ENERGY RESILIENCE IN SAINT LUCIA

ECPA Ministerial Dialogue Series
Building Urban Resilience
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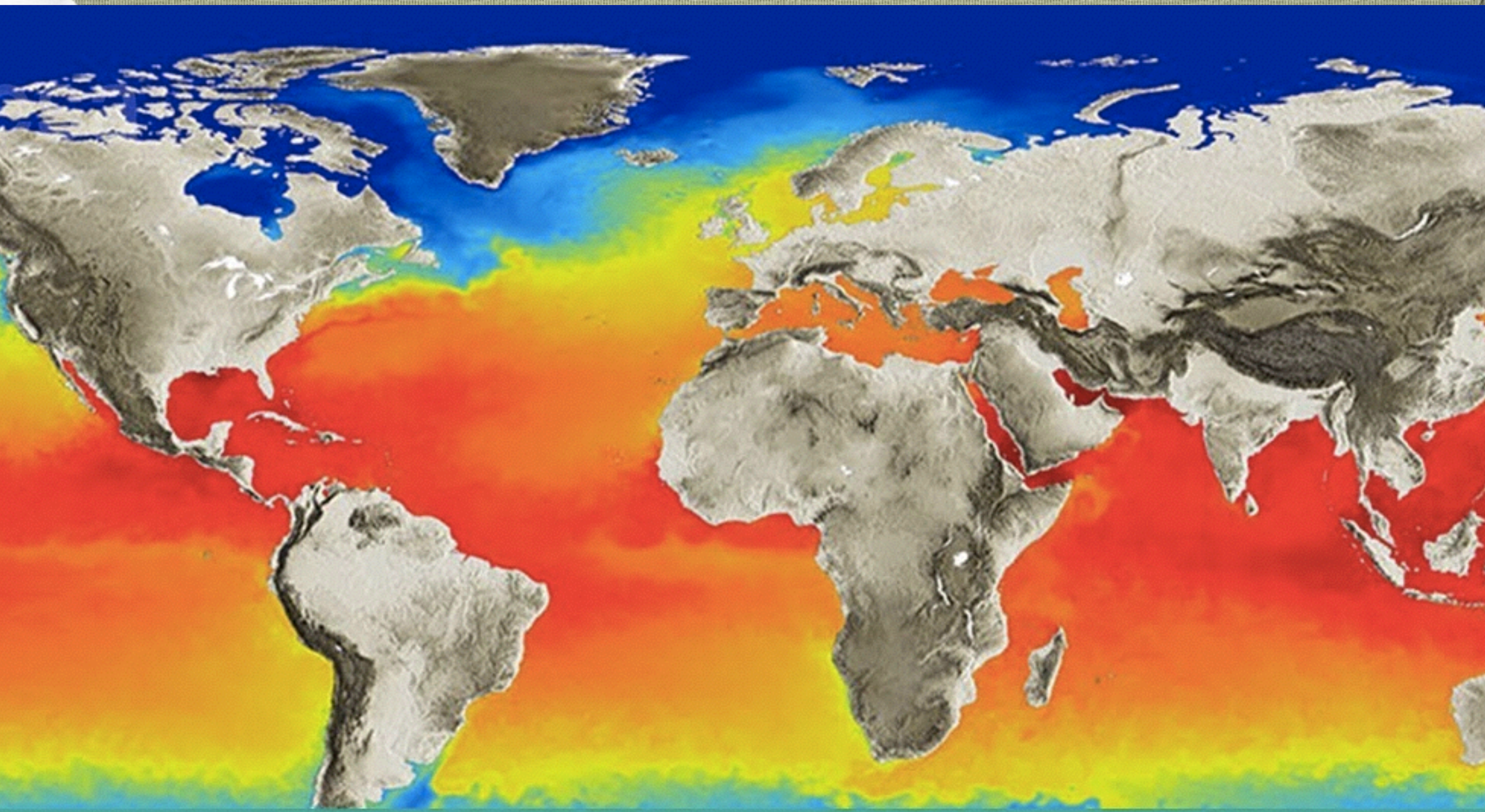
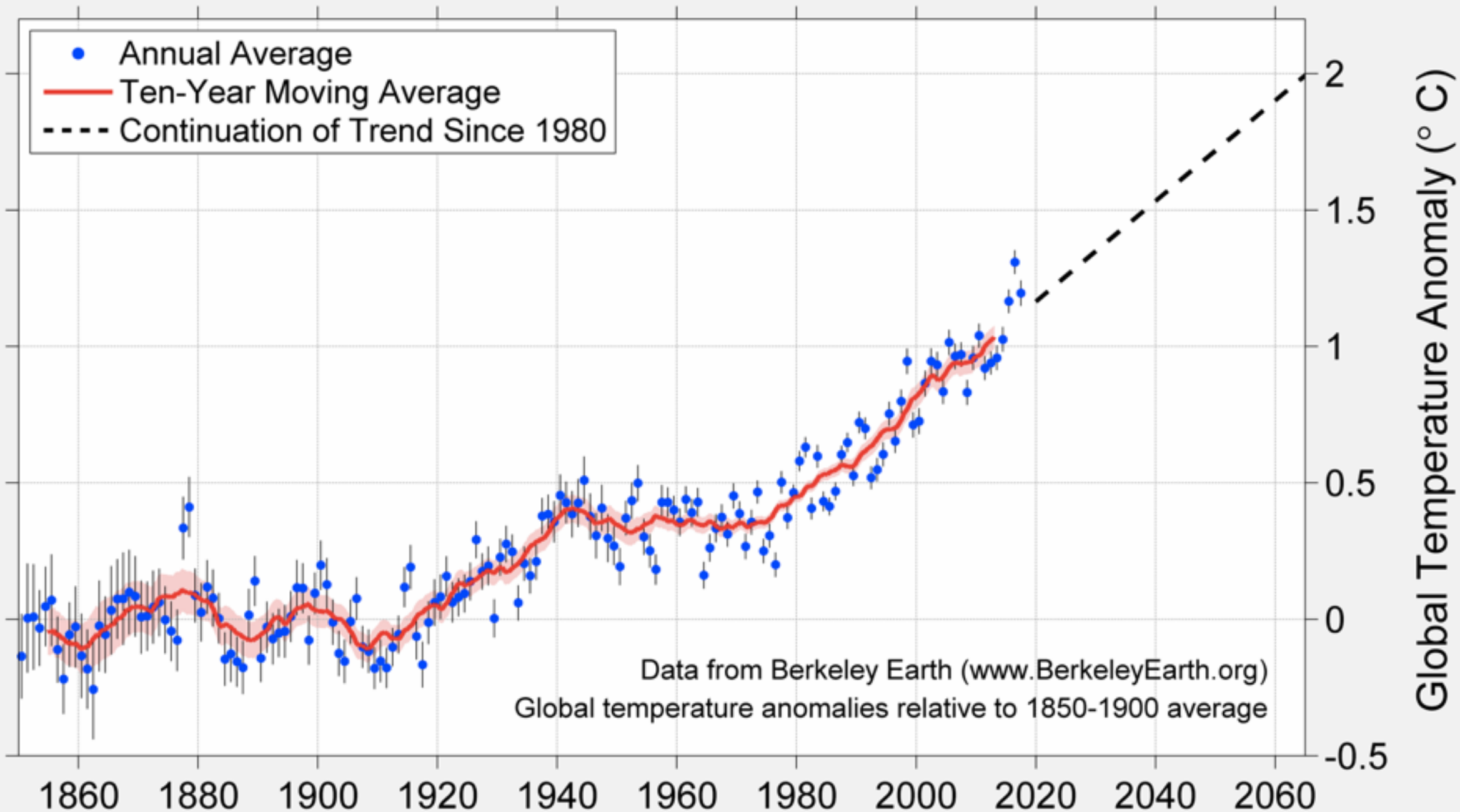
Terrence Gilliard
Chief Energy, Science and Technology Officer
Department of Infrastructure, Ports and Energy
Saint lucia



