



# Environmental data and information in the Caribbean

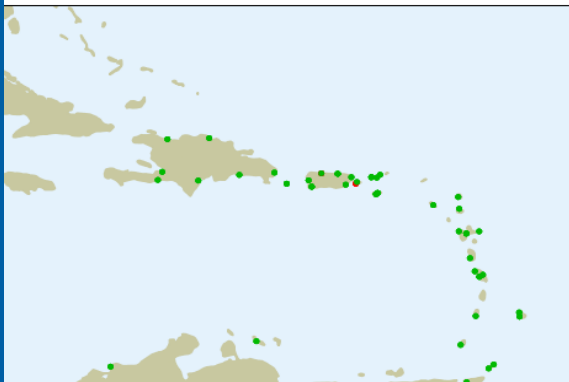
(supplement to CARICOM presentation:

(1) UNSD/UNEP Questionnaire on Environment Statistics

(2) Examples of various types of data source outside government statistics)

Charles Davies, UNEP Regional Office for Latin America and the Caribbean

7 February 2014





# UNSD data collection in environment statistics

- UNSD collects data through the UNSD/UNEP Questionnaire on Environment Statistics from non-OECD/Eurostat countries every two years.
- The Questionnaire is sent to national statistical offices and ministries of environment and focuses on water and waste statistics.
- UNSD/UNEP Questionnaire 2013 on Environment Statistics (7th round) is currently underway

(<http://unstats.un.org/unsd/environment/questionnaire.htm>)



# UNSD/UNEP data collection—water statistics

1. Renewable Freshwater Resources (W1)
2. Freshwater Abstraction and Use (W2)
3. Water Supply Industry (ISIC 36) (W3)
4. Wastewater Generation and Treatment (W4)
5. Population Connected to Wastewater Treatment (W5)





# UNSD/UNEP data collection—waste statistics

1. Generation of Waste by Source (R1)
2. Management of Hazardous Waste (R2)
3. Management of Municipal Waste (R3)
4. Composition of Municipal Waste (R4)
5. Management of Municipal Waste – City data (R5)



# UNSD Questionnaires: 1999-2010: Responses as of 15 February 2011

Country	1999	2001	2004	2006	2008	2010
Anguilla				Anguilla	Anguilla	Anguilla
Antigua and Barbuda				Antigua and Barbuda	Antigua and Barbuda	Antigua and Barbuda
Bahamas		Bahamas				Bahamas
Barbados	Barbados	Barbados				
Belize	Belize	Belize	Belize	Belize	Belize	Belize
Bermuda				Bermuda	Bermuda	Bermuda
British Virgin Islands				British Virgin Islands	British Virgin Islands	
Dominica			Dominica	Dominica		
Grenada		Grenada				
Guyana		Guyana			Guyana	Guyana
Jamaica		Jamaica	Jamaica	Jamaica	Jamaica	Jamaica
St. Vincent and the Grenadines		St. Vincent and the Grenadines	St Vincent and the Grenadines			
Suriname			Suriname	Suriname	Suriname	Suriname
Trinidad and Tobago			Trinidad and Tobago	Trinidad and Tobago	Trinidad and Tobago	




# UNSD dissemination

UNSD disseminates data through:

- **UNSD Environmental Indicators** (Air and climate, Biodiversity, Energy and minerals, Forests, Governance, Inland water resources, Land and agriculture, Marine and coastal areas, Natural disasters, and Waste) (<http://unstats.un.org/unsd/environment/qindicators.htm>)
- **Country Files** (access restricted to countries and international organizations that participate in the data collection) (<http://unstats.un.org/unsd/environment/Questionnaires/index.asp>)
- **Country Snapshots** (include UNSD environmental indicators and other economic/demographic data) ([http://unstats.un.org/unsd/environment/Questionnaires/country\\_snapshots.htm](http://unstats.un.org/unsd/environment/Questionnaires/country_snapshots.htm))
- **Environment statistics in UNData** (<http://data.un.org/>)

