepare, or cause to be prepared a NPDP to guide land use planning decisions in the country. The NLUP and the NPDP documents work together to form the National Physical Development Plan as described in the *Physical Planning Act*.

Physical Planning Act (2002)

National Land Use
Policy (2015)

National Physical
Development Plan (2016)

The NLUP incorporates key requirements from *The Physical Planning Act* as the precursor to the NPDP. The NLUP meets the *Physical Planning Act* requirement as a statement of principle aims and objectives with respect to the development and other use of land. Building on the NLUP, the NPDP fulfils the remaining *Physical Planning Act* Requirements:

- Section 9.(2)(b), a report on the existing conditions; and,
- Section 9.(3), such maps, plans, drawings, diagrams and other graphic representations as the Authority considers necessary to explain the plan.

The NPDP also implements several other functions that are permitted by the *Physical Planning Act*:

- Section 9.(4)(a), define the sites of proposed roads, public and other buildings and works, or the allocation of land for agricultural, residential, industrial or other purposes of any class, and the conditions under which such development should be carried out;
- Section 9.(4)(b), designate any area as an area which should not be developed due to susceptibility to aircraft hazard or to flooding, erosion, subsidence, instability or other condition of the physical environment;
- Section 9.(4)(c), make proposals for the preservation of buildings, sites and other features of special architectural, cultural, historical, or archaeological interest;
- Section 9.(4)(d), provide for any of the matters set out in the First Schedule⁸ as the Authority considers appropriate to the nature and scope of the proposed plan; and,
- Section 9.(4)(e), designate as a comprehensive planning area any area which in the opinion of the Authority need to be planned as a whole for one or more of the purposes of development, redevelopment, improvement, or conservation.

All land use decisions made in Dominica shall be consistent with the NLUP and the NPDP. This requirement will support the paradigm described in the NLUP of making land use decisions based on the public good and in support of advancing long-term economic, social, and environmental well-being of Dominica and its citizens.

⁸ e.g., roads, buildings, community planning, amenities, public services, etc.

Part 2.0: Vision for Land Use and Physical Development

The Vision for Land Use and Physical Development for the NPDP is derived from the vision and policies established by the NLUP, and from the priorities and values identified through public and stakeholder consultation. The Part IV of the NLUP establishes a vision for Dominica's Land Use Planning System that honours Dominica's identity as *the Nature Island* of the Caribbean. This vision calls for well managed settlements, agricultural lands, rivers, forests, coastal zones, and biodiversity.

Part V of the NLUP establishes land use policies around three core areas:

- Investment, and Social and Economic Development;
- Enhanced Forest, Natural Environment, and Agricultural Vitality; and,
- Increasing Resilience to Climate Change.

Based on assets and values identified through public and stakeholder consultation, the NPDP has an additional focus on environmental protection and tourism. Environmental protection is identified as a key value of the people of Dominica. Tourism is identified as a key opportunity to increase economic development. The focus on both environmental protection and tourism build on and leverage Dominica's existing assets many of which are natural features.

The vision for the future of Dominica's Land Use and Physical Development explains the aims and objectives of the NPDP through a picture of what Dominica will be like in 2035.

In 2035...

... Dominica will have retained forest cover over 65% of the land mass including protected National Parks and Forest Reserves and privately owned forests as a way to protect biodiversity, prevent erosion, mitigate climate change, and provide opportunities to earn a sustainable livelihood without destructive activities;

... Dominica will be an internationally recognized sustainable tourism destination renowned for its pristine natural environment, environmental features, and high-quality tourism facilities;

... Dominica will continually build resilience to the impacts of climate change and natural hazards, with development and infrastructure located in the safest areas and designed and constructed based on best practices, and with a comprehensive emergency preparedness system in place including emergency shelters, evacuation routes and evacuation jetties;

... Dominica's settlement areas will be in the safest possible locations, connected to the interior, and made up of well-organized residential neighbourhoods with parks and open space, and community facilities. Commercial and industrial areas will be located in practical and convenient locations that minimize land use conflicts and will be aesthetically pleasing;

... Dominica will have strong agricultural areas that produce healthy food for the residents of Dominica and high-value exports using sustainable practices; and,

... Dominica will be enforcing planning legislation and monitoring progress towards this vision.

Part 3.0: Existing Conditions

Dominica is situated between Guadeloupe to the north and Martinique to the south, at 15° 30' north latitude and 61° 25' west longitude with a total land area of 750.6 square kilometres (290 square miles). It has one of the lowest population densities and the most intact forest cover in the Caribbean, and prides itself on its “Nature Island” identity.



Image Source: Biodiversity Strategy and Action Plan (2001-2005)

3.1 Physical Characteristics and Existing Land Uses

Dominica is a rugged mountainous terrain that is still being formed by geothermal/volcanic activity. Dominica has nine potentially active young volcanoes resulting in high levels of volcanic risk.

65% percent of Dominica’s land cover is made up of forests and natural vegetation. The island is interspersed with an abundance of fresh water rivers, waterfalls and lakes. Dominica also has large agricultural areas and human settlement areas, including the City of Roseau as its capital. Agricultural lands and lands suitable for human settlement are limited by the steep slopes that characterize much of the landscape.

Dominica's climate is classified as humid tropical marine, with an average annual temperature of 27°C (80°F) and high annual rainfall averaging 445 centimetres (175 inches) per year.

Dominica is susceptible to a number of natural hazards. Dominica is affected by hurricanes and it is vulnerable to the impacts of climate change. The high rainfall and mountainous terrain makes the country susceptible to landslides which can be a hazard to public safety and can impact transportation. As indicated, there are also risks associated with earthquakes and volcanic activities. Some of the island's existing development falls within areas of significant risk of natural hazard.

Dominica has a high level of biodiversity with a range of plant, terrestrial and marine species, including a number of rare and unique species that thrive only on the Island of Dominica. There are a number of significant species under threat including Dominica's two endemic parrots and a number of marine species.

3.2 Population and Socio-Economic Characteristics

Dominica has a population of 71,293 people (2011, Census) settled across ten parishes:

Parish	Area	Population	Density
	<i>hectares</i>	<i>2011</i>	<i>persons per hectare</i>
St. Andrew	17,960	9,471	0.5
St. David	12,680	6,043	1.3
St. George	5,350	21,241	4.0
St. John	5,850	6,561	1.1
St. Joseph	12,010	5,637	0.5
St. Luke	1,110	1,668	1.5
St. Mark	990	1,834	1.9
St. Patrick	8,440	7,622	0.9
St. Paul	6,740	9,786	1.4
St. Peter	2,770	1,430	0.5
TOTAL	73,900	71,293	1.0

Roseau is Dominica's capital and the largest population centre with a total of 14,725 people as of the 2011 Census; the next largest settlement is Portsmouth with a total of 4,167 people. The average household size in 2011 was 2.7 people, declining from the previous census.

The population is expected to grow by up to 29,000 people in the next twenty years, so that the population of Dominica could reach 100,315 by the year 2035. The driver of this population growth is expected to be growth in the economy and employment opportunities, especially in the agricultural and tourism sectors. Additional employment opportunities will encourage more people to choose to remain in Dominica, and combined with the strong natural rate of growth (i.e., births), then this will lead to population growth.

The main employment sectors in Dominica are the public sector, agriculture, and tourism.

There are four hospitals in Dominica; the Princess Margaret Hospital in Roseau provides the greatest range of services. The country has more than 80 primary and secondary schools. These schools and other community facilities act as emergency shelters in the case of hurricanes.

3.3 Connectivity

The main road network of Dominica includes 320 kilometres of main roads and 585 kilometres of secondary roads. The main seaport is the deep water port located at Woodbridge Bay. In Roseau, there is also a cruise ship terminal and a ferry terminal that both contribute to the island's connectivity. There are two airports in Dominica; the largest and most up to date airport is Douglas-Charles Airport, which can accommodate planes up to 48 seats.

Mobile telephone service and internet access is available through several carriers in Dominica.

3.4 Utilities and Infrastructure

Electricity and potable, running water are provided almost universally throughout the country. Sanitary sewers only exist in greater Roseau and this is becoming a problem in some more densely populated areas such as in Portsmouth. The single centralized landfill which serves the country for solid waste management is nearing capacity.

Part 4.0:

Development

Concepts

Part 4.0 explains the development concepts that provide the overarching structure to the plan and explain the rationale behind the NPDP, and in particular the policies found in Part 5.0 and the NPDP's Figures 1, 2, and 3. These development concepts are consistent with and derived from the NLUP and are linked to the Vision for Land Use and Physical Development described in Part 2.0.

Four development concepts provide the overarching structure for the NPDP:

- Concept One: Recognition of Constraints;
- Concept Two: Mainstreaming Climate Change Mitigation and Adaptation;
- Concept Three: Prioritization of Environmental Protection and Tourism; and,
- Concept Four: Focus of Planning and Development in Centres.

4.1 Concept One: Recognition of Constraints

A core function of land use planning is to define areas which are suitable for development. Inherently, the first step for making this determination is identifying lands that are not suitable for development. In Dominica, the key constraints to development are:

- Natural Hazard Risk Areas;
- National Parks, Forest Reserves, and the Waitukubuli National Trail; and,
- Agricultural Areas.

These constraints originate largely in Dominica's steep topography. The landscape shapes the natural hazard risks: it created an opportunity to protect large portions of the interior and informs areas that are suitable for agricultural production. Existing human settlement can also

be a constraint to development. A final constraint is the DOWASCO water catchment areas where development is restricted to protect the quality of potable water.

Much of Dominica's land mass is subject to natural hazards including landslides, storm surges, hurricanes, flash flooding, volcanoes, and earthquakes. In order to manage the risks from natural hazards to public safety and property, areas that are subject to the greatest risks from natural hazards should be identified. Future settlement shall be directed away from these areas and appropriate mitigation measures should be taken where needed.

The national parks, reserves, and the national trail are protected under existing frameworks in Dominica and are clearly delineated. These existing protections shall be carried forward and reinforced so that the NPDP is consistent with the existing policy framework and to ensure these valuable natural resources are never compromised.

In accordance with the NLUP, the most important areas for agricultural production are designated as agricultural areas and protected for the long-term. This will support the agricultural sector of the economy and contribute to the health and food security of the island.

Physical development in Dominica must be based on decisions that recognize and respect these constraints and direct development into the most appropriate areas. Recognizing these constraints also increases awareness of the scarcity of land unconstrained for development.

4.2 Concept Two: Mainstreaming Climate Change Mitigation and Adaptation

Reducing and addressing the impacts of climate change is one of the great challenges of our time. Now, and in the coming years, climate change will have profound impacts on climatic conditions leading to more frequent and severe storms, droughts, and other weather conditions. Climate change will impact marine and terrestrial landscapes and ecosystems as sea levels rise and water temperatures increase. The impacts of climate change are expected to be the most profound for Dominica and other small island nations. The NPDP is one component of a broad set of actions needed to prepare Dominica for climate change through mitigation and adaptation measures.

Physical planning has an important role to play in both mitigation and adaptation of climate change. In terms of mitigation: protecting and enhancing the natural environment protects carbon sinks, and encouraging efficient land use planning and the use of renewable energies

can reduce the carbon footprint of the community. In terms of adaptation: directing development away from areas at risk from natural hazards and low-lying coastal areas, encouraging decentralized infrastructure, and protecting existing agricultural lands will increase resiliency to the expected impacts of climate change.

The policies of this Plan draw connections between good planning and preparing for climate change. Based on the policies embedded in the NLUP and NPDP, all future land use decisions in Dominica will address climate change mitigation and adaptation.

4.3 Concept Three: Prioritization of Environmental Protection and Tourism

The policies of this plan prioritize protection for the natural environment and investment in tourism facilities. Environmental protection is a key value of the people of Dominica. Tourism is recognized as a key opportunity to increase economic development. Tourism is positioned to become a driver of national and local economic activity.

The focus on both environmental protection and tourism build on and leverage Dominica's existing assets, many of which are natural features. The prioritization of environmental protection and tourism has been confirmed through public and stakeholder consultation / community values and in the context of existing international accords, Government strategies, agency mandates, and NGO priorities.

Prioritizing environmental protection will ensure that physical planning decisions in Dominica reflect the key values of the people of Dominica. Physical planning can support tourism by supporting infrastructure that will improve access to the island and by preventing land use conflicts between tourism and other uses. An island that is appealing to tourists will also create a high quality environment for the residents of Dominica.

