

The Environmental Management Authority (EMA)

The Environmental Management Authority, situated in Port of Spain, Republic of Trinidad and Tobago, is a statutory body established by the government of Trinidad and Tobago to address the country's environmental problems.



Environmental Management Act

- The EMA was established in June 1995 under the Environmental Management Act, No. 3 of 1995.
- Under the Environmental Management Act, the EMA is mandated to educate the public about the nation's environmental issues through awareness programmes.



Our Environmental Education Goals

Trinidad and Tobago's National Environmental Policy states that:

- If the ethic for sustainable development is to be widely adopted, people must re-examine their values and alter their behaviour.
- Information must be widely disseminated through formal and informal education sectors so that the required actions are widely understood.
- Environmental education for children and adults must be integrated into education at all levels.

Climate Change initiatives in Trinidad and Tobago

The Republic of
Trinidad and Tobago
signed and ratified
the UNFCCC in 1994
and is committed to
play an integrated
role in helping to
achieve ... the
ultimate objective of
the Convention ...

(Initial National Communication of
the Republic of T & T under the
UNFCCC)



Lecture to the Salybia community which is situated on the north-east coast of Trinidad





An EMA official conducts a lecture on Climate Change to secondary school students.



Using games to communicate Climate Change to young children from a rural community.



**Lecture series on Climate Change to commemorate
World Environment Day, 2007**

GLOBE

ACTIVITIES



A student from Couva Government Secondary School records temperature readings.



A Stephenson Screen at Iere High School in south Trinidad.

2002. 2. 28



Students testing water quality of the Couva River in Central Trinidad.



Distributing information on Wetlands and Climate Change in our sister isle, Tobago.

Effects of Global Climate Change on Wetlands

Global Climate Change may lead to changes in sea level, sea-surface temperatures, rainfall, and wind and ocean currents.

Increases in temperature, sea-level rise and changes in rainfall patterns can reduce the ability of wetlands to perform their vital functions of protecting reefs, coastal fisheries and providing for erosion control.

In addition, if wetlands are unable to effectively adapt to climate change, their productivity, upon which many other species depend, will be affected. All of these changes may have far reaching social, economic and ecological effects.

As part of the efforts to conserve wetlands, the Government of the Republic of Trinidad and Tobago's National Wetland Policy promotes the protection, management and restoration of wetlands.

This will sustain and enhance the ecological and socio-economic values and functions of wetlands for the current and future generations.



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VULNERABILITY OF SMALL ISLAND DEVELOPING STATES TO CLIMATE CHANGE

Vulnerability may be defined as the extent to which climate change may damage or harm a system (a system can refer to a country or to a sector such as agriculture or tourism).

It depends not only on a system's sensitivity but also on its ability to adapt to new climatic conditions.

Climate models predict that global temperature will rise by about 1.0 to 3.5°C and the mean sea level rise is expected to be between 15 and 95 cm.

It is accepted that Small Island Developing States (SIDS) such as the Caribbean Islands are vulnerable to the impacts of Global Climate Change due to...

1. Small land area and position within the annual path of tropical cyclones and hurricanes.
2. The concentration of economic activity and infrastructure in the coastal areas, making them highly vulnerable to storm events and sea-level rise.
3. Direct and indirect dependence on natural resources such as forests and coral reefs for maintaining vital socio-economic sectors and services, including agriculture, tourism and fisheries.
4. Limited technical, human and financial resources and limited capacity for natural resource management.
5. Lack of relatively diversified economic bases due to limited human and natural resources and dependence on agriculture and tourism as primary industries through concessionary arrangements with other countries.

ADAPTATION TO...



GLOBAL CLIMATE CHANGE

Global Climate Change could lead to changes in sea level, an increase in sea surface temperature and changes in rainfall, wind and ocean currents. Coping with these anticipated changes is known as adaptation.

It is possible that the effects of climate change such as less rainfall, hotter temperatures and the movement of sea water (which is salty) inland can affect our fresh water resources.

Increasing sea levels can result in the flooding and erosion of low-lying coastal areas.



Roads and bridges near the coast would be adversely affected by increases in sea level.