Environment Statistics Country Snapshot  
Trinidad and Tobago



Indicator	Year
<b>Air and climate</b>	
Sulphur dioxide (SO <sub>2</sub> ) (1000t)	9 1990
SO <sub>2</sub> per capita (kg)	7 1990
NO <sub>x</sub> (1000t)	37 1990
NO <sub>x</sub> per capita (kg)	26 1990
CO <sub>2</sub> (million tonnes)	48 2008
CO <sub>2</sub> per capita (tonnes)	36 2008
GHG (million tonnes CO <sub>2</sub> eq.)	16 1990
GHG per capita (tonnes CO <sub>2</sub> eq.)	13 1990
Ozone depleting CFCs (GDP eq.)	0 2008
GHG from energy (%)	62 1990
<b>Biodiversity</b>	
Proportion of terrestrial and marine areas protected (%)	16 2010
Number of threatened species	58 2010
Fish catch (tonnes)	13 901 2010
Change in fish catch from previous year (%)	-1 2010
<b>Economy</b>	
GDP growth rate from previous year (%)	-1 2011
GDP per capita (at current prices - \$US)	16 272 2011
% Value added: agriculture, hunting, forestry, fishing	1 2011
% Value added: mining, manufacturing, utilities	46 2011
<b>Energy</b>	
Energy consumption (1000t oil eq.)	22 017 2008
Energy consumption per capita (kg oil eq.)	16 476 2008
Energy use intensity (kg oil eq. per \$1,000 GDP (Constant 2005 PPP\$))	656 2008
Renewable electricity production (%)	0 2008
<b>Land and agriculture</b>	
Total area (sq km)	5 130 2011
Agricultural land (sq km)	540 2011
Arable land (% of agr. land)	2 2011
Permanent crops (% of agr. land)	41 2011
<b>Water and sanitation</b>	
Permanent meadow and pasture (% of agr. land)	13 2011
Change in agricultural land area since 1990 (%)	-30 2011
Forest area (sq km)	2 257 2011
Change in forest area since 1990 (%)	-6 2011
<b>Population</b>	
Population (1000)	1 341 2010
Population growth rate from previous year (%)	0 2010
<b>Waste</b>	
Total population served by municipal waste collection (%)	90 <sup>1</sup> 1996
Municipal waste collected (1000t)	425 <sup>1</sup> 2000
Household waste generated (1000t)	11 2000
<b>Water and sanitation</b>	
Long-term average renewable freshwater resources (km <sup>3</sup> per year)	3 840 197 A
Urban population with access to improved drinking water source (%)	98 2010
Rural population with access to improved drinking water source (%)	93 2010
Urban population with access to improved sanitation (%)	92 2010
Rural population with access to improved sanitation (%)	82 2010

United Nations Statistics Division Page 1 of 2

# UNEP Live

OUR CHANGING ENVIRONMENT: PLACE BY PLACE

Select Country/Region/Global

Or

Select Theme

SEARCH

## UNEP Priority Areas


- Climate Change
- Disasters & Conflicts
- Ecosystem Management
- Environmental Governance
- Harmful Substances
- Resource Efficiency
- Environment Under Review

## Integrated Analysis

- Air Quality-Health-Climate Change
- Measuring Progress Towards Global Environmental Goals

# Environmental Data Explorer

UNEP DEWA GEO

 **United Nations Environment Programme**  
environment for development

## Environmental Data Explorer

The Environmental Data Explorer is the authoritative source for **data sets** used by UNEP and its partners in the Global Environment Outlook (GEO) report and other integrated environment assessments. Its **online database** holds more than **500 different variables**, as national, subregional, regional and global statistics or as geospatial data sets (maps), covering themes like Freshwater, Population, Forests, Emissions, Climate, Disasters, Health and GDP. Display them on-the-fly as **maps, graphs, data tables** or download the data in different formats.