4.4 Concept Four: Focus of Planning and Development in Centres

The policies of this plan guide major development towards the Primary, Secondary, and Tertiary Centres that have been identified in this plan. The Primary, Secondary, and Tertiary Centres represent a hierarchy of settlements in Dominica based on existing and historical economic and

population centres as well as areas that are suitable for and have a high potential for future growth. These centres are expected to accommodate the majority of Dominica's physical development and population growth over the next twenty years.

Identifying Primary, Secondary, and Tertiary Centres provides focus and allows for prioritization for growth, planning, and investment. Growth in Primary, Secondary, and Tertiary Centres is also expected to help Dominica optimize its investments so that they can be strategically located to provide services to a substantial portion of the current and future population. Focussing on the Primary, Secondary, and Tertiary Centres in the NPDP in turn gives prioritization for areas that require Local Area Plans and new infrastructure to most efficiently serve the needs of the communities. Focusing planning and development on the Primary, Secondary, and Tertiary Centres will support goals of the *Physical Planning Act* to improve the quality of the physical environment, and to achieve orderly, efficient and equitable planning, allocation, and development of the resources of Dominica.

Identifying Primary, Secondary, and Tertiary Centres will also support the decentralization of infrastructure and economic development to increase resiliency.

4.5 Implementation of Concepts

Details for implementation of the four development concepts, which are the basis of the NPDP, are found in the NLUP, and Part 5.0 and 6.0 of this Plan.

Part 5.0: Land Use Policies

Part 5.0 Land Use Policies should be read in conjunction with the NLUP. Part 5.0 draws connections between the NLUP and **Figure 1: Land Use Plan**, **Figure 2: Sustainable Tourism and Natural Features**, and **Figure 3: Renewable Energy**. Part 5.0 elaborates on NLUP policies that warrant additional detail.

Figure 1: Land Use Plan illustrates:

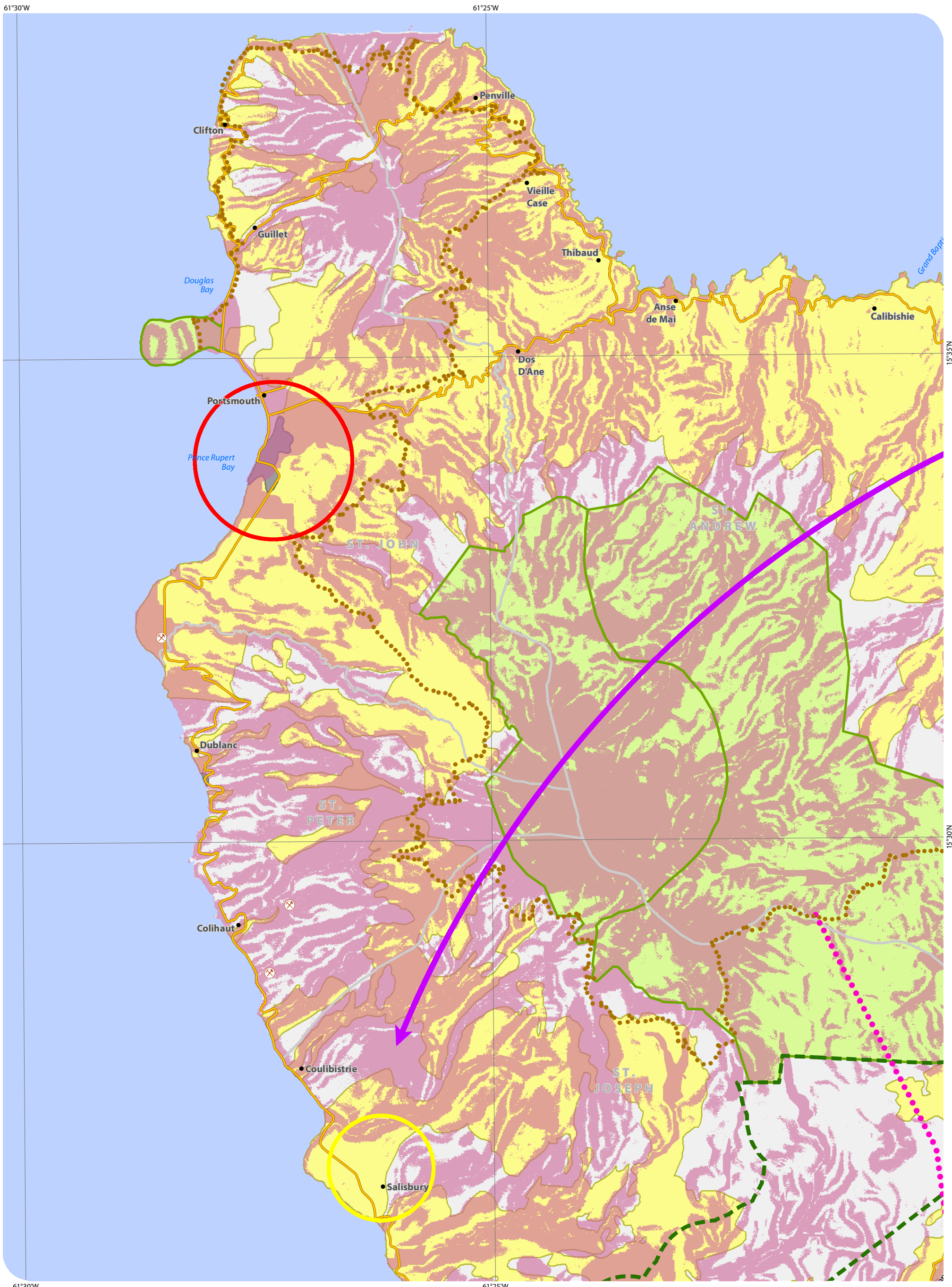
- **Land Uses:** To regulate the character and intended function of the different areas and indicate the types of uses that are permitted. These designations provide direction for future development in Dominica.
- **Constraints:** To guide development away from areas where they would be subject to undue risk or where development would be incompatible with an existing or planned future use. These constraints prevent development that is counter to the vision for the future for land use in Dominica.
- **Key Infrastructure and Investments:** To highlight important existing and planned land based investments that help achieve the vision for Dominica’s future.

Figure 2: Sustainable Tourism and Natural Features illustrates:

- **Sustainable Tourism Features and Opportunities:** To identify existing and planned investment in tourism facilities that leverage economic development and advance the identity of Dominica as the “Nature Island”.
- **Conservation Initiatives:** To highlight the close connection between Dominica’s identity as the “Nature Island” and the importance of protecting the natural environment, as well as the economic development opportunities associated with high-value, low-volume sustainable tourism.

Figure 3: Renewable Energy illustrates:

- **Potential Renewable Energy Opportunities:** To identify on-going and potential future locations for renewable energy generation projects.



COMMONWEALTH OF DOMINICA

NATIONAL PHYSICAL DEVELOPMENT PLAN

LAND USE PLAN
FIGURE 1A

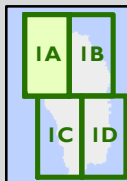
- Proposed International Airport
- Proposed Evacuation Jetty
- Airport
- Quarry
- Proposed Approximate Road Connection
- Waitukubuli National Trail
- Primary Road
- Proposed Trail Connection

Settlement Hierarchy (see 5.5)

- Primary Centre
- Secondary Centre
- Tertiary Centre
- Settlement
- Parish

Land Use Designations

- Kalinago Territory (see 5.5)
- Layou River Management Area (see 5.1)
- National Park and Forest Reserve (see 5.1)
- Existing Settlement Area (see 5.3)
- Agricultural Area (see 5.5)
- Interior Area (see 5.5)
- Airport Built-Up Area (see 5.3)
- National Park and Forest Reserve (see 5.1) and Natural Hazard (see 5.3)
- Existing Settlement Area (see 5.3) and Natural Hazard (see 5.3)
- Agricultural Area (see 5.5) and Natural Hazard (see 5.3)
- Interior Area (see 5.5) and Natural Hazard (see 5.3)

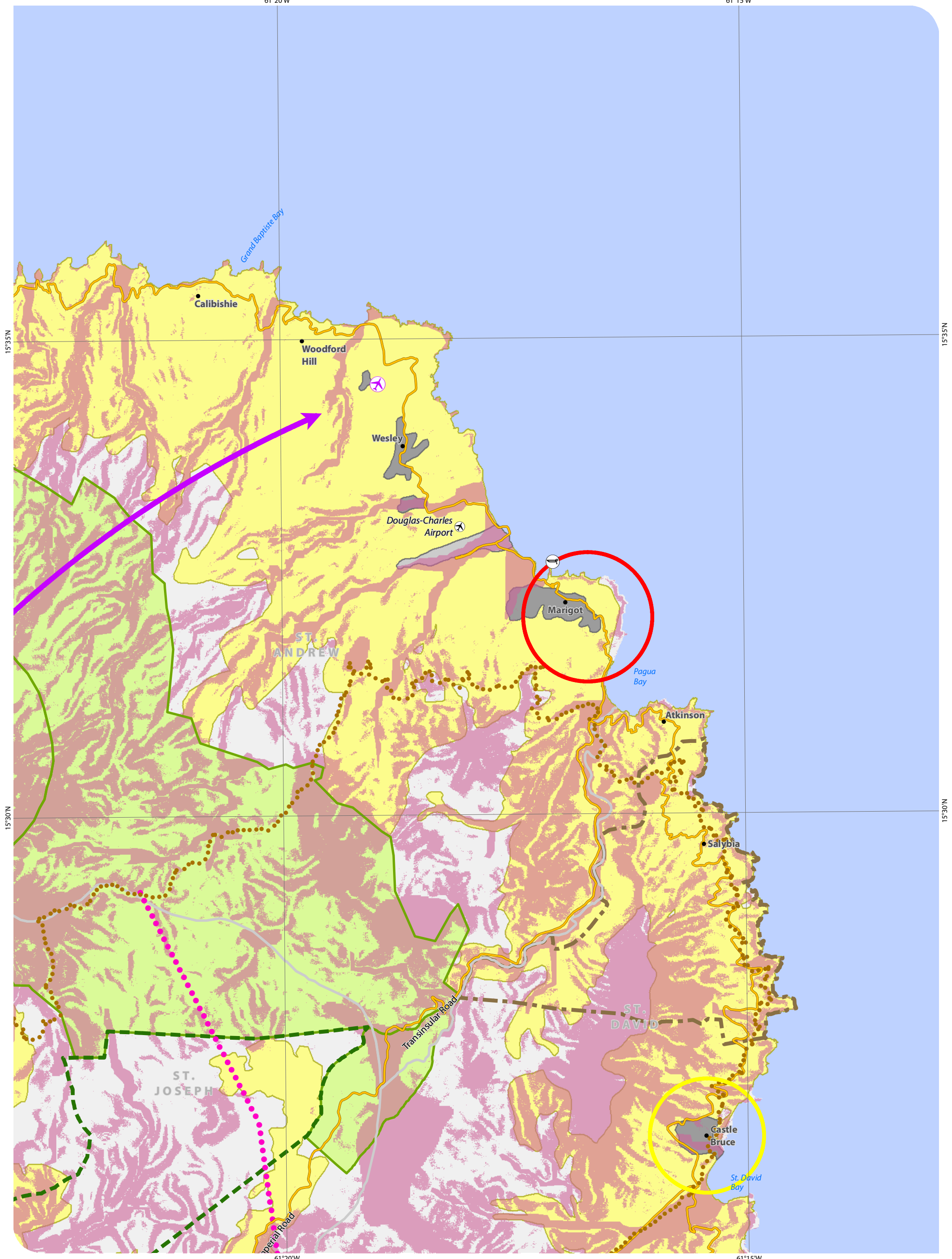


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COMMONWEALTH OF DOMINICA

NATIONAL PHYSICAL DEVELOPMENT PLAN

LAND USE PLAN
FIGURE 1B

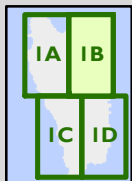
- Proposed International Airport
- Proposed Evacuation Jetty
- Airport
- Quarry
- Proposed Approximate Road Connection
- Waitukubuli National Trail
- Primary Road
- Proposed Trail Connection

Settlement Hierarchy (see 5.5)

- Primary Centre
- Secondary Centre
- Tertiary Centre
- Settlement
- Parish

Land Use Designations

- Kalinago Territory (see 5.5)
- Layou River Management Area (see 5.1)
- National Park and Forest Reserve (see 5.1)
- Existing Settlement Area (see 5.3)
- Agricultural Area (see 5.5)
- Interior Area (see 5.5)
- Airport Built-Up Area (see 5.3)
- National Park and Forest Reserve (see 5.1) and Natural Hazard (see 5.3)
- Existing Settlement Area and Natural Hazard (see 5.3)
- Agricultural Area (see 5.5) and Natural Hazard (see 5.3)
- Interior Area (see 5.5) and Natural Hazard (see 5.3)

