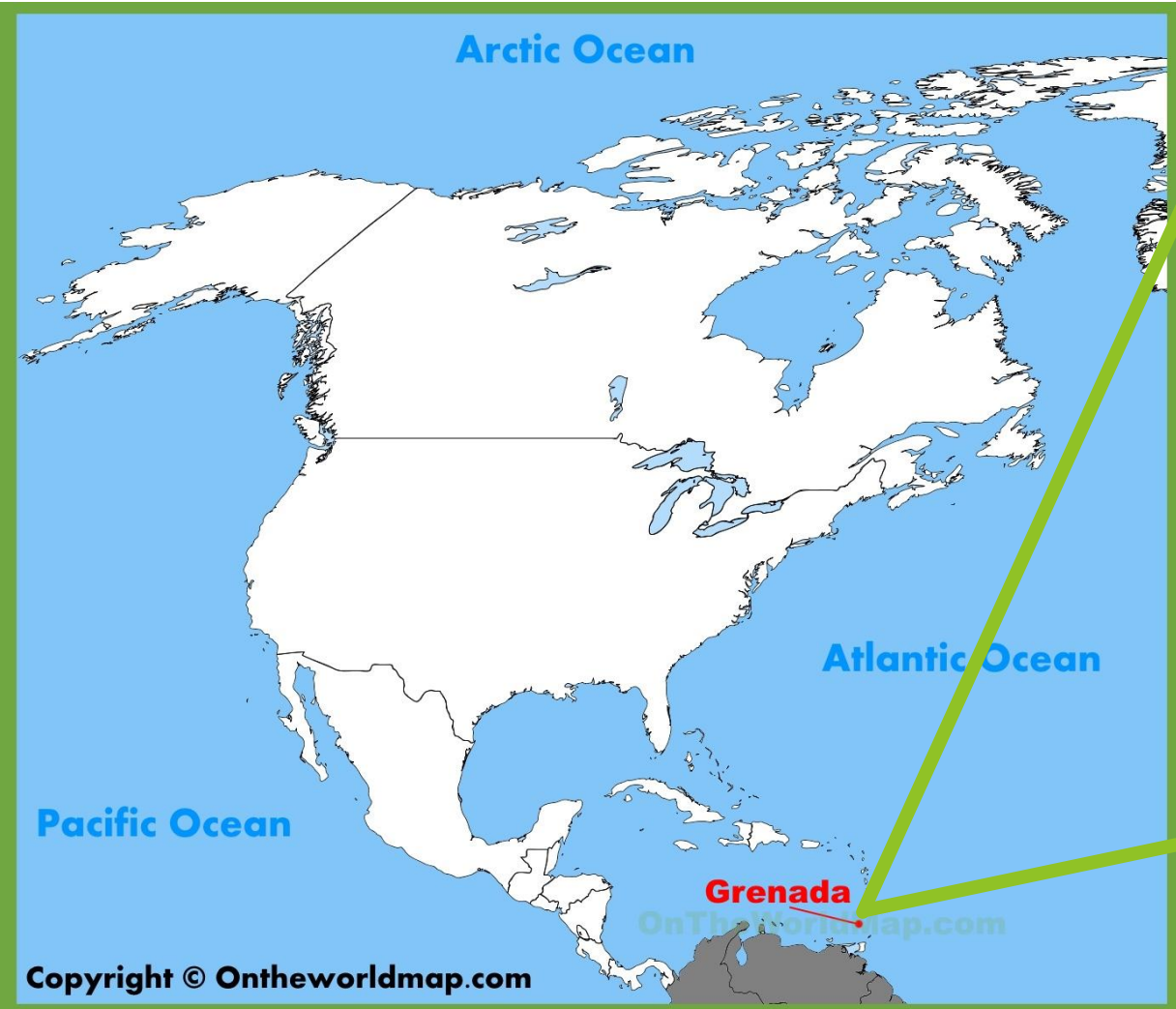


# **CLIMATE SMART COOLING SOLUTIONS FOR SUSTAINABLE BUILDINGS IN LATIN AMERICA & THE CARIBBEAN**

Leslie Smith, Grenada  
August 20<sup>th</sup>, 2020.