**search the EDE Database**

Level: **All** National Subregional Regional more »

**Enter words to search for:**  
e.g. water, forest, population or a country name ?

or use a data category  
All GEO Subthemes

**Search**

or use the [Advanced Search](#)

the global environment in numbers

Indicator	Value	Year
Electricity Production	10,702,465 GWh	2008
Fish Catch	92,810,443 Metric Tons	2011
CO2 Concentration	393 ppm	2012

<http://geodata.grid.unep.ch/>



# MDGs

United Nations Statistics Division | Department of Economic and Social Affairs | United Nations

## Millennium Development Goals Indicators

The official United Nations site for the MDG Indicators

HOME DATA INDICATORS DOCUMENTS CAPACITY BUILDING LINKS CONTACTS

Search Criteria Series Data

Please use the controls below to select at least one country and one series, and then click [View Data](#).

Tree View Flat View

- All MDGs
  - Goal 1. Eradicate extreme poverty and hunger
  - Goal 2. Achieve universal primary education
  - Goal 3. Promote gender equality and empower women
  - Goal 4. Reduce child mortality
  - Goal 5. Improve maternal health
  - Goal 6. Combat HIV/AIDS, malaria and other diseases
  - Goal 7. Ensure environmental sustainability
    - Target 7.A: Integrate the principles of sustainable development into country policies and programmes
    - Target 7.B: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss
    - Target 7.C: Halve, by 2015, the proportion of people without sustainable access to basic services
    - Target 7.D: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers
  - Goal 8. Develop a global partnership for development

Countries Regions

- All
- Afghanistan
- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Anguilla
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize

Display Options

- Display data type (country data, estimate, etc)
- Group series with the same indicator

Group results by:

- Indicator
- Country

[View Data](#)

<http://unstats.un.org/unsd/mdg/Default.aspx>

# World Database on Protected Areas



www.wdpa.org, protectedplanet.net (information from national governments, used to produce global statistics and track MDG 7 and Aichi Target, good site to access national protected area information). Managed by World Conservation Monitoring Centre and IUCN.

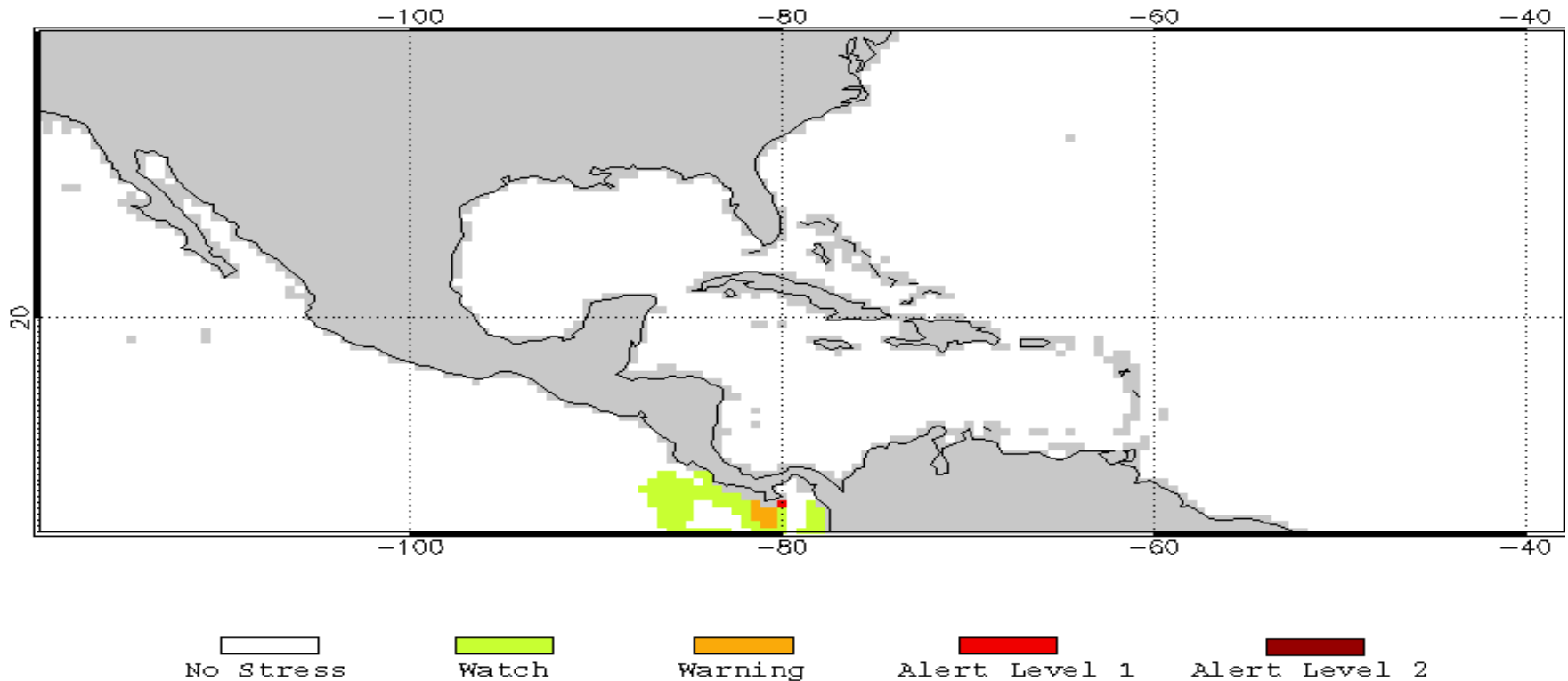
# The International Disaster Database (EM DAT)