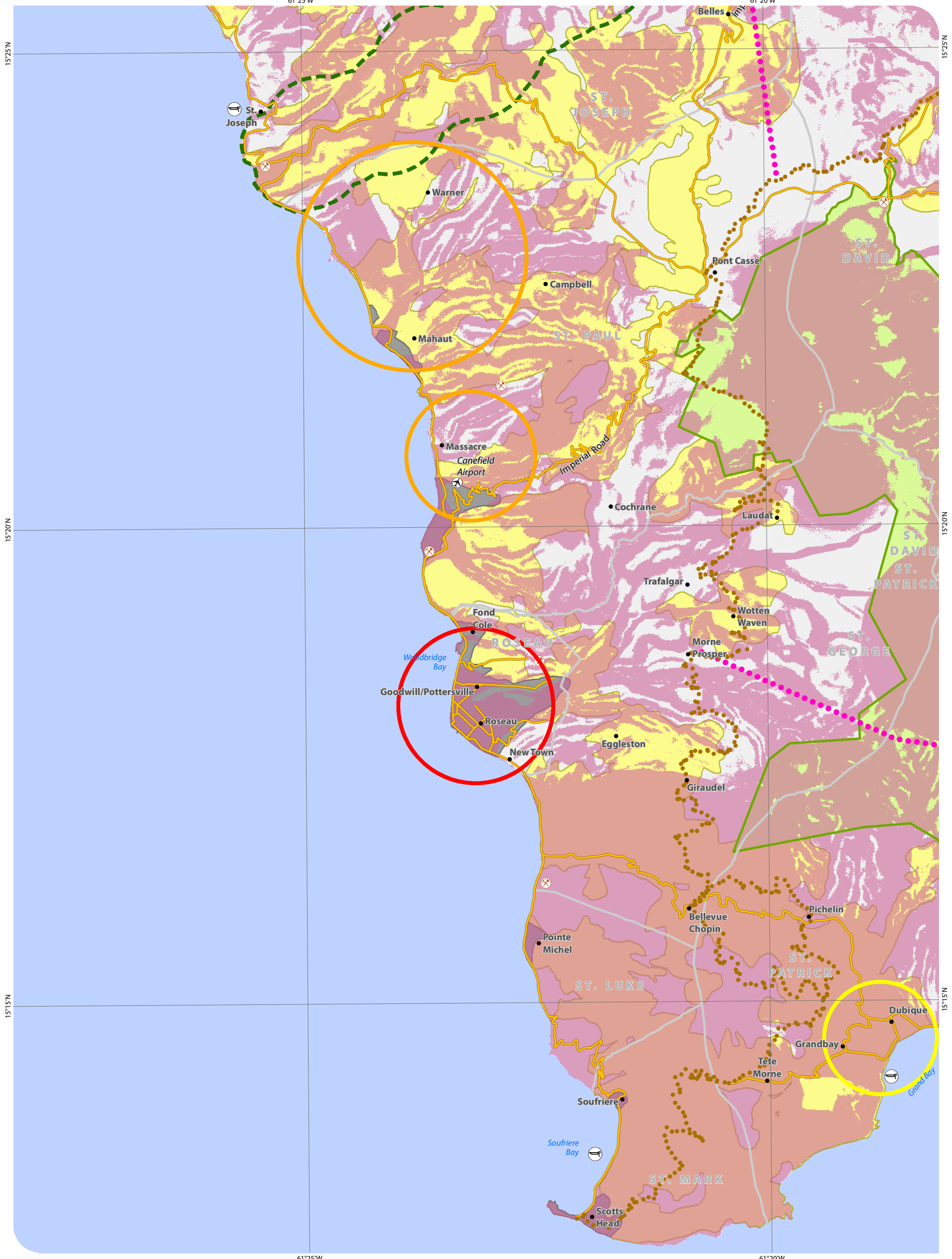


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COMMONWEALTH OF DOMINICA

NATIONAL PHYSICAL DEVELOPMENT PLAN

LAND USE PLAN
FIGURE 1C

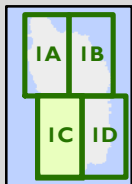
- Proposed International Airport
- Proposed Evacuation Jetty
- Airport
- Quarry
- Proposed Approximate Road Connection
- Waitukubuli National Trail
- Primary Road
- Proposed Trail Connection

Settlement Hierarchy (see 5.5)

- Primary Centre
- Secondary Centre
- Tertiary Centre
- Settlement
- Parish

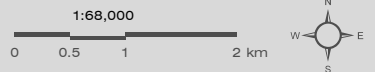
Land Use Designations

- Kalinago Territory (see 5.5)
- Layout River Management Area (see 5.1)
- National Park and Forest Reserve (see 5.1)
- Existing Settlement Area (see 5.3)
- Agricultural Area (see 5.5)
- Interior Area (see 5.5)
- Airport Built-Up Area (see 5.3)
- National Park and Forest Reserve (see 5.1) and Natural Hazard (see 5.3)
- Existing Settlement Area and Natural Hazard (see 5.3)
- Agricultural Area (see 5.5) and Natural Hazard (see 5.3)
- Interior Area (see 5.5) and Natural Hazard (see 5.3)

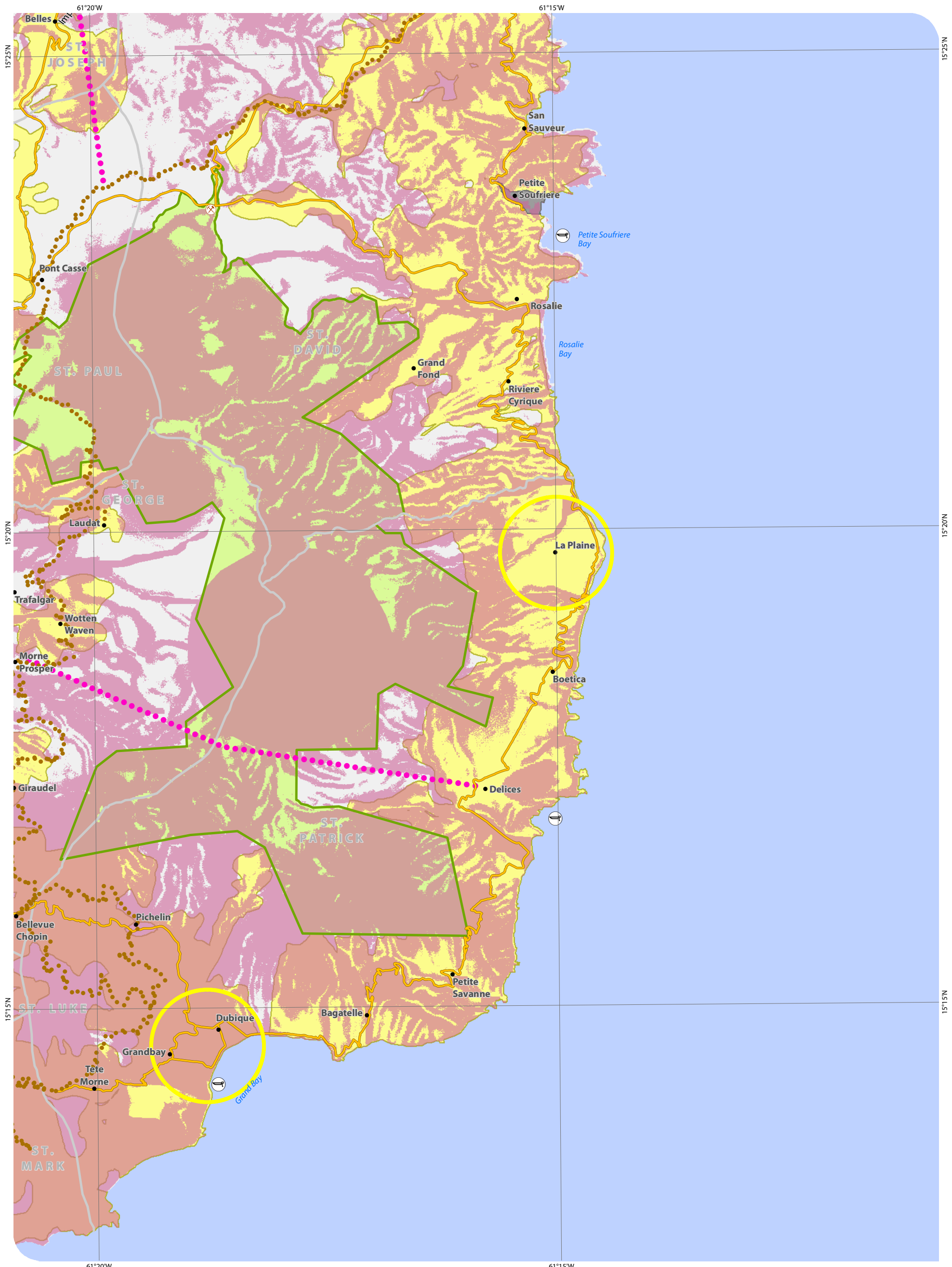


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COMMONWEALTH OF DOMINICA

NATIONAL PHYSICAL DEVELOPMENT PLAN

**LAND USE PLAN
FIGURE 1D**

- Proposed International Airport
- Proposed Evacuation Jetty
- Airport
- Quarry
- Proposed Approximate Road Connection
- Waitukubuli National Trail
- Primary Road
- Proposed Trail Connection

Settlement Hierarchy (see 5.5)

- Primary Centre
- Secondary Centre
- Tertiary Centre
- Settlement
- Parish

Land Use Designations

- Kalinago Territory (see 5.5)
- Layou River Management Area (see 5.1)
- National Park and Forest Reserve (see 5.1)
- Existing Settlement Area (see 5.3)
- Agricultural Area (see 5.5)
- Interior Area (see 5.5)
- Airport Built-Up Area (see 5.3)
- National Park and Forest Reserve (see 5.1) and Natural Hazard (see 5.3)
- Existing Settlement Area (see 5.3) and Natural Hazard (see 5.3)
- Agricultural Area (see 5.5) and Natural Hazard (see 5.3)
- Interior Area (see 5.5) and Natural Hazard (see 5.3)

DILLON CONSULTING

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5.1 Natural Environment

A. National Parks and Forest Reserves

- i) Land designated as “National Parks & Forest Reserves” on **Figure 1: Land Use Plan** includes all the existing National Parks and Forest Reserves in Dominica. The National Parks and Forest Reserves included in this designation are:
- Cabrits National Park;
 - Morne Trois Pitons National Park (UNESCO World Heritage Site);
 - Morne Diablotin National Park;
 - The Northern Forest Reserve; and,
 - The Central Forest Reserve.
- ii) The National Parks and Forest Reserves are important to the natural environment, for mitigation and adaptation to climate change, and to the identity of Dominica. In accordance with the NLUP (2.4) and the *National Parks and Protected Areas Act* permitted uses in National Parks and Forest Reserves shall continue to be conservation and commemorative uses, and recreation uses and low-impact tourism uses that are compatible with preserving the natural beauty of the area including the flora and fauna.
- iii) In accordance with the NLUP (2.4.2), and as required to retain the UNESCO World Heritage site designation for Morne Trois Pitons National Park, the area adjacent to National Parks and Forest Reserves shall be considered a transition zone. The width of the transition zone shall be as follows:
- Private lands adjacent to Morne Diablotin: 200 metres;
 - Forest Area adjacent to Morne Diablotin: 500 metres;
 - Private lands adjacent to Morne Trois Pitons: 200 metres;
 - Public lands adjacent to Morne Trois Pitons: 300 metres; and,
 - All other cases: 150 metres.
- iv) Within the transition zone adjacent to National Parks and Forest Reserves:
- Development shall only be permitted if it will not have negative impacts on the National Park or Forest Reserve, and if it is compatible with Dominica’s “Nature Island” identity and with maintaining a natural and high quality environmental experience;
 - The Government may consider acquiring the transition zone lands; and,
 - Programmes to promote land uses that are compatible with the National Parks and Forest Reserves will be encouraged.

