

Sea Level Rise, Climate Change and Its Impacts on Food Security in SIDS: Challenges and Opportunities

Rolph Payet &
Antoine Moustache



Objectives

Part I

- ▣ The Sea Level Rise Foundation
- ▣ The implications of Sea Level Rise
- ▣ The impact chain of Sea Level Rise
- ▣ Role of the Foundation

Part II

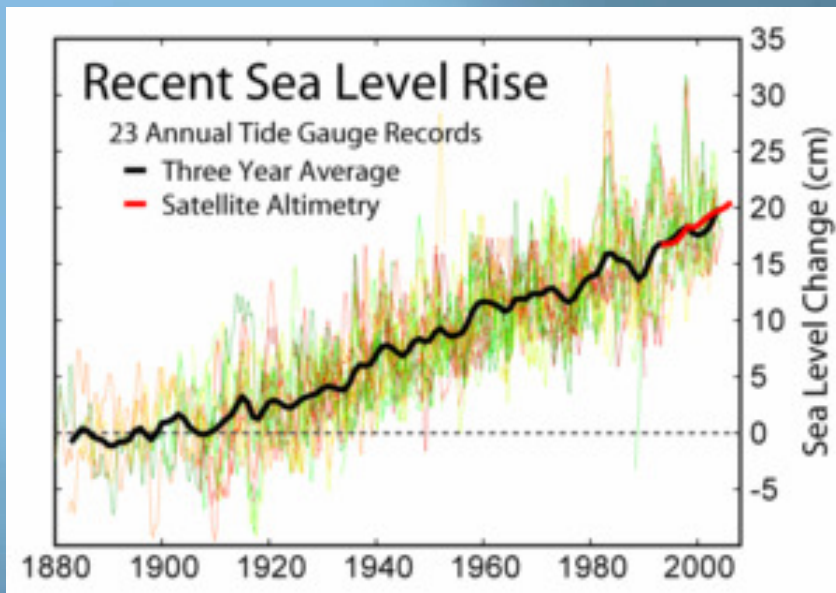
- ▣ The global food security crisis
- ▣ Food security issues in SIDS
- ▣ Challenges and Opportunities



Sea Level Rise
Foundation

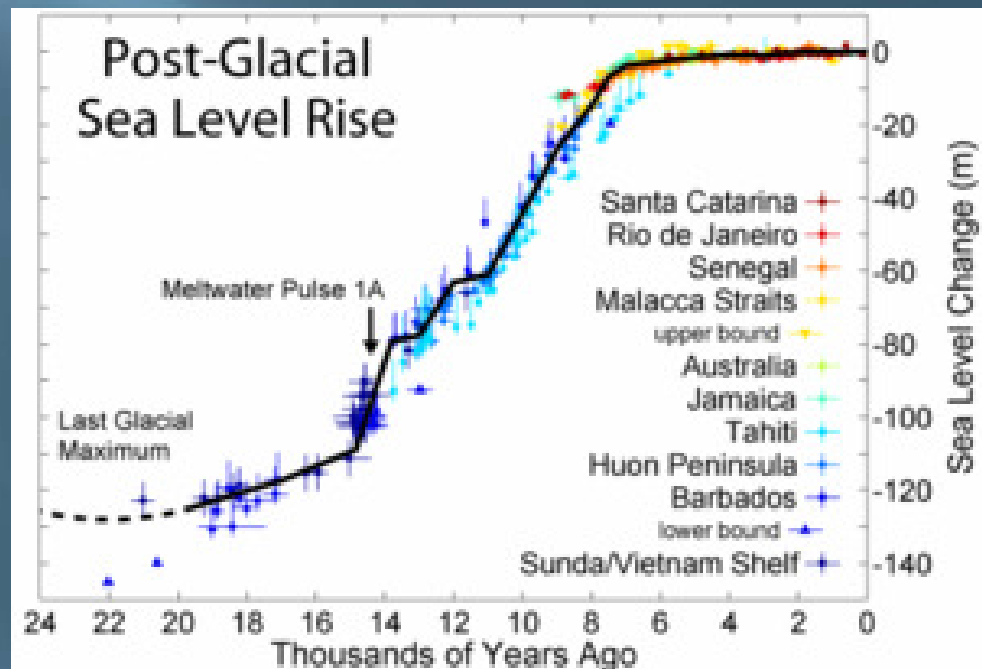
Part I

Sea Level Rise: It's Happening !!