The screenshot displays the EM-DAT website interface. At the top, there is a header with the EM-DAT logo and the text "The International Disaster Database" and "Centre for Research on the Epidemiology of Disasters - CRED". Below the header is a navigation menu with links for Home, About, Database, Explanatory Notes, Publications, Activities, DISDAT, FAQs, and login. A search bar is also present. The main content area is titled "Database" and includes a notice about a complete update of the database. On the right side, there are six red buttons with white text and right-pointing arrows: "ADVANCED SEARCH" (with "Create your dataset" below it), "COUNTRY PROFILE" (with "Disaster by Country" below it), "DISASTER PROFILES" (with "Summary of Events" below it), "DISASTER LIST" (with "Generate list events" below it), "REFERENCE MAPS" (with "Pre-made maps" below it), and "DISASTER TRENDS" (with "Pre-made graphs" below it).

<http://www.emdat.be/> (the widely cited disaster database including country profiles – data from international agencies and non-government sources)

# Coral Reef Watch

NOAA/NESDIS Bleaching Alert Area, 1/30/2014



<http://coralreefwatch.noaa.gov/satellite/baa.php>

# UNESCO IOC sea level



## SEA LEVEL STATION MONITORING FACILITY

Intro

Map

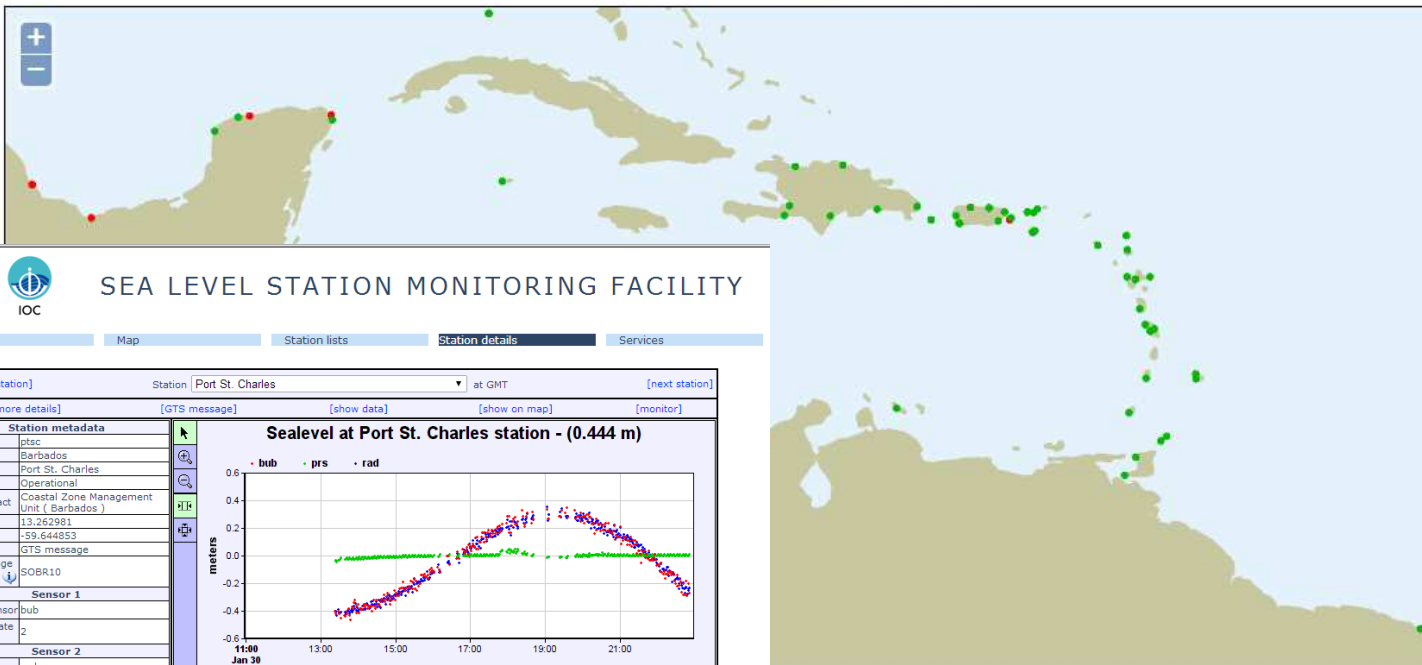
Station lists

Station details

Services

### Sealevel stations

Status at 2014-01-29 16:49 GMT



Type

Legend:

- Station is offline, or data is outdated
- Station is online
- Station is not available at this site

Offline = No data received since 3 times the transmit interval.

The status is checked every 5 minutes.

The quality of the transmitted data is not checked.