B. Layou River Management Area

- i) The approximate “Layou River Management Area” is indicated on **Figure 1: Land Use Plan** and is intended to protect a corridor along the Layou River and to improve conservation in the entire watershed area. In the future, the Layou Watershed may or may not become a new Forest Reserve but is hereby identified in accordance with Section 9.(4)(e) of the *Physical Planning Act*.
- ii) The boundary of the Layou River Management Area indicated in **Figure 1: Land Use Plan** is approximate and subject to review once the area has been surveyed; the boundary includes a corridor of one-kilometre on either side of the Layou River and a larger area adjacent to the Central Forest Reserve.
- iii) The following actions should be taken to implement the Layou River Management Area:
 - Complete a survey to determine the appropriate boundaries for the area;
 - Prepare a conservation and implementation strategy which shall outline what activities are compatible with conservation of the watershed and determine whether the Government should acquire any lands to ensure protection of the buffer areas of the Layou River;
 - Determine whether the Layou Watershed should be designated as a Forest Reserve by Order of the President; and,
 - Determine whether a detailed management plan (e.g., similar to the Pont Casse and Environs Plan) needs to be prepared.
- iv) Large scale development that poses a major risk to water quality in the Layou River Management Area is discouraged until the conservation and implementation plan has been prepared.
- v) If the Layou River Management Area receives legislative protection as a Forest Reserve, the policies of Section 5.1.A. shall be applied to the area.

C. New Management Areas

- i) The policies of Section 5.1.B. may be applied to any other watershed or river if it is determined by the Government that the watershed or river requires extra protection because of special vulnerability and/or because of the type and quantity of development in the area.

D. Marine Reserves

- i) The two existing Marine Reserves are shown on **Figure 2: Sustainable Tourism and Natural Features**. The existing Marine Reserves are:

- Cabrits Marine Reserve; and,
 - The Soufriere Scott's Head Marine Reserve.
- ii) In accordance with the NLUP (2.4.2), the 300 metres of the coastal zone adjacent to the Marine Reserves shall be considered a transition zone. Within that zone, development shall only be permitted:
- If it will not negatively impact the Marine Reserve including its ecological function;
 - If it is compatible with the principles of coastal zone management in accordance with Section 5.1. and the NLUP; and,
 - If it is compatible with Dominica's "Nature Island" identity and with maintaining a natural and high quality environmental experience.

E. Proposed Salisbury Marine Reserve

- i) There is a proposed Salisbury Marine Reserve. At this time, the proposed Salisbury Marine Reserve does not have legislative protection as a Marine Reserve.
- ii) Until such time as the Salisbury Marine Reserve receives legislative protection as a Marine Reserve, development in the coastal zone adjacent to the proposed reserve that is incompatible with a Marine Reserve should be discouraged.
- iii) If the proposed Salisbury Marine Reserve receives legislative protection, the policies of Section 5.1.C shall be applied to the area.

F. Forests on Private Lands and Outside of National Parks and Forest Reserves

- i) Forested areas exist in the areas designated as "Agricultural Area" and "Interior Area" on **Figure 1: Land Use Plan**. In accordance with the NLUP (2.1) and to maintain the connectivity of the natural environment, the existing forest cover should be retained to the extent possible. In accordance with the NLUP (2.1.4), investment opportunities are permitted in forested lands in the "Agricultural Area" and "Interior Area" provided they are not wide scale, intensive, or destructive, and protect and enhance the vitality of the forest in accordance with the NLUP (2.1).

G. Riparian (River) and Coastal Zones

- i) In accordance with the NLUP (2.2.6), every river, stream, and lake shall be protected by a buffer to protect drinking water and increase resilience to climate change. Within that buffer, development shall not be permitted. The width of the buffer shall be as follows:

- 50 metres along each side of the high water mark if the river, stream, and lake has an average dry-season flow of more than eight million gallons per day, and is producing or capable of producing potable water; and,
 - 20 metres along each side of the high water mark of the river, stream, and lake in all other cases.
- ii) In accordance with the NLUP (2.2.2), development shall not be permitted that degrades coastal zones or increases the risk of climate change impacts to people, property, or infrastructure. For the purposes of this and other NLUP policies for integrated coastal zone management and protection of marine and coastal habitats, the coastal zone shall be considered the area within 300 metres of the coast or the coastal area subject to coastal flooding risk as shown in the Natural Hazard overlay, whichever is greater.

H. Sea Turtle Nesting Sites

- i) New development in the coastal zone shall be directed away from known sea turtle nesting sites. Approximate locations of known turtle nesting sites are shown on **Figure 2: Sustainable Tourism and Natural Features**.
- ii) Development in the coastal zone shall be located, designed, and constructed to minimize disruptions to Sea Turtle Nesting Sites and to prevent disruption of nesting sites during the nesting season.

I. Parrot Nesting Sites

- i) In addition to other legislative requirements, development in areas with known or potential parrot nesting sites shall be located, designed, and constructed to minimize disruptions to nesting sites during the nesting season.

J. Management of Water Resources and Water Catchment Areas

- i) In accordance with the NLUP (1.1.1.3), development that uses large quantities of water during construction or operation shall be assessed to ensure it does not negatively impact the long-term sustainability of the country's water resources.
- ii) In accordance with the NLUP (2.2.4), and in accordance with the Water and Sewerage (Catchment Area) Regulations, development located within a DOWASCO Water Catchment Area shall be assessed to ensure it does not negatively impact the long-term sustainability of the area's water quality or quantity. DOWASCO Water Catchment Areas are shown on **Figure 2: Sustainable Tourism and Natural Features**; however, all proponents of development near or in a Water Catchment Area must consult DOWASCO to confirm the extent of the Water Catchment Area.



COMMONWEALTH OF DOMINICA

NATIONAL PHYSICAL DEVELOPMENT PLAN

SUSTAINABLE TOURISM AND NATURAL FEATURES
FIGURE 2

- | | | | | | |
|----------------|--------------|-------------------------|-----------------|------------------------------|----------------------------------|
| Airport | Parish | Turtle Nesting Site | Sulphur Springs | Tourism Development Area | Coral Reef |
| Settlement | Primary Road | Marine Reserve | Swimming | Waitukubuli National Trail | Seagrass Bed |
| Secondary Road | Watercourse | Proposed Marine Reserve | View Point | Kalinago Territory | National Park and Forest Reserve |
| | | Snorkelling | Wreck | Proposed Trail Connection | Layout River Management Area |
| | | | Waterfall | DOWASCO Water Catchment Area | |

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5.2 Tourism

A. Tourism and the “Nature Island”

- i) Protecting the natural environment in Dominica is imperative for the long-term sustainability of the tourism industry and for enhancing the country’s high-value, low-volume niche tourism.
- ii) Preserving a high quality environment makes Dominica appealing to residents and visitors and supports the country’s economic development; therefore tourism projects should incorporate investments in environmental protection.
- iii) Tourism investments should be prioritized and developed so that they provide opportunities for local citizens to also enjoy the facilities / amenities and should not be exclusively for foreigners. In accordance with the NLUP (2.2.3), the carrying capacity of existing tourism facilities should be respected.
- iv) Existing tourism facilities should be protected from incompatible development in accordance with Section 6.1.

B. Tourism Development Areas

- i) Tourism Development Areas are identified on **Figure 2: Sustainable Tourism and Natural Features**. The Tourism Development Areas were identified in the *Tourism Master Plan 2012-2022* as the priority areas for tourism investments. The development of tourism investments shall be in accordance with the land use designations and policies of this plan.

C. Waitukubuli National Trail

- i) The Waitukubuli National Trail is shown on **Figure 1: Land Use Plan**. In accordance with the NLUP (2.4.1), the Waitukubuli National Trail will be protected for its tourism potential.
- ii) In accordance with the NLUP (2.4.2), the 30 metres on either side of the Waitukubuli National Trail shall be considered a transition zone:
 - Within the transition zone, new development shall only be permitted if it is compatible with the recreation and tourism uses of the trail;
 - Where new development occurs within the trail’s transition zone, the development should be designed and located to minimize any negative impact on the trail; and,
 - Existing land uses that are not compatible with the recreation and tourism uses of the trail are encouraged adapt their activities to minimize their negative impacts to the trail, or relocate if feasible; and,

- Existing agricultural activities within the trail's transition zone are encouraged to use good agricultural practices that minimize negative impacts to the trail.
- iii) Development of tourism facilities including accommodations and restaurants are encouraged to locate at the intersections of trail "segments" as established by the Waitukubuli Ecological Foundation and the Division of Forestry, Wildlife and National Parks.
- iv) The Government encourages the involvement of organizations, landowners, stakeholders and donors in the promotion, protection, and maintenance of the trail.

D. Waitukubuli National Trail Proposed Connections

- i) **Figure 1: Land Use Plan** identifies two "Proposed Trail Connections" that are intended to be additions to the Waitukubuli National Trail Network:
 - The first Proposed Trail Connection would link the Waitukubuli National Trail in the Northern Forest Reserve to Pont Casse; and,
 - The second Proposed Trail Connection would link the Waitukubuli National Trail from Morne Prosper to the Atlantic Coast near Delices.
- ii) In the final surveying of the proposed trail connections, the Government shall determine a route that minimizes maintenance requirements.
- iii) Until such time as the Proposed Trail Connections are completed:
 - Development within the proposed trail corridor is discouraged; and,
 - Development within 30 metres of the proposed trail corridor should be compatible with the future recreation and tourism uses of the future trail, and should be designed and located to minimize any negative impact on the future trail.
- iv) When the Proposed Trail Connections are established, the policies of Section 5.2.C. shall apply.

E. Built and Cultural Heritage

- i) Buildings, sites, and landscapes with distinct cultural or historical significance should be identified as "Cultural Heritage Sites" for protection and rehabilitation in accordance with the NLUP (1.8).
- ii) The area within 150 metres of a cultural heritage site shall be considered a transition zone in accordance with the NLUP (1.8.3.2). Within that transition zone, development including billboard advertisements shall only be permitted if:

- It can be shown that it will not have a negative impact on the cultural heritage site;
- It is designed to be compatible with the cultural heritage site; and,
- It reflects the principle of island design in accordance with the NLUP (1.8) and Section 5.2.F.

F. Island Design

- In accordance with the NLUP (1.8) the concept of “Island Design” should be used to:
 - Sustain the unique architectural expression and design that is prevalent in Dominica as a result of the distinct culture and heritage of the island; and,
 - Guide the siting, scale, architectural expression, and landscape design of new development to be visually compatible with the surrounding area.
- Development located in the transition zones of cultural heritage sites should be designed based on the principle of Island Design.
- Tourism development in key locations within Tourism Development Areas should be designed based on the principle of Island Design.

5.3 Natural Hazards

A. Natural Hazard Overlay

- Figure 1: Land Use Plan** includes a Natural Hazard “overlay” showing areas that are most at risk for Natural Hazards. The Natural Hazard overlay shows where Agricultural Areas, Interior Areas, National Parks and Forest Reserves, and Existing Settlement Areas are subject to risk from Natural Hazards. The Natural Hazard overlay includes the following data and is shown in **Figure F: Composite Hazards** (Figure 2 from the NPDP Framework Report):

Hazard	Risk Level	Source
Coastal Flooding	50-Year Flood	USAID, 2006
Earthquake	High	USAID, 2006
Wind	Very High	USAID, 2006
Flash Flooding	100-Year Flood	Caribbean Handbook on Risk Information Management (CHRIM), 2014
Landslide	High Susceptibility and Moderate Susceptibility	CHRIM, 2014
Volcanic Eruption	Very High based on a 100 year scenario	USAID, 2006

- ii) The Natural Hazard overlay is based on available risk assessments; however, the frequency and severity of natural hazards is increasing as a result of climate change. These maps show areas where the risk of a natural hazard occurring is most probable and it should not be understood to mean that areas outside the Natural Hazard overlay are completely safe.
- iii) The Natural Hazard overlay shall be updated from time-to-time based on future national or area-specific risk assessments.
- iv) Development should generally not be permitted in areas within the Natural Hazard overlay to protect public safety and prevent property damage.

B. Uses Permitted in the Natural Hazard Overlay

- i) **Figure 1: Land Use Plan** shows that the Natural Hazards Overlay overlaps with land use designations including Agricultural Areas, Interior Areas, Natural Parks and Forest Reserves, and Existing Settlement Areas. Within the Natural Hazard overlay, the policies of this section add superseding restrictions to the underlying land use designation (for example, in an Interior Area and Natural Hazard, the more restrictive land use policies of Section 5.3 and Section 5.5 apply). In any case where the policies of another Section of this plan are in conflict with Section 5.3 then Section 5.3 shall prevail.
- ii) In rare or special situations, a specific development project may be permitted in the Natural Hazard overlay provided that:
 - Site-specific studies are completed to assess the specific risks;
 - Engineering and building design measures are able to mitigate risk to public safety and property to an acceptable level for the development;
 - Erosion management in accordance with the NLUP (3.4) is employed;
 - The development will not increase risk to the surrounding area; and,
 - The development complies with all other policies of this Plan.
- iii) Infrastructure and community facilities should only be permitted in areas within the Natural Hazard overlay when:
 - No viable alternatives exist;
 - Local area studies are completed to assess the specific risks; and,
 - Engineering and building design measures are able to mitigate the risk to public safety and property to an acceptable level.
- iv) Except in the National Parks and Forest Reserves, Agricultural uses may be permitted in the Natural Hazard overlay provided that:

- The agricultural use will not increase the level of risk associated with the underlying hazard, for example, deforestation would not be permitted in areas susceptible to landslides; and,
 - In accordance with the NLUP (3.4) and recognizing the connection between erosion and drought, best practices for erosion control are employed.
- v) In cases where it is not possible to mitigate risk to an acceptable level to protect public safety and prevent property damage, development shall not be permitted.