# GRENADA



# National Perspective:

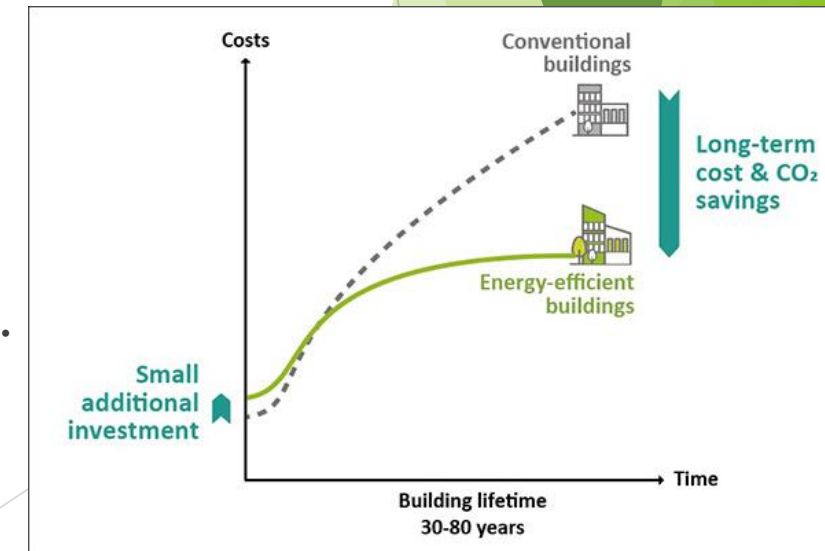
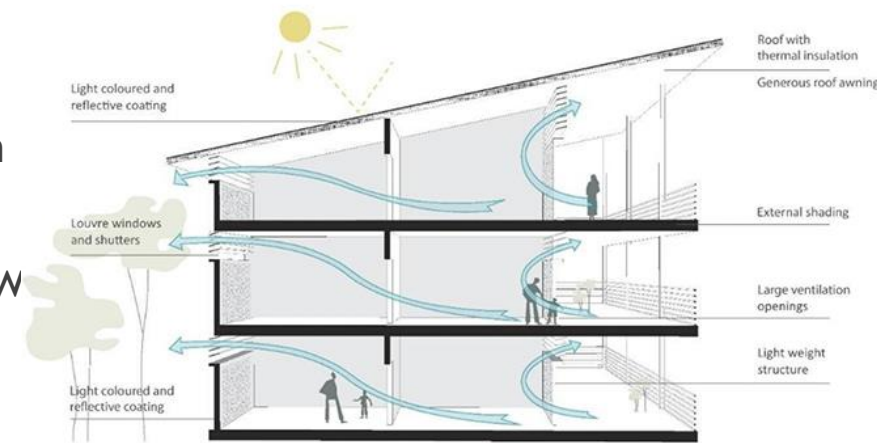
- ▶ In recent years there has been significant growth in the RAC sector in Grenada.
- ▶ Growth driven by: Steady economic growth, lower O & M cost, moderate population growth and rise in atmospheric temperature caused by climate change.
- ▶ Less than 10% of households in Grenada has an AC
- ▶ In 2013 the RAC electricity consumption was estimated to have contributed 64% to the total national electricity consumption (*IDB 2015*)
- ▶ The main source of electricity demand is generally air conditioning by the hotel sector, accounting for up to 48% of total electricity demand. (*2nd NC-UNFCCC 2017*)
- ▶ In 2015, the RAC sector was responsible for approximately 29% of Grenada's total GHG emissions (*GIZ 2019*)
- ▶ Unitary AC (55%) and MAC systems (27%) were the biggest contributors.
- ▶ It is estimated that annual GHG emissions from the RAC sector would almost double by 2033 and then slowly decrease by 2050 (*GIZ 2019*)
- ▶ 38% of avoided emissions by 2050 is related to transitioning to low GWP refrigerants and 68% to corresponding energy efficiency improvements.
- ▶ Under the NDCs – *Grenada commits to reducing its GHG emissions by 30% of 2010 by 2025, with an indicative reduction of 40% of 2010 by 2030.*
  - ▶ One of the goals under the NCCPAP is: Reducing greenhouse gas emissions through increased energy efficiency and the use of renewable energy; (NCCPAP 2007-2011)



# Getting (Sustainable) Cooling Right!!

## It Goes Way Beyond Air-conditioning

- ▶ Policies and Regulations must be put in place to avoid or reduce the need for cooling in buildings
  - ▶ Energy Policies to support: Energy Efficiency, MEPS, temperature limits in buildings.....
- ▶ Increased thermal efficiency of buildings. ( design, insulation, air flow building envelope, cool roofs....)
- ▶ Urban Planning - expand green spaces in cities, promotion of district cooling
- ▶ Incentives: for behavioral changes towards less use of cooling and greater interest in EE cooling appliances
- ▶ Smart investments and Technology upgrades in the manufacture of cooling applicates with improved COP/EE/SEER
- ▶ New financing and business models to promote sustainable cooling (e.g. CAAS)
- ▶ Training and Capacity development of RAC technicians
- ▶ Public education and outreach to aid in technology choices