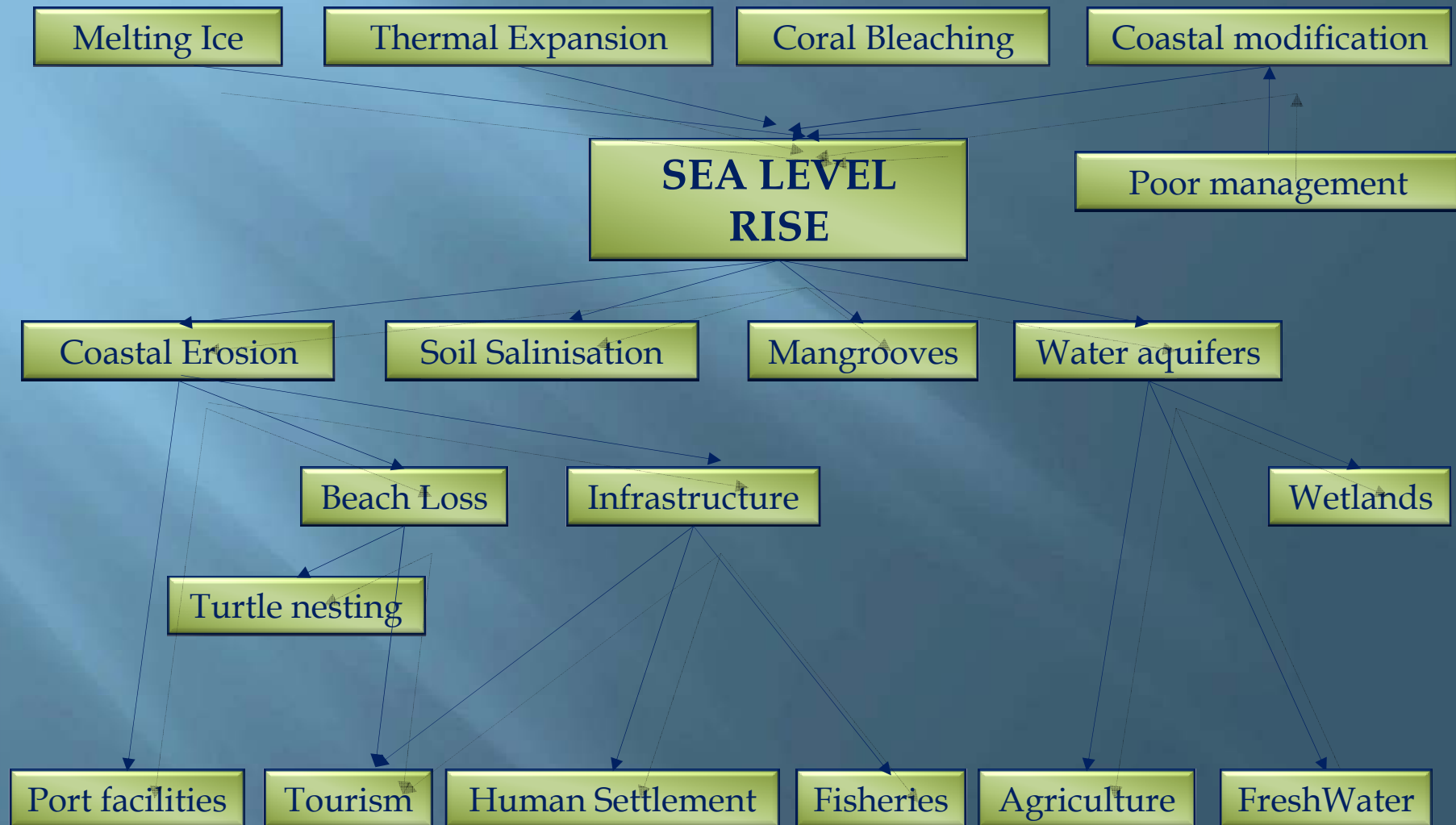


Sea level measurements from tide gauge records in geologically stable environments show a rise of around 20 cm per century (2 mm/year). (Douglas, 1997)

Changes in sea level since the end of the last glacial episode



The complex impact chain of Sea Level Rise



The Sea Level Rise Foundation
aims to:

Educate
Engage
Empower
Enable

Educate

- ▣ Awareness of Sea Level Rise and its impacts
- ▣ Capacity building across all sectors
- ▣ Strengthen University, technology and knowledge networking and exchange
- ▣ School Programmes
- ▣ Community-based programmes
- ▣ Risk Reduction Awareness Activities
- ▣ Knowledge-base on Adaptation to Sea Level Rise

Engage

- ▣ Engage Stakeholders in planning, implementation & monitoring
- ▣ Strengthen role of operators in various economic sectors
- ▣ Departments of Government – Finance, Development
- ▣ Gender engagement
- ▣ Media Outreach

Empower

- ▣ Leadership for Adaptation
- ▣ Decision-making
- ▣ Mainstream Adaptation
- ▣ Policy development & implementation
- ▣ Development codes and practices
- ▣ Toolkits and management approaches
- ▣ Effective monitoring techniques