C. Volcanoes

- i) Only areas with the highest risk level of being impacted by a volcanic eruption are included in the Natural Hazard overlay since it is generally possible to have advance warning of a volcanic eruption. Many other areas also have a risk of being impacted by volcanic eruptions. Design and construction best practices for building in volcanic areas should be identified and used for building in all areas that have a risk of being impacted by volcanic eruptions.

D. Landslides

- i) The Landslide susceptibility mapping in the NPDP Framework Report (2016) shows the risk of landslide initiation; however, it does not include mapping of landslide accumulation (run out). Lands located at elevations below the areas shown as susceptible to landslides may also be at risk for landslide accumulation. Local area studies should be done to determine and mitigate the risks for landslide accumulation when considering development.
- ii) Building on steep slopes is discouraged and design, construction, and erosion management best practices for building on slopes should be identified and used for building on slopes even where landslide risk is considered minimal.

E. Sea Level Rise

- i) In addition to the requirements of Section 5.1, development and infrastructure located along the coast should be designed and located with consideration for the sea level rise that is predicted to occur as a result of climate change.

F. Emergency Preparedness

- i) In accordance with the NLUP (1.1.4), the transportation network is an important aspect of emergency preparedness. Signed evacuation routes should be established to

assist with evacuations for different emergency scenarios (e.g., hurricane, tsunami, volcanic eruption).

- ii) Evacuation jetties are planned in the six locations identified on **Figure 1: Land Use Plan**. Evacuation jetties will assist with evacuations and/or distribution of emergency supplies in an event where an area becomes cut off from the land based transportation network. Evacuation jetties may be temporary (i.e., stored in emergency shelters and placed in the water when needed) or permanent structures. The existing fishing infrastructure in Marigot will serve the purpose of an evacuation jetty. The new locations for evacuation jetties are:

- Petite Soufriere;
- Delices;
- Grand Bay;
- Soufriere; and,
- St. Joseph.

G. Existing Development in Natural Hazard and Post-Disaster Areas

- i) Where existing major infrastructure is located within the Natural Hazard overlay the following actions should be considered depending on the type and severity of the risk:
- Complete local area studies that assess the specific risks and identify risk mitigation measures;
 - Reduce the risks through resiliency solutions such as coastal and sea defenses, slope stabilization, and retrofitting of buildings; and/or,
 - Relocate the infrastructure to areas with lower risk and revert the lands to agricultural uses in accordance with Section 5.3.B.iv.
- ii) Where existing development or activities are found to be increasing the risk of Natural Hazard the following actions should be considered depending on the type and severity of the risk:
- Complete local area studies that assess the specific risks and identify risk mitigation measures;
 - Reduce the risks through resiliency solutions such as coastal and sea defenses, slope stabilization, and retrofitting of buildings; and/or,
 - Relocate the activity or development to areas with lower risk and revert the lands to agricultural uses in accordance with Section 5.3.B.iv.
- iii) Where settlements exist within the Natural Hazard overlay the following actions should be considered depending on the type and severity of the risk:

- Complete local area studies that assess the specific risks and identify risk mitigation measures;
 - Reduce the risks through resiliency solutions such as coastal and sea defenses, slope stabilization, and retrofitting of buildings; and/or,
 - Resettle the population to areas with lower risk and revert the lands to agricultural uses in accordance with Section 5.3.B.iv.
- iv)** After Tropical Storm Erika in August 2015, the following settlements were identified as “special disaster areas” by the Resettlement Committee. These communities are identified for full or partial resettlement because of the on-going risk from natural hazards:
- Petite Savanne;
 - Pichelin;
 - Good Hope;
 - Bath Estate (Paradise Valley);
 - Dubique;
 - Campbell;
 - Coulibistrie;
 - San Sauveur; and,
 - Petite Soufriere.
- v)** Resettlement of communities identified as “special disaster areas” will require a phased approach. The first priority for resettlement will be areas where houses were fully destroyed by TS Erika, followed by areas where houses were partially destroyed by TS Erika, followed by the areas that have been identified as being at the greatest risk by the Resettlement Committee or through engineering and other studies. The areas of lowest priority for resettlement will be those remaining areas as deemed necessary.
- vi)** In those communities identified for resettlement or any community severely impacted by a future natural hazard event, new development shall not be permitted, and post-disaster redevelopment shall not be permitted to avoid reinvesting in areas that will ultimately be destroyed again. This policy is not intended to deter post-disaster recovery efforts.

5.4 Human Settlement

A. Settlement Hierarchy and Focus of Growth

- i) In accordance with the NLUP (1.7.1), Dominica's communities have been organized into a settlement hierarchy, characterized by a combination of national and regional significance and population.
- ii) **Figure 1: Land Use Plan** identifies Primary, Secondary, and Tertiary Centres. The communities included in this hierarchy are expected to accommodate the majority of anticipated growth and development over the next 20 years, as shown in **Table 5-1**.
- iii) The development required to support the growth and sustainability of Dominica's communities shall be focussed in the areas identified within the settlement hierarchy. No new settlements (i.e., villages or towns) should be established separately from one of the Primary, Secondary, or Tertiary Centres.

Table 5-1: Planned Population of Centres and Settlements

Settlement Area	Population and Share of Population (2011 census)		Share of Population in 2035		Population Change, 2015-2035	
	Population	Share of Population	Population	Share of Population	Population Change	Share of Population Change
TOTAL	70,739	100.0%	100,315	100.0%	29,576	41.8%
Primary Centres						
Greater Roseau	14,725	20.8%	20,882	20.8%	6,157	41.8%
Portsmouth	4,167	5.9%	5,909	5.9%	1,742	41.8%
Marigot	2,411	3.4%	5,016	5.0%	2,605	108.0%
Secondary Centres						
Massacre /Canefield	4,876	6.9%	6,922	6.9%	2,046	42.0%
Warner	515	0.7%	3,009	3.0%	2,494	484.4%
Mahaut	2,113	3.0%	3,009	3.0%	896	42.4%
Tertiary Centres						
Salisbury/Grand Savanne	2,174	3.1%	3,110	3.1%	936	43.0%
La Plaine	1,128	1.6%	1,605	1.6%	477	42.3%
Castle Bruce	1,087	1.5%	1,505	1.5%	418	38.4%
Grand Bay	2,612	3.7%	3,009	3.0%	397	15.2%
All Others	34,931	49.4%	46,339	46.2%	11,408	32.7%

B. Primary Centres

- i) The Primary Centres identified on **Figure 1: Land Use Plan** are:
- Greater Roseau;
 - Portsmouth; and,
 - Marigot.
- ii) Roseau is designated as a Primary Centre because it is the political and historical capital of Dominica and is the largest urban centre where over 20% of the country's population resides. Roseau is experiencing significant growth; however, large areas of Roseau are affected by the Natural Hazard overlay, therefore:
- Intensification and redevelopment of underutilized sites is expected to accommodate growth by increasing density in the existing built-up area without further encroaching into new areas subject to natural hazard risk;
 - All development shall employ engineering and building design measures to mitigate risk to public safety and property in accordance with Section 5.3; and,
 - Intensification and redevelopment shall respect the historic character of Roseau in accordance with Section 5.2.
- iii) Portsmouth is designated as a Primary Centre because it is the second largest urban centre with almost 6% of the country's population and because it is experiencing significant growth. Portsmouth acts as a regional hub for the north part of Dominica and is a significant area in terms of tourism, including Ross University which attracts 3,500 resident tourists (students) every year and which creates many full-time employment opportunities. Portsmouth has recently attracted a hotel development and has vacant lands with strong development potential including lands owned by the Government, and lands in the Point Round area. However, Portsmouth has large areas affected by the Natural Hazard overlay; therefore development should be directed away from the low-lying flat lands.
- iv) Marigot is designated as a Primary Centre because it is a major regional hub and because it is near to the existing international airport. Marigot also has areas of safe land for development so it can accommodate growth. Marigot is expected to see increased growth and economic development. This plan recognizes that if the airport is relocated to Woodford Hill then the focus of growth may shift from Marigot to Woodford Hill.

C. Secondary Centres

- i) The Secondary Centres identified on **Figure 1: Land Use Plan** are:
 - Warner/Mahaut; and,
 - Massacre/Canefield.
- ii) Warner/Mahaut and Massacre/Canefield were identified as Secondary Centres because they are characterized by large-scale and rapid growth and because they have opportunities to expand. To this end:
 - Major housing development and supporting community facilities is expected in Warner because there is a large volume of state land available;
 - Industrial development should continue to be encouraged for Mahaut with supporting housing and community facilities; and,
 - Industrial development tied to the Canefield airport, should continue to be encouraged with supporting housing and community facilities expected in both Canefield and Massacre.
- iii) The Secondary Centres should be prioritised for Local Area Plans.

D. Tertiary Centres

- i) The Tertiary Centres identified on **Figure 1: Land Use Plan** are:
 - Salisbury/Grand Savanne;
 - Grand Bay/Berekua;
 - La Plaine; and,
 - Castle Bruce.
- ii) The Tertiary Centres were selected because these are communities serving as sub-regional hubs that provide a range of community services and amenities to the immediate and surrounding area.
- iii) Except for Grand Bay/Berekua, the Tertiary Centres have opportunities to expand and investment in housing and supporting facilities is expected.
- iv) Grand Bay/Berekua is located in an area subject to multiple risks from natural hazards and future development shall generally be discouraged; however, it is recognized as a Tertiary Centre because of its historic and cultural importance, and because of this importance then some limited development is expected.

E. Local Area Plans

- i) In accordance with the NLUP (1.7.2), proper planning, siting, and infrastructure provision shall occur prior to development of new settlement areas. This shall take the form of local area plans, including those already prepared by communities identified

within growth centres: Roseau Development Plan; Portsmouth and Cotton Hill Land Use Plan; Northeast Area Land Use Plan (to the extent that it relates to Marigot and environs, or Woodford Hill should the focus of settlement change as a result of relocating the airport); and, Warner Land Use Plan.

- ii) Although not a centre in this Plan, development in the Pont Casse area shall be guided by the Pont Casse and Environs Land Use Plan.
- iii) New local area plans may be bounded by the Parish boundaries. Local area plans for Roseau and Portsmouth should be bounded by the administrative boundaries of the cities, separately from any Parish Plan.
- iv) The NLUP (1.9.1.5) calls for new and existing settlement areas to be planned and developed with adequate community facilities and amenities. In particular, new and existing housing is to be organised into neighbourhoods and integrated with settlement areas in proximity to shops, services, parks and open space, institutions and community facilities, and the transportation network.
- v) Local Area Plans should identify the impacts/potential impacts of climate change and identify adaptation measures which:
 - Maintain the ecological integrity of the biophysical environment including protected areas, watersheds, river valleys and the coastal zone;
 - Maintain the integrity of the cultural landscape including traditional economic activities such as agriculture and fishing;
 - Allocate and safeguard suitable lands for residential, commercial, institutional, industrial, agricultural, tourism and recreational development;
 - Identify adaptation and mitigation measures to improve the integrity and of rivers including buffer/transition zones;
 - Identify lands that are unsuitable for development due to high susceptibility to natural hazards and climatic events;
 - Ensure the efficient location and use of existing and proposed new systems for water supply, sewage and solid waste disposal;
 - Ensure the efficient location of existing infrastructure and proposed new infrastructure and drainage systems to withstand major climatic events;
 - Identify opportunities for investments in renewable energy such as wind farms, solar energy, or wave energy; and,
 - Adopt an approach which integrates relevant existing scientific climate change data and adaptation processes with local ecological knowledge, in

order to develop new tools that incorporate climate change concerns in community planning.

vi) When local area plans are developed for new settlement areas they shall include at least the following three categories of community amenities and services:

- Community facilities, such that this results in their equitable distribution and are accessible to residents;
- Parks and open spaces that promote good public health, contribute to the Nature Island identity, reduce “heat island” effect, and maintain a connection to the natural environment, and that are in close proximity to residential areas and provided in sufficient sizes and quantities to meet the needs of the residents; and,
- Commercial development such as downtowns, main streets, markets, shopping plazas, and/or individual commercial sites that are planned to foster prosperity, provide economic opportunities, and convenient access to goods and services.

vii) If no other standard is appropriate, then space should be allocated for each use in a Local Area Plan based on the following approximate requirements:

- Community facilities (institutional uses): 1 acre per 1000 persons of population;
- Parks and Open Space: 3 acres per 1000 persons of population; and,
- Commercial Development: 2-3 acres per 1000 persons of population.

viii) Local Area Plans may also include development standards relating to:

- Provision of off-street parking;
- Allocation for waste collection, services and utilities;
- Road widths;
- Traffic/transportation (including bicycling and footpaths);
- Noise pollution; and,
- Density.