Climate Change can also have a negative impact on the agricultural and fisheries sectors.

Movement of sea water inland is known as salt water intrusion and may occur as a result of sea level rise.

NAME _____
SCHOOL _____
CLASS _____
SUBJECT _____



GLOBAL CLIMATE CHANGE



Here's What We Can Do to Reduce The Effects of Global Warming



Reduce: Reuse: Recycle

REDUCE GARBAGE

CONSERVE ENERGY AT HOME

- Reduce greenhouse gases as a way of life in T&T.
- An energy-efficient air conditioning unit and refrigerator can conserve one tonne each of CO₂ annually per household.
- Compact fluorescent, spiral bulbs are 75 percent more efficient than standard light bulbs.



On average, a person throws away 10 times his/her bodyweight in waste per year.

One kilogramme of debris sent to the landfill produces two kilogrammes of methane, a greenhouse gas.

SAVE ENERGY ON THE ROADS

Walk, cycle, car pool or use public transportation to reduce vehicle emissions on the road. Keep your car engine well-maintained and change the oil to reduce emissions and save fuel.



Recycling paper, glass, aluminium, steel and other materials to produce 'new' materials, can save energy.



Information courtesy: UNEP

PROTECT OUR COASTS AND SEAS

Protect our coasts and seas by not destroying our swamps and coral reefs and by not littering in our rivers and streams.

CLIMATE CHANGE AND THE CARIBBEAN

Vulnerability to Climatic Risks



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High economic activity and infrastructure take place on coastal areas in the Caribbean.



A section of coral reef at risk from climate change and global warming.



Satellite view - Baccos Reef, Tobago, showing the decreasing area of the reef.

Caricom countries are primarily Small Island Developing States (SIDS), located in low-lying regions with fragile coastal eco-systems. Coastal areas which hold the vast majority of the population and economic activity are vital to the prosperity of these countries.

They are also the most productive areas, supporting a wealth of living marine resources and high biological diversity.

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- Direct and indirect dependence on natural resources such as forests and coral reefs for maintaining vital socio-economic sectors and services, including agriculture, tourism and fisheries.



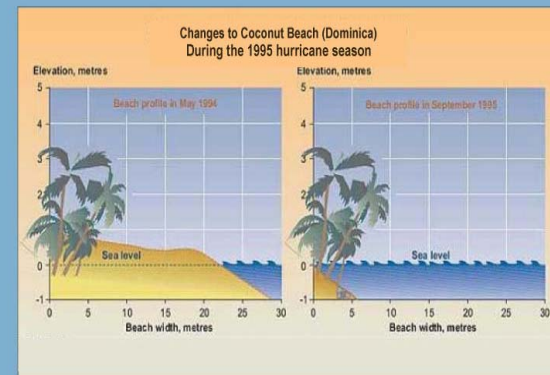
Photos courtesy: Baccos Reef Trust and EMA. Information courtesy: Caribbean Planning for Adaptation to Global Climate Change

CLIMATE CHANGE AND SEA LEVEL RISE



Global warming has contributed significantly to the rise in average sea level, as well as the increase in ocean temperature.

Rising sea level, combined with more frequent storms, washes away vulnerable beaches and increases rates of erosion, making them less attractive for tourism areas. Salt-water intrusion, due to sea level rise, can also affect freshwater supplies, agriculture and human settlement.



Between May 1994 and September 1995, the profile of Coconut Beach, Dominica dramatically changed.

Information and Graphs Courtesy: UNEP

The Pointe-a-Pierre Wild Fowl Trust

- The Wild Fowl Trust, now in its 41st year, is a wildlife reserve, which encompasses two lakes and about 25 hectares of land within a major petrochemical complex (PETROTRIN).