Enable

- ▣ Mobilise knowledge and appropriate practice and technology
- ▣ Value-addition : scale-up, replication
- ▣ Mobilise FDI for Adaptation
- ▣ Private sector participation
- ▣ Long-term planning approaches

Part II

Food Security Issues in SIDS
The Seychelles' Case

Food Security Issues in SIDS: The Seychelles' Case

Food Security in SIDS have 3 dimensions

- ▣ Local Food Production
 - Crops and livestock
 - Fisheries (65kg / input)

- ▣ International Trade
 - Food import
 - Food storage
 - High transportation costs

- ▣ Climate Change
 - Extreme weather events (torrential rain/drought)
 - Sea level rise and costal agricultural land
 - Increased coral bleaching events a fisheries

Food Security Issues in SIDS: The Seychelles' Case

Local Food Production Issues

- ▣ Finite land resources and competing land uses;
- ▣ Poor soils and rough topography;
- ▣ High fertilizer input (escalating prices);
- ▣ Under valorisation of existing agricultural land;
- ▣ Proportionately large land area under reserves (50%); high population density;
- ▣ Small farming entities (< 1hectare) no economies of scale.

Food Security Issues in SIDS: The Seychelles' Case

Local Food Production Issues

- ▣ Poor research and extension methods;
- ▣ Low farm investment and no subsidy;
 - e.g. Chicken (CIF-2 USD, local 2.75)
- ▣ Inadequate policy and institutional support;
- ▣ Inadequate human and infrastructure capacity;
- ▣ Dwindling stocks in artisanal and semi industrial fisheries.

Food Security Issues in SIDS: The Seychelles' Case

International Trade Issues (Imports)

- ❑ Low trading volumes;
- ❑ Disproportionately high transportation costs (3rd /4th highest fees for container transport in the world);
- ❑ Competing access to foreign exchange;
- ❑ Low & expensive storage capacity of basic foods;
- ❑ Low price bargaining power for basic foods imports; (extensive use of middlemen).
- ❑ Difficult regional trade through lack of shipping.

Food Security Issues in SIDS: The Seychelles' Case

International Trade Issues (Exports)

- ❑ Loss of preferential and total export market for plantation/fishery produce;
- ❑ Lack of FDI (investment) in plantation and general agriculture;
- ❑ Inadequate policy and institutional support for export of produce;
- ❑ Low scale of production – high overheads;
- ❑ No subsidy on production cost: the cause of copra and cinnamon industry's death;
- ❑ Inability to effectively compete in international trade for one's produce.

Food Security Issues in SIDS: The Seychelles' Case

Climate Change Issues

- ▣ Continuous loss of soil fertility through heavy downpours and poor crop output;
- ▣ Threats of serious drought and crop losses;
- ▣ High pests and diseases prevalence and crop losses;
- ▣ Lack of appropriate technology against extreme weather events for land based production;
- ▣ Low investment level in adaptation technology.

Food Security Issues in SIDS: The Seychelles' Case

Climate Change Issues

- ❑ Inadequate policy/institutional support e.g. Insurance Scheme for crops/livestock/fisheries;
- ❑ Sea level rise and salt water intrusion in coastal agricultural soil;
- ❑ Loss of coral reefs through mass coral bleaching (1998) and dwindling fisheries stocks
- ❑ Difficult moratorium in some species in artisanal fisheries;

Food Security Issues in SIDS: The Seychelles' Case

Opportunities

- ▣ Further political support to food production;
- ▣ Address policy issues and build institutional support for food production;
- ▣ Engage further private sector participation/investment/new varieties and species/technology in food production;
- ▣ Build much needed human capacity priority training .

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Opportunities

- ❑ Engage further private sector in higher value added products for niche markets;
- ❑ Engage households as powerful entities in national food production;
- ❑ Prioritise scarce foreign exchange resources to food and agricultural inputs and supplies;
- ❑ Educate/build awareness in need for fish stock management.
- ❑ Mobilise resources for adaptation to climate change.

The Global Context and role of International Agencies

- ▣ The Mauritius Strategy and the UN has recognized the vulnerability of SIDS and food security is an issue important to SIDS.
- ▣ FAO organised a special Ministerial Event on Food Security and Sustainable Development in Small Island Developing States in 2005; identified 12 action points which are still pertinent.
- ▣ Eg.
 - ✓Develop capacities for strategic policy responses for food security;
 - ✓Establish regional programmes for Food Security in our region;
 - ✓Mainstream disaster risk management and climate change adaptation
 - ✓Improve the performance of agriculture
 - ✓Managerial capacities and marketing strategies need to be established for the regular supply of safe and quality food and non-food products.

THANK YOU

Please visit our website

www.sealevel-rise.org

And the SeaLevelRise Blog

<http://sealevelrise.blogspot.com>