F. Residential Areas

i) Development of land uses other than residential in residential areas shall only be permitted if the proposed use is compatible with the residential uses in accordance with the NLUP (1.11); more specifically, land uses that result in levels of noise that disturb the peacefulness of a residential area, excess odour, or excess dust/debris shall not be permitted.

- The Government may establish guidelines to help inform decisions surrounding land use compatibility and/or suggest acceptable levels for odour, dust and debris.
- The Government may require certain technical studies to evaluate the land use compatibility in accordance with Section 6.1.

G. Housing Development

- i) Housing is an important land use in Dominica and critical to the well-being of communities, families and individuals. Dominica is characterized by an increasing number of households and a shortage of housing, with housing starts accounting for less than 35% of demand (GSPS 2014). The quantity, quality, and adequacy of housing to meet demand all remain a challenge.
- ii) The NLUP (1.9) establishes several principles and guidance for the development of housing. These include planning for an appropriate range of housing forms and housing types (1.9.1.1) and ensuring that housing is affordable to a wide range of persons and families (1.9.1.2).
- iii) Development Standards:
 - The minimum lot size for a single detached dwelling shall be 370 square metres;
 - The preferred minimum density outside of the Centres is 26 units per developable hectare; and,
 - The preferred minimum density in the Centres is 52 persons per hectare.

H. Kalinago Territory

- i) The Kalinago Territory is identified on **Figure 1: Land Use Plan**. This territory is recognized as a special policy area, in accordance with the NLUP (1.10.1), and is to be managed with the Kalinago people for environmental sustainability, their economic development, and their social development:
 - The Kalinago Territory contains lands designated as Agricultural Areas, Interior Areas, and contains Natural Hazards, so the policies pertaining to these designations should be considered in the management of lands in the territory;
 - The Physical Planning Division will work with the Kalinago Council and the Ministry of Kalinago Affairs to improve capacity for planning and development within the Kalinago Territory;

- The Kalinago Territory should be managed with consideration for the unique architectural and cultural heritage of the area; and,
- Specific land use and investment priorities are to be consistent with a future local area plan and the Carib Territory Local Area Plan prepared in 2012.

I. Housing to Serve Dominica's Needs

- i)** It is Government policy to provide affordable lots and infrastructure, and to improve housing conditions to improve the well-being of the population.
- ii)** Recognizing that informal settlement can prevent optimization of infrastructure and land use, future informal development is prohibited in accordance with the policies of Section 6.1.
- iii)** It is Government policy to not remove informal development from state lands and rather to support the regularisation of suitable squatter settlements in accordance with the NLUP (1.9.3).
- iv)** Squatter development located in lands designated Natural Hazard overlay shall not be regularized except in accordance with the policies of Section 5.3. Squatter development that is severely impacted by a natural hazard shall not be rebuilt and shall be relocated to safe areas to ensure public safety.

5.5 Agricultural Areas and Interior Areas

A. Agricultural Areas

- i)** Land designated as Agricultural Areas on **Figure 1: Land Use Plan** is intended to be protected for the long term for agricultural use in accordance with the NLUP (1.2, 2.3.1).
- ii)** Settlement areas shall not encroach into agricultural areas except in the following rare circumstances:
 - There is a demonstrated demand for growth that cannot be accommodated within the existing settlement area; AND,
 - The lands are adjacent to the existing development of a Primary Centre, Secondary Centre, or Tertiary Centre; AND,
 - There are no lands designated Interior Areas that are suitable to accommodate the extension of settlement for a Primary Centre, Secondary Centre, or Tertiary Centre; AND,
 - The lands are not within the Natural Hazard overlay; AND,

- The area is planned for the logical extension of settlement for a Primary Centre, Secondary Centre, or Tertiary Centre through a Local Area Plan.
- iii) Permitted uses in Agricultural Areas are agricultural production, uses related to agriculture, small-scale agro-tourism, and agro-processing.
- iv) In accordance with the NLUP (2.3.1.) uses permitted in Agricultural Areas should be conducted with regard for proper agricultural practices, including through managing leachate and preventing nutrient loss.
- v) In accordance with the NLUP (1.2.3) subdivision of property in Agricultural Areas and conversion of Agricultural Areas to other uses shall not be permitted unless an area-specific study can demonstrate that the area is not suitable for agricultural use.
- vi) Development of uses other than the uses permitted in Agricultural Areas may be permitted if it can be demonstrated that there are no suitable alternatives and that encroachment into the agricultural area is kept to the minimum possible level.
- vii) Agricultural uses in Agricultural Areas that are subject to the Natural Hazard overlay shall be permitted if they comply with the policies of Section 5.3.
- viii) The Agricultural Areas designation includes existing large estates and land classified as having the most fertile agricultural soil based on available information. The soil classification does not account for factors such as slope and suitability for different crop types. There are two on-going studies that will improve the accuracy of the mapping of agricultural areas (the “Soil Fertility Mapping Project for Dominica and other Eastern Caribbean Islands” being completed by the Moroccan Agency for International Cooperation and a soil fertility sampling project being completed as part of the World Bank’s Disaster Vulnerability Reduction Project) and when these studies are complete:
 - This Plan shall be updated with revised mapping that incorporates the new information; and,
 - The agricultural mapping in these studies shall supersede the mapping in this plan and shall be used to implement the agricultural policies in accordance with the NLUP and Section 5.5 of this plan.

B. Interior Areas

- i) Interior Areas as identified on **Figure 1: Land Use Plan** are the rural areas of Dominica that are outside of Agricultural Areas and National Parks and Reserves. The Interior Areas are the areas of Dominica that are the least constrained lands (i.e., they are not subject to the Natural Hazard overlay) outside of the Settlement Areas.
- ii) Interior Areas that are adjacent to the existing development of a Primary Centre, Secondary Centre, or Tertiary Centre and not within the Natural Hazard overlay are

the areas of Dominica that are suitable for human settlement. These areas should be considered first for locating new settlement areas, including housing and community facilities, and major infrastructure. Permitted land uses shall be determined through a Local Area Plan.

- iii) The development of an individual private house within Interior Areas that is outside a Primary Centre, Secondary Centre, or Tertiary Centre and not within the Natural Hazard overlay may be approved if it meets the following criteria which discourage ribbon and back lot development:
 - It is adjacent to an existing development, or it is near to an existing village or town; AND,
 - It is on an existing public road; AND,
 - It can be properly serviced with a well and on-lot sewage disposal; AND,
 - It meets all other relevant policies of this Plan.
- iv) Tourism development within Interior Areas that are outside a Primary Centre, Secondary Centre, or Tertiary Centre and not within the Natural Hazard overlay may be approved if it meets all other relevant policies of this Plan.
- v) Development other than infrastructure or the uses contemplated in (ii), (iii), and (iv) above should generally be discouraged.

5.6 Infrastructure

A. Generally Permitted in All Land Uses

- i) Infrastructure is generally permitted to locate within all land uses shown on **Figure 1: Land Use Plan**.
- ii) Government agencies are encouraged to work with the Planning Authority to ensure that infrastructure projects conform to the policies of this Plan, and in particular the policies of Sections 6.1.B and 6.1.C.

B. Resilient to Natural Hazards and Climate Change

- i) In accordance with the NLUP (3.2.1.) new infrastructure should be located and designed to be resilient to natural hazards and/or disturbance tolerant.
- ii) Infrastructure can support mitigation and adaptation to climate change and should be planned and designed taking climate change into account. For example, road design may need to be updated to accommodate heavier rainfall, and rainwater capture systems should be considered to improve drought resiliency.

C. Major Infrastructure Projects

- i) Major infrastructure including airports and highways are shown on **Figure 1: Land Use Plan**.
- ii) Any major future infrastructure projects should be shown on **Figure 1: Land Use Plan** in subsequent updates to this plan.

D. Decentralization of Infrastructure

- i) Infrastructure should be decentralized to help increase Dominica's resiliency to natural disasters and climate change. Infrastructure that would benefit from decentralization includes, but is not limited to:
 - Solid waste management;
 - Communication;
 - Primary health services;
 - Rainwater capture and water storage facilities;
 - Energy generation; and,
 - Government services/institutions.

This Plan permits the development of this decentralized infrastructure anywhere in Dominica as long as it meets all other Government requirements (e.g., completion of an Environmental Impact Statement).

E. Airports

- i) The two existing airports, Douglas-Charles Airport and Canefield Airport are shown on **Figure 1: Land Use Plan**. Development in the areas surrounding the two airports shall not be permitted unless it is demonstrated that the development is compatible with the airport use and with potential future expansion of the airports.
- ii) In accordance with the NLUP (1.5.1) a location for a Proposed International Airport is identified on **Figure 1: Land Use Plan**.
 - The area of the Proposed International Airport shall be reserved for this future use and no other land uses other than infrastructure shall be permitted in the interim.
 - Development in the area surrounding the Proposed International Airport shall not be permitted unless it is demonstrated that the development is compatible with the proposed airport use.
- iii) The Proposed International Airport is located in an Agricultural Area. The impact on agricultural lands should be managed to the extent possible in accordance with the NLUP (1.2) and Section 5.5.

F. Roads

- i) Highways and major roads are shown on **Figure 1: Land Use Plan**.
- ii) The minimum width for one lane of a road shall be:
 - Highway or Primary Road: 4.26 metres; and,
 - Secondary Road: 3.0 metres.
- iii) New development in a Primary, Secondary, or Tertiary Centre should have a pedestrian sidewalk of 1.2 metres in width on at least one side of the road.
- iv) A new East-West Road has been proposed as a connection to the Proposed International Airport and the approximate route of the Proposed East-West Road is shown on **Figure 1: Land Use Plan**. The route identified for the Proposed East-West Road shall be reserved for this future use and no other land uses other than infrastructure shall be permitted in the interim.

G. Solid Waste Management

- i) As the centralized landfill in Roseau reaches capacity, expansion opportunities and suitable locations should be identified for new solid waste facilities. Suitable locations for solid waste facilities should meet the following criteria:
 - Be located within 1 kilometre of a major road;
 - Be in the Interior Area and not designated with the Natural Hazard Overlay;
 - Be outside of any Water Catchment Area;
 - Be a minimum of 1 kilometre away from a Settlement Area;
 - Be in an area where the surrounding uses are compatible with a solid waste facility; and,
 - Be developed to have minimal impact on natural environment, or be developed such that negative impacts to the natural environment can be mitigated.