- To obtain more details about a station - move mouse over station and click.
- To zoom in - hold down the Shift-key while holding down the mouse button and drawing a rectangle or use the Scroll mouse button, or use the control buttons in upper left part of map.
- To pan - drag the map, or use the control buttons in upper left part of map.



## SEA LEVEL STATION MONITORING FACILITY

Intro

Map

Station lists

Station details

Services

[previous station] Station  at GMT [next station]

[more details] [GTS message] [show data] [show on map] [monitor]

Station metadata	
Code	ptsc
Country	Barbados
Location	Port St. Charles
Status	Operational
Local Contact	Coastal Zone Management Unit ( Barbados )
Latitude	13.362981
Longitude	-59.644853
Connection	GTS message
GTS message type	SOBR10
Sensor 1	
Type of sensor	bub
Sampling rate (min)	2
Sensor 2	
Type of sensor	rad
Sampling rate (min)	1
Sensor 3	
Type of sensor	prs
Sampling rate (min)	1

**Sealevel at Port St. Charles station - (0.444 m)**

Legend: bub (red dot), prs (blue dot), rad (green dot)

From 2014-01-30 10:58 to 2014-01-30 22:58 @IOC-VLIZ

Period	Signals	Data
<input checked="" type="radio"/> 12h	<input checked="" type="checkbox"/> bub	<input checked="" type="radio"/> Relative levels= signal - average over selected period
<input checked="" type="radio"/> day	<input checked="" type="checkbox"/> rad	<input type="radio"/> Absolute levels= as received
<input type="radio"/> 7 days	<input checked="" type="checkbox"/> prs	<input type="radio"/> Offset signals= relative signals + offset
<input type="radio"/> 30 days	<input type="checkbox"/> Remove outliers	
	<input type="checkbox"/> Remove spikes	