Some of the work done at the Trust includes:

- Research, breeding and re-introduction programmes for locally endangered, wetland birds
- Promoting and implementing the wise use of our natural resources



Education and public awareness programmes on environmental issues including Climate Change

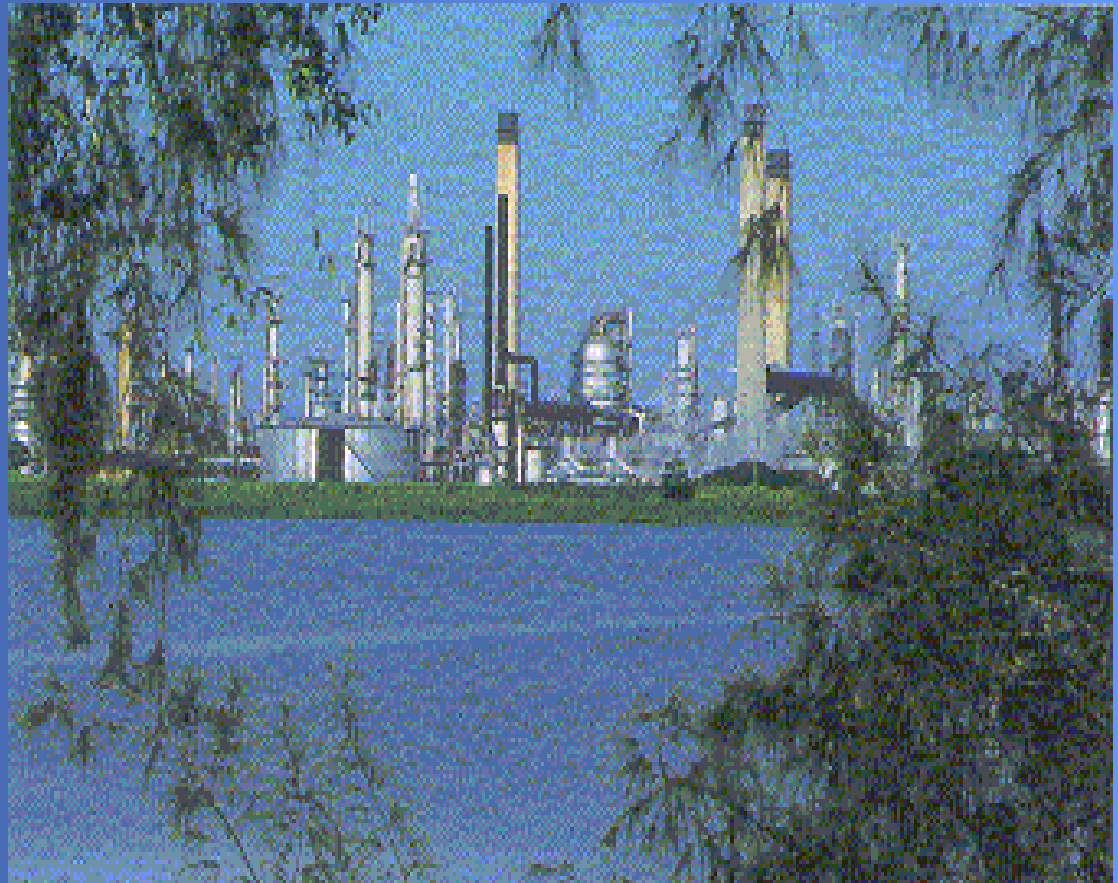


- Lobbying for improved environmental policies



Petroleum Company of Trinidad & Tobago

- The Petroleum Company of Trinidad and Tobago Limited, PETROTRIN, is fully owned by the Government of the Republic of Trinidad and Tobago.



PETROTRIN'S Environmental Policy

- Ensure that its operations comply with all applicable environmental legislation, corporate, industry standards and where feasible, adopt corporate standards where appropriate legislation is, or may be inadequate.



PETROTRIN'S Environmental Policy

- Support research and work with industry, government and other public agencies to establish realistic environmental standards.
- Ensure appropriate and cost effective waste and emissions management programmes are implemented for the prevention of and control of pollution.



The Buccoo Reef Trust, Tobago

The Buccoo Reef Trust (BRT) is a non-profit organisation, registered in Trinidad and Tobago and the USA that was specifically created to assist in addressing the threats facing Tobago's marine environment and to explore opportunities for the sustainable development of marine tourism, fishing and aquaculture in the Caribbean region as a whole.



**Thank you for your
time.**

Any questions?