5.7 Industry

A. Alternative Energy

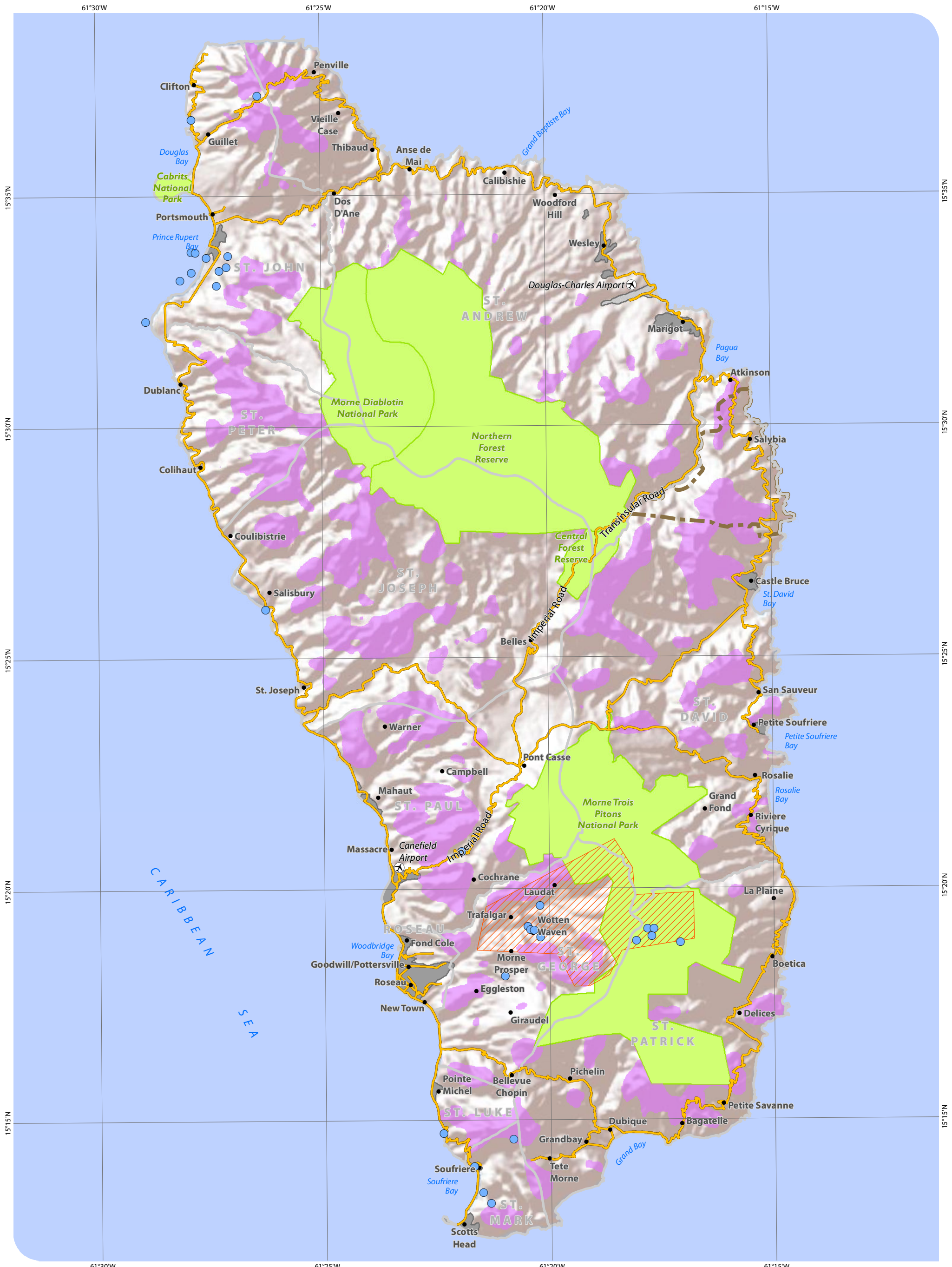
- i) Development of alternative energy sources should be encouraged in accordance with the NLUP (1.6.1). Alternative energy sources include but are not limited to geothermal, solar, wind, micro-hydro, and micro-tidal energy projects.
- ii) Geothermal energy potential has been identified in the Parish of St. George, and to a lesser extent, in the Parish of St. Patrick and Parish of St. David. The on-going

Geothermal Energy Project Area is identified on **Figure 3: Renewable Energy**. Other places may also have geothermal energy potential and **Figure 3: Renewable Energy** identifies all known locations with geothermal activity that may be explored for their energy production potential.

- iii) Areas identified as having high, and very high wind risk (USAID, 2006) are identified as Potential Wind Energy Areas on **Figure 3: Renewable Energy** and may be suitable for the development of wind energy projects.
- iv) The use of passive and active solar energy in building siting and design should be encouraged.
- v) The following criteria should be used to assess the suitability of proposed locations for alternative energy projects and/or to proactively identify suitable locations for alternative energy projects:
 - Relative feasibility of the location to access alternative energy source (e.g., the amount of sun exposure for a solar energy project);
 - Impact on the natural environment and ability to mitigate any negative impacts during both construction and operation of the project;
 - Risk from climate change and natural hazards and the ability to mitigate any risks; and,
 - Compatibility with surrounding land uses including human settlement and tourism sites.

B. Resource Extraction

- i) Existing quarries are shown on **Figure 1: Land Use Plan**. In accordance with the NLUP (1.6.2) the area within 500 metres of a quarry shall be considered a transition zone.
 - Development within the transition zone shall not be permitted unless it can be demonstrated that the development is compatible with the quarry and that it will not hinder continued extraction or future expansion of the quarry.
- ii) Exporting water is an on-going goal for the Government. Extraction of water resources for economic development is permitted in Interior Areas, Agricultural Areas, and in any settlement as long as it is compatible with surrounding land uses, and the water extraction is managed in accordance with the NLUP (2.2.3) and the policies of Section 5.1.



COMMONWEALTH OF DOMINICA

NATIONAL PHYSICAL DEVELOPMENT PLAN

RENEWABLE ENERGY
FIGURE 3

- | | | |
|--------------------|----------------------------------|---------------------------------------|
| Airport | Existing Settlement Area | Renewable Energy Opportunities |
| Settlement | Airport Built-Up Area | Geothermal Activity |
| Primary Road | National Park and Forest Reserve | Geothermal Energy Project Area |
| Parish | | Potential Wind Energy Area |
| Kalinago Territory | | |



MAP DRAWING INFORMATION:
DATA PROVIDED BY GOOD/PPD/Dominode
MAP CREATED BY: GM
MAP CHECKED BY: CH
MAP PROJECTION: WGS 1984 UTM Zone 20N



FILE LOCATION: I:\GIS\148894 - Dominica\mxd

PROJECT: 148894

C. Manufacturing and Industry

- i) Suitable locations for manufacturing lands should be proactively identified in accordance with the NLUP (1.4), resulting in clusters of manufacturing uses. Lands that are proposed for manufacturing may be approved if they meet the following criteria:
- Have good proximity to transportation infrastructure;
 - Within or near to a settlement area(s);
 - Is compatible with surrounding uses;
 - Has access to raw inputs such as agricultural or fishery inputs;
 - Has access to water and sanitary servicing, or the site is suitable for individual servicing;
 - Has minimal impact on natural environment, or can demonstrate the ability to mitigate any negative impacts; and,
 - Are not designated with the Natural Hazard overlay.
- ii) Any planned or existing manufacturing lands shall be protected from the encroachment of incompatible land uses in accordance with the NLUP (1.4.2).

B. Home Occupations

- i) Home occupations are encouraged provided that they are compatible with the surrounding land uses.

Part 6.0:

Implementation

6.1 Implementation of the National Physical Development Plan

The NPDP is the primary implementation tool of the policies and direction outlined in the NLUP. The NPDP is to be implemented through collaboration among Government agencies and in conjunction with other sector policies and plans, strategic approaches, cooperation and coordination with private landowners and the public, as well as public education. This multi-faceted approach to implementation will allow both the NLUP and NPDP to guide the positive growth and development of Dominica.

A. Application for Planning Permission

- i) The implementation of the NPDP will be primarily through an application for planning permission that allows the Government to assess the merits, negative impacts, and mitigation measures of a proposed development as defined in *the Physical Planning Act* to include:
 - building, engineering, mining or other operations in, on, over or under any land;
 - the making of any material change in the use of any building or land;
 - subdivision of land, or change of land use.
- ii) If there is a concern about the land use compatibility of a proposed development then the Government should be guided by the policies of Sections 6.1.C and 6.1.D, below.
- iii) The Government may request revisions to, or may reject a development proposal that does not help achieve the long-term vision of Dominica and/or that is not in conformity with the policies of the NPDP.
- iv) The Government will conduct public education to ensure that people understand under what circumstances and for what activities they are required to apply for planning permission.

B. Illegal Development

- i) With the exception of infrastructure built by the Government as described in this Plan, any other development built without a planning permission is considered illegal development and the Government may take steps to either:
- Regularize the development; or,
 - Arrange for demolition of the development if it poses a hazard to public health, a hazard to public safety, and/or is located in the area shown as Natural Hazard overlay on **Figure 1: Land Use Plan**.

C. Land Use Compatibility

- i) Achieving greater land use compatibility than the current status quo in Dominica is a positive step towards the country's social development. Development should be assessed for its land use compatibility to prevent land use conflicts in accordance with the NLUP (1.1.) even when a use is permitted in Part 5.0 of this Plan.
- ii) To assess land use compatibility, the Government may require technical studies, and shall use the following criteria:
- The location of the development is appropriate in terms its intended function;
 - The noise generated from the development is at an acceptable level and does not unduly disrupt the peaceful enjoyment of nearby areas;
 - Any dust, debris, odour, or pollution generated by the development is managed on-site and is not emitted such that it effects or deposits onto nearby properties, or these issues are effectively mitigated as described in a Comprehensive Environmental Impact Statement;
 - The development is not unsightly nor unattractive (i.e., standing out starkly from the surrounding areas), or its unsightliness is effectively mitigated through screening, fencing, berms, and/or landscaping;
 - The development is not out-of-scale with its immediate surroundings or the broader area, unless there is some prevailing public interest rationale for such a large-scale development;
 - The development is aesthetically pleasing in terms of its architectural and landscaping design; and,
 - There are no negative impacts, or negative impacts are effectively mitigated, to: (i) historic buildings, historic sites, or other cultural heritage sites; (ii) the Waitukubuli National Trail; (iii) a National Park or Forest

Reserve; and/or, (iv) a coastal zone adjacent to a Marine Reserve, (v) a coastal zone.

D. Technical Studies to Aid Decision-Making

- i) To better assess the appropriateness or evaluate the land use compatibility of a proposed development, the Government may require certain technical studies at the proponent's expense prior to issuing any approval. The Government may require:
- A Comprehensive Environmental Impact Study considering cumulative impacts and ensuring the proposed development is compliant with the NLUP and the NPDP in accordance with the NLUP (Part 5, Section 6);
 - A scoped environmental impact study to determine the impacts to local ecology and mitigation measures to minimize any negative impacts;
 - A natural hazard risk assessment to determine the specific risk and mitigation measures to adequately protect the development from climate change impacts (e.g., storm surge, high winds, landslides, flash flooding, etc.), earthquakes, volcanic risks, and any other applicable risks;
 - A geotechnical study to confirm the load-bearing adequacy of the soil;
 - A hydrogeological study to determine the adequacy of on-site well water and/or the suitability of the soil to accommodate on-lot sewage disposal;
 - An air emissions study to determine the extent of noise, dust, debris, odour, or pollution emitted from development and how emissions are mitigated;
 - A traffic study to determine the volume of automobiles (including trucks, buses, etc.) attracted by the development and any road upgrades necessary to effectively serve increased traffic volumes;
 - A water (or water/sewerage) study to determine the volume of centralized water (or centralized water/sewerage) needed to accommodate the development and confirm that there is available capacity in the water system (or water/sewerage system);
 - A social impact study to determine the impacts to local citizens or nearby communities and how the development achieves a net gain in terms of social development; and/or,
 - An economic impact study to determine how the development achieves positive, sustained economic development.

E. Addressing Uncertainties

- i) The Government should take a pro-active and/or precautionary approach when addressing uncertainties related to climate change and natural hazards.

F. Collaboration Within Government

- i) The Government shall involve all relevant agencies as required to ensure this plan is properly implemented by the competent and responsible authorities.
- ii) At a minimum, intra-governmental collaboration shall occur:
 - In order to evaluate a development proposal that impacts the mandate or jurisdiction of multiple Government agencies;
 - In establishing the terms of reference for an Environmental Impact Statement or Local Area Plan; and,
 - In advance of updating the NLUP or the NPDP or preparing a local area plan.
- iii) Collaboration within Government may occur through meetings, committees, correspondence, or other means.

G. Institutional Strengthening

- i) In accordance with Section 6.1.F. the Government will continue to work towards institutional strengthening to better achieve the goals and intended outcomes of the NPDP including through the following actions:
 - Clarify which department has jurisdiction over sectors/issues where there is uncertainty;
 - Amend legislation to address any loopholes that permit activities that are counter to the long-term vision of Dominica and/or that are not in conformity with the policies of the NPDP (e.g., amend legislation to require planning consent for a transfer that subdivides land); and,
 - Conduct continuous capacity building to ensure Government agencies and other key stakeholders have the knowledge and resources to implement the NPDP or to support its implementation.

H. Stakeholder and Public Consultation

- i) The Government may consult with any Ministry, Division, agency, local government, NGO, private interest, or the general public during the course of evaluating an application for planning permission.

- ii) The Government shall maintain records of any consultation conducted during the course of evaluating an application for planning permission.
- iii) The Government should consider the feedback received through consultation such that its decision on an application for a planning permission is:
 - Informed by stakeholder and public feedback; and,
 - In conformity with the policies of this Plan.