Tip: use left icons to zoom & scroll

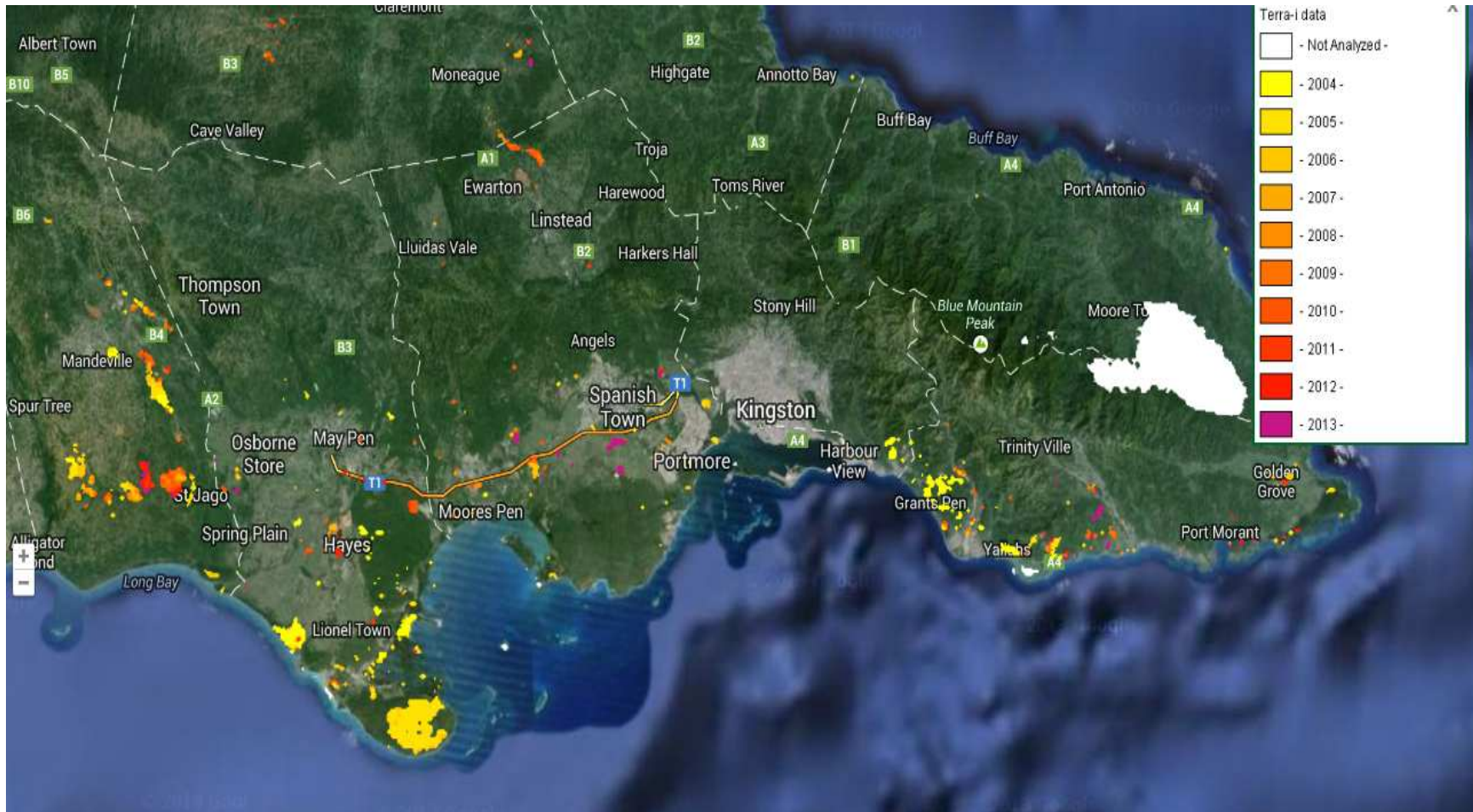
<http://www.ioc-sealevelmonitoring.org/>