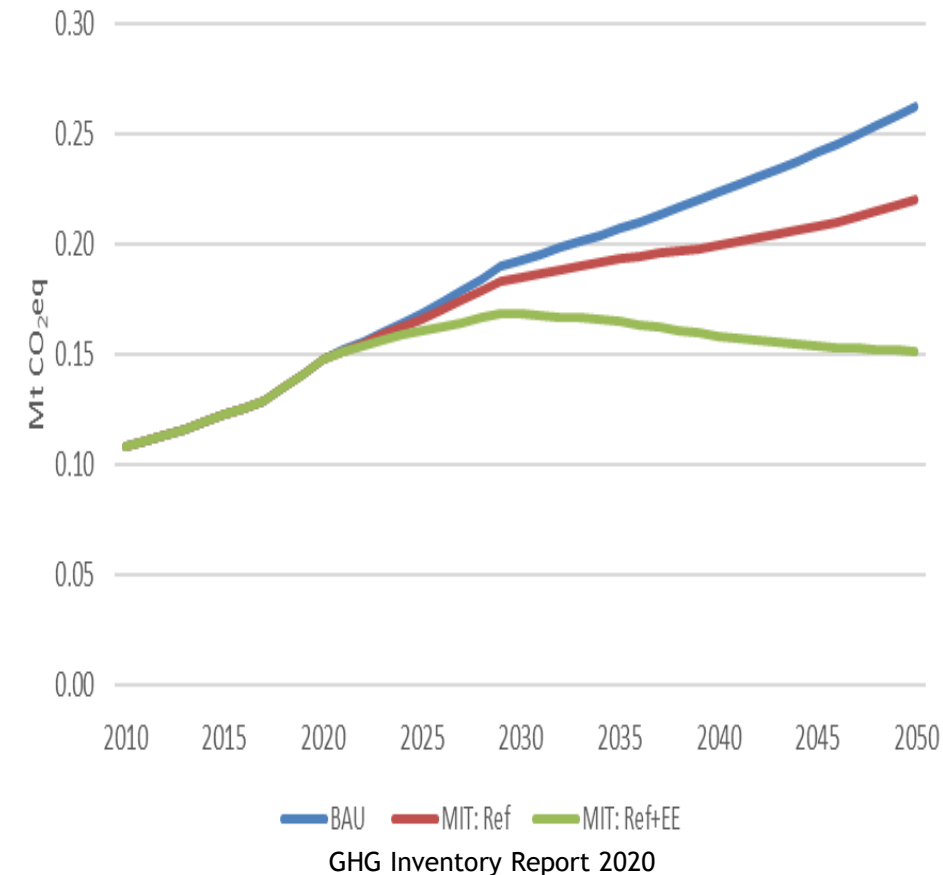


# Policy Areas - Grenada

## ▶ Key Policies:

- ▶ Ban on imports of CFCs (2010)
- ▶ Licensing and Quota System for ODS/refrigerants (2010)
- ▶ Establishment of RAC Standards (GDS. 135:2016, EE Labelling of RAC Appliances (with MEPS)
- ▶ Establishment of a code of practice for the RAC Sector (GDS 139:2018)
- ▶ **Ratification of the Kigali Amendment to the Montreal Protocol (May 2018)**
- ▶ Green Cooling Communication Strategy (Sept 2020)
- ▶ National Cooling Plan and Strategy (Dec 2020)
- ▶ Fiscal Incentive for Natural Refrigerant technology in the AC sub-sector
- ▶ OECS Building Code
- ▶ Caribbean Renewable Energy Efficiency Building Code (CREEBC)
- ▶ National Energy Policy (NEP)
- ▶ National Climate Change Policy and Action Plan (2017-2021)
- ▶ National Climate Change Adaptation Plan

**Under the current NDC review, Energy Efficient Cooling and the management and responsible use of F-gases are included because of the huge mitigation potential in this sector**



# Conclusion

- ▶ The RAC Sector in Grenada holds a very large mitigation potential, particularly in the UAC sub -sector
- ▶ Avoided emission from the RAC sector can contribute to approximately 6.3% of the NDC target by 2030. Greater mitigation potential is expected after 2030
- ▶ A large mitigation potential lies in the transitioning from the high climate damaging HCFCs and HFCs to alternatives with low GWP and improved EE
- ▶ To meet the challenges of sustainable cooling for all we need a holistic approach under considerations of:
  - ▶ Regulatory schemes
  - ▶ Market incentives
  - ▶ Technology upgrades
  - ▶ Capacity building
  - ▶ Awareness raising





“Energy Efficiency, renewable energy and natural cooling solutions must be explored as we phase out HFCs”.  
*Inger Anderson, Executive Director , UNEP*



The global stock of air conditioners in buildings will grow to 5.6 billion by 2050, up from 1.6 billion today – **which amounts to 10 new ACs sold every second for the next 30 years**, according to the report. *The Future of Cooling, IEA*

