

# CLIMATE CHANGE AND AGRICULTURE IN THE CARIBBEAN: PROTECTED AGRICULTURE – AN ADAPTATION OPTION



# Overview

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- **Workshop Objective:** To develop the elements of a strategy to adapt to and mitigate against climate change in Caribbean agriculture.
- >30 participants comprising over seven disciplines; from National, Regional and International organizations.
- Funded by CTA, Technical Centre for Agricultural and Rural Cooperation ACP-EU.

# Content

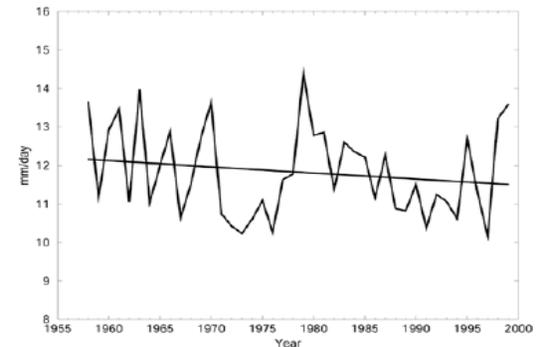
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- **Scientific evidence for climate change** and the possible economic, ecological and development impacts.
- Impact of **climate change on agriculture**.
- **Adaptation and mitigation** strategies to reduce the impact of climate change on agricultural productivity and food and nutrition security goals.
- **Protected agriculture** - option to assist with achieving food and nutrition security and to reduce exposure of crops to the potential hazard of climate change.

# Conclusions – Science of Climate Change

Taylor truths:

- ▣ Climate **Has** Changed
- ▣ Climate **Will** Change
- ▣ Climate **Demands** Change



*(Dr Michael Taylor, Physicist University of the West Indies) – Encapsulated the conclusions of this session of the workshop.*

# Conclusions – Agriculture & Climate Change

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- **Agricultural productivity** and hence **Food and Nutrition Security** will be significantly impacted by climate change as critical components of the agro-ecosystem are being affected (e.g. water, soil and pests)
- Inconsistent data collection and storage (meteorological and agricultural) have and will affect our ability to:
  - understand the impact of the changes on agricultural productivity
  - forecast the changes and develop appropriate strategies and time interventions

# Conclusions – Agriculture & Climate Change



- **Weak linkages** among current institutions have resulted in fragmentation, uncoordinated efforts and the ability to integrate the results to achieve a more comprehensive response to the challenge of climate change.
- Science-based policies are critical for the implementation of climate change adaptation strategies which also take climate variability into consideration

# Conclusions – Mitigation and Adaptation

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- Various technologies/practices can be utilized in current farming operations to reduce the impact of climate change e.g. protected agriculture, water harvesting, drought tolerant crops.
- There is limited empirical evidence of the impact of climate change on agriculture in the Region, however with the current knowledge and information it is possible to initiate planning and the implementation some of the options.
- Inadequate research programmes to develop adaptation technologies and practices will impact the Region's ability to attain **Food and Nutrition Security Goals**.

# Conclusions – Mitigation and Adaptation



- Strategies/policies relating to climate change are being developed without sectoral linkages (land, water, marine, agriculture, meteorology).
- The conduct of impact assessments for mitigation and adaptation strategies is critical for monitoring and evaluating the strategies.
- Agricultural mitigation activities must be pursued to enhance agricultural productivity and the acquisition of carbon credits and resources to fund adaptation activities.

# Conclusions – Protected Agriculture

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- Protected agriculture is a viable option to ensure Food and Nutrition Security and also an adaptation option for to combat climate change (e.g. efficient use of inputs, reduction of pests, equipped with features to ensure disaster mitigation).
- Adaptive research in protected agriculture is necessary for developing sustainable production systems.
- Capacity building of stakeholders along the value chain is necessary to improve the returns on the investments.

# Recommendations



- Establish a multidisciplinary team to develop the regional climate change strategy for agriculture.
- Consult with all stakeholders to ensure that the strategy reflects the needs, challenges and ensures buy-in.
- Pursue an integrated approach to strategy development so the cross cutting issues from various sectors (e.g. agriculture, fisheries, land, tourism, energy) can be addressed from a unified position.

# Recommendations

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- Use the Guyana experience as a case study for developing the climate change strategy and garnering funds to implement the strategy (resource mobilization).
- The Region should prepare itself for the upcoming climate change summit in Cancun (November 2010) in order to contribute to putting agriculture on the negotiating agenda, take advantage of any resources that may become available from the **Adaptation Fund**, during the session proposed for agriculture.

# Recommendations



- Determine and implement carbon sequestration practices for sustainable development and sources of financing.



“Our best efforts in peace, development and human rights will be undermined if we do not effectively address the threats posed by climate change”

*UN Secretary - General Ban Ki-moon' address to the tenth African Union Summit in Addis Ababa, Ethiopia (AU Summit, 2008)*

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