# Caribbean land cover



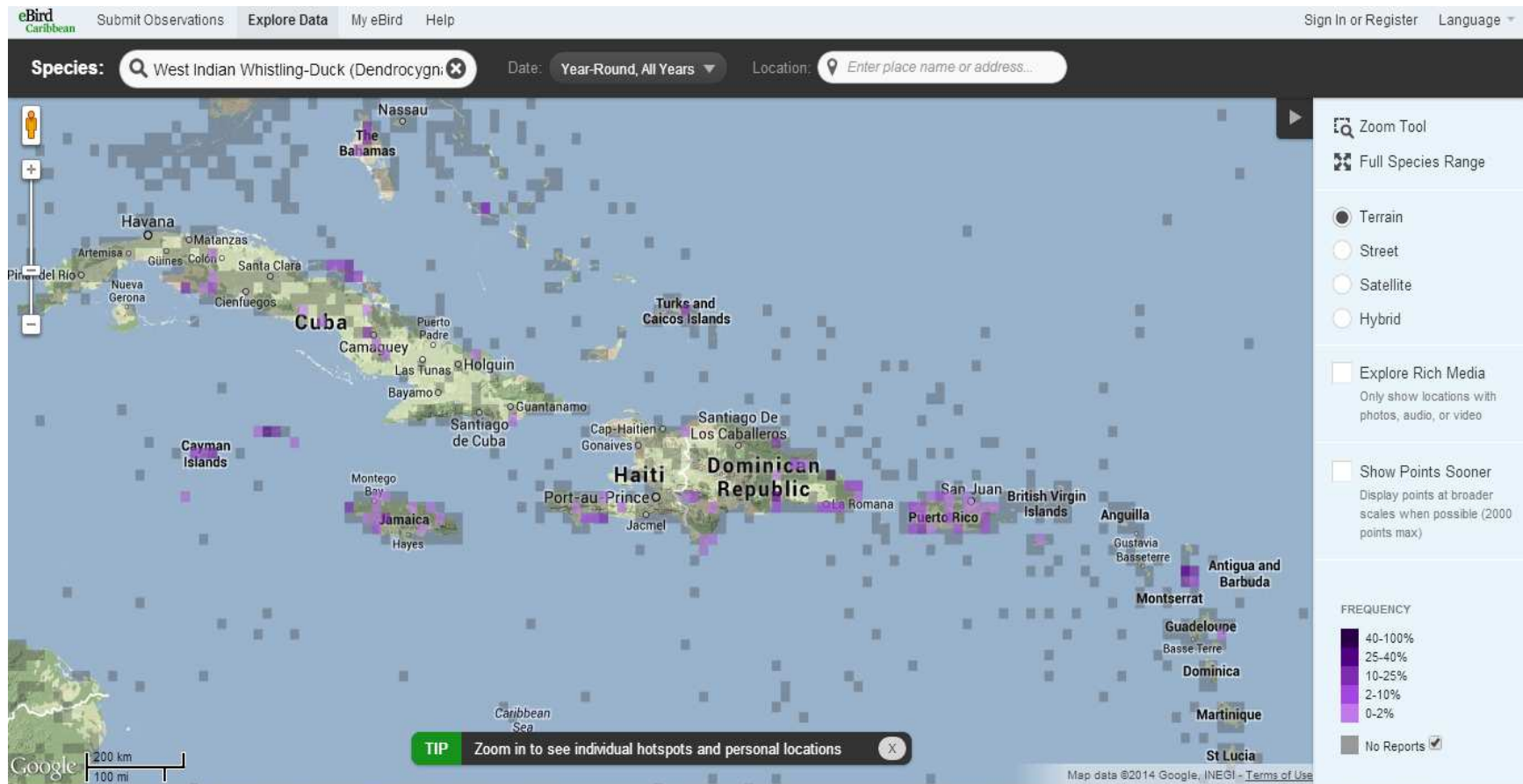
[www.geosur.info](http://www.geosur.info) (network of geospatial data providers, a programme of the Latin American Development Bank (CAF)—Caribbean land cover data from US Forest Service)

# Real-time land cover monitoring (Terra-i)



[www.terra-i.org](http://www.terra-i.org) (example of a programme using satellite data to generate time series land cover change maps)

# Caribbean e-bird Atlas



eBird.org (example of “citizen science”, many are really expert communities)