6.2 Medium-Term Investment Action Plan

Community and Infrastructure Plan

A key function of the NPDP is to suggest a transparent and comprehensive investment framework to support decision making for the Government, international donor agencies, financial institutions and private project proponents. To this end, the NPDP offers a prioritized list of projects, reflecting policy and sectoral priorities that support the direction and policies of the NLUP and NPDP.

Establishing priorities based on criteria that are relevant, transparent and credible can increase investor confidence and lead to land use decisions consistent with the NLUP and NPDP.

The investment action plan presented in this section offers a phased approach to implementing priority projects that operationalize the NPDP vision and policies. The investment action plan includes projects that will support future population growth, address gaps between the existing infrastructure and needs, and support economic development, social development, and resilience. The investment action plan is based on an analysis of:

- Allocation of population projections to the centres;
- Determination of the number of population-related community facilities in the centres needed to support the population;
- Determination of viable, physical planning-related projects; and,
- Determination of the supporting institutional strengthening projects.

A. The projects identified in the following **Table 6-1** are to be implemented over a 20 year period. Formal impact assessments, detailed designs, and detailed costing may be required as part of these projects' implementation phase. Where appropriate, projects should be prepared in the context of local area plans. It is expected that the Government may seek the support from funding agencies to assist with these projects.

- i) Projects may occur sooner or later than the target year(s) proposed in this Plan subject to funding availability, potential synergies with private investment, considerations for risk management and feasibility, or changes in global /regional/national priorities.
- ii) If a project’s target year is “as based on population” in **Table 6-1**, then this means that the project should be phased in step with the population increase in the Centre.

Table 6-1: Medium-Term Investment Action Plan Projects

Sector (NLUP Reference) / Investment	Target Year(s) for Completion
Human Settlement (1.7.6; 1.7.7)	
1. Provision of low cost housing units under the Low-Income Housing Development Programme	2025/2030/2035
2. Regularization of existing squatter settlements	2020
3. Construction of traditional-style/climate resilient houses in the Kalinago Territory under the Carib Territory Housing Programme	2025/2030/2035
4. New or upgraded community infrastructure (14 community health centres; 3.5 community centres/emergency shelters; 15 primary schools; 1 secondary school; 8.5 recreation areas)	As based on population
5. Public education on land use planning requirements/benefits	2020
6. Surveying of boundary for the Layou River Management Area	2030
Tourism (2.4.1; 2.4.2)	
7. Feasibility study for the Waitukubuli National Trail expansion	2025
8. Enhance the urban environment (Roseau)	2018
9. Improve facilities at Emerald Pond, Trafalgar Falls, Wotten Waven, and Kalinago Barana Aute	2025
10. Pre-feasibility study for cruise docks / cruise village at Canefield (Donkey Bay)	2035
11. Surveying of boundary for Indian River Management Area	2020
Natural Hazards (1.1.4; 3.2.2)	
12. Evacuation jetties (5)	2020
13. Signage for evacuation routes	2025

Sector (NLUP Reference) / Investment	Target Year(s) for Completion
Agriculture (2.3)	
14. Re-classification of soil type for agriculture	2030
Infrastructure (1.1.1; 1.1.2; 1.1.4; 1.1.5; 1.5.1; 2.2.3)	
15. Bus terminals (Roseau, Portsmouth, Warner, Marigot)	2025/2030
16. Car park for Roseau	2020
17. Upgrade Roseau water system	As based on population
18. Upgrade Roseau sewerage system	As based on population
19. Upgrade Portsmouth/Picard water system	As based on population
20. New Portsmouth/Picard sewerage system	2020 (URGENT)
21. Upgrade Marigot water system	As based on population
22. New Marigot sewerage system	As based on population
23. Upgrade Massacre/Canefield water system	As based on population
24. New Massacre/Canefield sewerage system	As based on population
25. Upgrade Warner water system	As based on population
26. New Warner sewerage system	As based on population
27. Upgrade Mahaut water system	As based on population
28. New Mahaut sewerage system	As based on population
29. Upgrade water systems in Tertiary Centres	As based on population
30. Pre-feasibility study for at least 3 new solid waste facilities (north, south, and east)	2020
31. Pre-feasibility study for a new airport	2030
32. General road rehabilitation	2020/2030
33. Feasibility study for a new east-west road	2035

B. There may be instances where the Government, due to competing priorities and/or limited funding, may have to choose one project over another. In these situations, the Government should be guided by the following priority setting criteria:

i) Strategic Fit:

- Alignment with the vision and goals of the NLUP and NPDP;
- Alignment with other national sectoral plans;
- Alignment with local area plans, if applicable;

ii) Feasibility:

- Technical feasibility;
- Timeframe for implementation;

- Resources available;
 - Cost;
- iii) Need/importance:
- Demonstrated need;
 - Degree of positive impact and/or range of benefits to Dominica; and,
 - National profile / visibility.

Institutional Strengthening Plan

The NPDP Framework Report recommended a set of actions for ensuring a level of institutional capacity. Consistent with the institutional capacity available to the Government, achieving the long-term land use planning goals and intended outcomes will require a flexible approach to guiding development, relying on good planning practice and aiming for consistency with accepted planning principles.

The institutional capacity available to the Government should be sufficient to prevent development in areas that are most inappropriate for development. The role of the Planning Authority, working in close cooperation with the public and private and civil society stakeholders, will be based on finding compromises among competing priorities and celebrating incremental gains. While important progress towards establishing the necessary institutional capacity has already been made, continued effort will be required in the following areas.

- A. The institutional strengthening projects identified in the following **Table 6-2** are to be implemented over a five (5) year period.

Table 6-2: Institutional Strengthening Projects

Investment	Program Year(s)
Stronger inter-agency coordination between the Planning Authority and other Government agencies	1
Continuous capacity building of the Physical Planning, Lands and Surveys, Registry, and Forestry Divisions and key stakeholders such as people responsible for infrastructure development, private developers, developers of energy projects, and local government employees/officials. Capacity building should support local area planning, and knowledge of planning rules, and enforcement. Some courses can be co-ordinated with courses offered by the college.	2, 3, 4

Investment	Program Year(s)
Amendment to land titles legislation to ensure lot creation /subdivision of land meets the <i>Physical Planning Act</i> / NLUP / NPDP	2, 3
Further investment in the sharing of spatial data through the Dominode website	2, 3, 4

Part 7.0: Monitoring and Reporting

7.1 Monitoring and Reporting System

Achieving Dominica's vision for growth and development will rely on a system to continuously monitor and review the implementation of both the NPDP and NLUP. A monitoring and reporting (M&R) system is a mechanism for measuring, monitoring and reporting on the performance of the land use policies identified in Chapter 5.0. The NPDP M&R system is informed by existing national and international policy frameworks to ensure policy coherence and alignment of performance measurements, including the Government's Growth and Social Protection Strategy (GSPS) and the United Nations Sustainable Development Goals (SDGs).

A. Table 7-1 identifies performance indicators that will enable monitoring of the implementation of land use policies identified in both the NLUP and NPDP. The Government should monitor and report on the indicators in **Table 7-1** at regular intervals. To assist with monitoring and reporting, the Government should determine the baseline status and the goal to be achieved by 2035 for each indicator, and then at each interval report on the status of each indicator. The Physical Planning Division is primarily responsible for implementing the monitoring and reporting system with support from other government agencies.

Table 7-1: NPDP Monitoring and Reporting Framework

Priority Area	Indicator	Data/Verification
Natural Environment	<ul style="list-style-type: none"> Sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration (SDG Target 14.2) Promote the implementation of sustainable management of all types of forests (SDG Target 15.2) 	<ul style="list-style-type: none"> Environmental Impact Statements for any new marine facilities or coastal development Logs of restoration actions completed Management records for marine reserves Track change in % total forest cover Environmental Impact Statements for any development within forested area
Tourism	<ul style="list-style-type: none"> Devise and implement policies to promote sustainable tourism that creates jobs and promotes local culture and products (SDG Target 8.9) Increase the economic benefits from the sustainable use of terrestrial and marine resources, including through sustainable management of fisheries, aquaculture and tourism (SDG Target 14.7) 	<ul style="list-style-type: none"> Track change in annual tourism numbers, including participation in sustainable tourism activities Consider partnering with sustainability certification organizations (e.g., Marine Stewardship Council, Bird Friendly coffee) to audit and track sustainable production practices
Natural Hazards	<ul style="list-style-type: none"> Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters (SDG Target 13.1) Integrate climate change measures into national policies, strategies and planning (SDG Target 13.2) 	<ul style="list-style-type: none"> Track resettlement program Track illegal development located in the Natural Hazard overlay Log site specific studies and mitigation measures for development located in the Natural Hazard overlay Log reviews of all new government policies based on mainstreaming climate change adaptation and mitigation

Priority Area	Indicator	Data/Verification
Human Settlement	<ul style="list-style-type: none"> Ensure access for all to adequate, safe and affordable housing and basic services (SDG Target 11.1) 	<ul style="list-style-type: none"> Track provision of new lots for affordable housing and other programs Track provision of infrastructure (as DOWASCO already does)
Agricultural Areas and Interior Areas	<ul style="list-style-type: none"> Increase the agricultural productivity and incomes of small-scale food producers (SDG Target 2.3) Ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality (SDG Target 2.4) 	<ul style="list-style-type: none"> Track income data for small-scale food producers (through a census or longitudinal study) Consider partnering with sustainability certification organizations (e.g., Marine Stewardship Council, Bird Friendly coffee) to audit and track sustainable production practices
Infrastructure	<ul style="list-style-type: none"> Achieve universal and equitable access to safe and affordable drinking water for all (SDG Target 6.1) Expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all (SDG Target 7.b) Develop quality, reliable, sustainable and resilient infrastructure, including regional and trans-border infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all (SDG Target 9.1) 	<ul style="list-style-type: none"> Track DOWASCO provision of potable water Track change in quantity of energy produced through alternative energy generation Track change in demand for electricity Identify and track infrastructure projects based on how they improve access, equity, and resilience

Priority Area	Indicator	Data/Verification
Industry	<ul style="list-style-type: none"> Substantially increase the share of renewable energy in the global energy mix (SDG Target 7.2) Promote inclusive and sustainable industrialization and significantly raise industry's share of employment and GDP (SDG Target 9.2) Increase the access of small-scale industrial and other enterprises, in particular in developing countries, to financial services, including affordable credit, and their integration into value chains and markets (SDG Target 9.3) 	<ul style="list-style-type: none"> Track change in quantity of energy produced through alternative energy generation Track change in demand for electricity Log planning approvals for new industrial development

7.2 Updating the NPDP

- A.** While the *Physical Planning Act* does not specify a time frame for reviewing or updating policy, the NLUP should be reviewed by the Planning Authority every five to ten years to identify any required revisions and to incorporate new information and new conditions. The review and subsequent update of the NPDP should take place in conjunction with an update to the NLUP.
- B.** Any update to the NPDP is to be led by the Planning Board, executed by the Planning Authority, and undertaken in coordination with related Ministries and in consultation with the public and stakeholders from government, the private sector and civil society. The process for reviewing and updating the NPDP is expected to require a 6-month to 12-month timeframe.

Part 8.0:

Interpretation

8.1 Acronyms

CHRIM – Caribbean Handbook on Risk Information Management

DOWASCO – The Dominica Water and Sewerage Company Limited

DSWMC – Dominica Solid Waste Management Corporation

GSPS – Growth and Social Protection Strategy

M&R – Monitoring and Reporting

NLUP – National Land Use Plan

NPDP – National Physical Development Plan

PPD – Physical Planning Division (of the Government)

SDGs – United Nations Sustainable Development Goals

8.2 Definitions

Please refer to the *Physical Planning Act* for additional definitions. Where a term is not defined, the plain language or dictionary definition should be used.

Government – Refers to the Government of the Commonwealth of Dominica.

Island Design – Refers to the distinctive architecture of Dominica that has evolved from the island's history, climate, available materials, and topography, that is similar yet distinct from the architectural expression and landscape design of other islands. Typical features of island design can include: wood sidings, concrete blocks, colourful paints, connectivity to the outdoors such as through verandas, open air rooms, courtyards, and large shuttered windows, tall doors

with porticos, vaulted ceilings, and/or thatch roofs, as well as certain species of ornamental trees and plants.

Nature Island – Refers to the vision and branding used by the Government to promote the pristine and unique natural environment, biodiversity, climate, and terrain of the island which is protected through the National Parks legislation and other actions.