# RED List (IUCN)

The IUCN Red List of Threatened Species™ 2013.2

Guiding Conservation for 50 Years

Login | FAQ | Contact | Terms of use | IUCN.org

::About ::Initiatives ::News ::Photos ::Partners ::Sponsors ::Resources

Enter Red List search term(s)  OTHER SEARCH OPTIONS [Discover more](#)

**DONATE NOW!**

LEAST CONCERN (LC) NEAR THREATENED (NT) VULNERABLE (VU) **<ENDANGERED> (EN)** CRITICALLY ENDANGERED (CR) EXTINCT IN THE WILD (EW) EXTINCT (EX)

**A users' guide to The IUCN Red List web site**  
03 April 2009 - In October 2008, the IUCN Red List web site was given a brand new look. The new site has more functionality than ever before. This also means that the site has more detailed search pages that... [more](#)

**Launch of the first online Global Freshwater Biodiversity Atlas**  
29 January 2014 - A new online Atlas of freshwater biodiversity presenting spatial information and species distribution patterns will be launched today at the landmark Water Lives symposium, bringing together... [more](#)

**European large carnivores: a surprising success story**  
26 January 2014 - The latest issue of the IUCN European Newsletter sheds light on Europe's large carnivores, presenting the threats they have to face and examples of success stories in their... [more](#)

**A quarter of sharks and rays threatened with extinction**  
21 January 2014 - A quarter of the world's sharks and rays are threatened with extinction according to The IUCN Red List of Threatened Species™, with ray species found to be at a higher risk than... [more](#)

**European Parliament takes important step to combat Wildlife Crime**  
20 January 2014 - A groundbreaking motion for a Resolution on Wildlife Crime was approved... [more](#)

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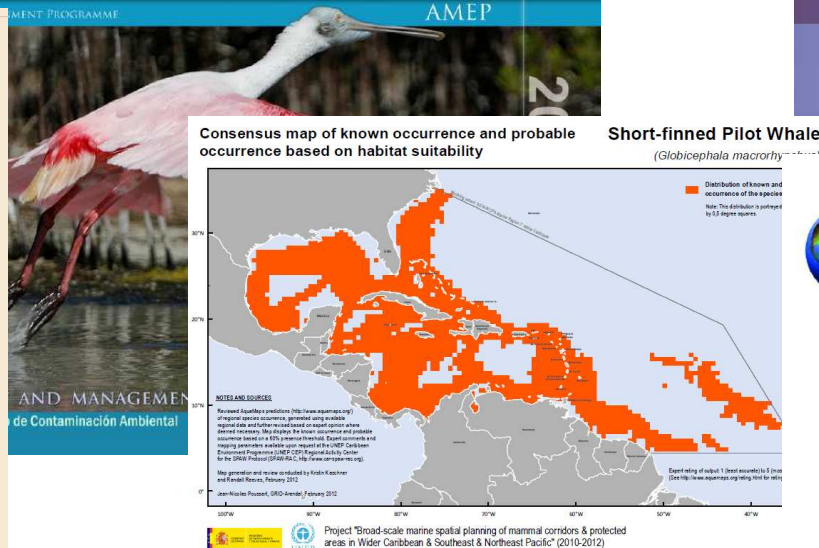
**OKAPI**  
*Okapia johnstoni*  
© Charles Miller (CC BY 2.0)

**Amazing Species**

<http://www.iucnredlist.org/>

# UNEP analysis and data (latter two from UNEP Caribbean Environment Programme—Jamaica)

- Caribbean Environment Outlook (with CARICOM) (1999 and 2004)
- Assessment and Management of Environmental Pollution (AMEP) Atlas; Assessment report on pollutant loadings in Caribbean Sea
- Marine mammals database (at [www.car-spaw-rac.org](http://www.car-spaw-rac.org))



# Priorities and gaps

- More effective coordination of information in support of different national and regional policy processes (Partnership Initiative)
- Comparable time series on key regional and national indicators
- Data used for policy-focused information and analysis