Climate change

WARMING PLANET



RANK 1 = WARMEST PERIOD OF RECORD: 1880–2018	YEAR	ANOMALY °C	ANOMALY °F
1	2016	0.95	1.71
2	2015	0.91	1.64
3	2017	0.85	1.53
4	2018	0.79	1.42
5	2014	0.75	1.35
6	2010	0.70	1.26
7	2013	0.67	1.21
8	2005	0.66	1.19
9	2009	0.64	1.15
9	1998	0.64	1.15


HURRICANE DORIAN-CAT 5
-185mph
MORE INTENSE
HURRICANES

EXISTENTIAL THREAT

HURRICANE	COUNTRY	YEAR	DAMAGE(Million USD)	%GDP
Ivan	Grenada	2004	1100	186
TOMAS	Saint Lucia	2010	336	34
Gilbert	Jamaica	1988	4	122
Maria	Dominica	2017	1370	226
irma	Barbuda	2017	220	15
Irma	BVI	2017	3600	350
Dorian	**Bahamas**	**2019**	**7000**	**56**
Maria	Puerto Rico	2017	94000	89

COASTAL COMMUNITIES

SEA-LEVEL RISE

- Up to 1m
- Displacement of people
- Devastation to tourism industry
- Ports
- Agriculture
- Water Sector
- Energy Sector
- Permanent loss of land

Other Implications

- Decreased rainfall
- Drought frequency
- Coral bleaching
- Flood frequency

ENERGY SECTOR VULNERABILITY

- Dominica- Hurricane Maria destroyed 98% T&D network
- Barbuda -Hurricane Irma -100% electricity grid wiped out and severely damaged generation assets
- Essential services and productive sectors disrupted
- High dependence on imported fossil fuels
- Many vulnerabilities throughout energy value chain
- Far reaching economic and social consequences
- TIMELY ACTION IS REQUIRED IN SIDS!!!

Climate Resilience in Energy Sector

"the ability of the energy system to **cope with** or **recover** from a hazardous event, trend, shock or stress that is climate related, such as rising sea level, increasing temperature, hurricanes, flood and the like"

Integrated Risk Management Framework

1. Enhanced capacity to better withstand adverse situations through; improved planning, improved systems operations, "hardening" of energy assets, and deployment of distributed generation; and

2.Being better prepared for rapid resource deployment and response when damages are sustained, and to efficiently and quickly recover from such events.

FOUR PILLARS

- Climate Risk Assessments
- Power System Vulnerability Assessment
- Emergency Response Preparedness
- Power System Planning (with resilience)

WORLD BANK SUPPORT

- Caribbean Energy Resilience Initiative
- Saint Lucia, Saint Vincent, Saint Kitts and Antigua & Barbuda
- Use assessments from all four pillars to develop investment plan

Saint lucia

- Preliminary Climate Risk Assessments done
- REOI for Power System Vulnerability Assessment
- Project to conclude in 3rd quarter 2020

Saint Lucia

- Policy and legislative changes
- Market reforms
- Regulation
- Anticipated Entry of IPPs
- Preparation of National Energy Transition strategy and IRP

Increasing Renewables in National Energy Matrix

- National Energy Policy
- Renewable Energy Sector Development Project-WB
- Solar PV Demonstration Project -WB
- UAE-CREF
- Caricom-Italy MOU
- RMI- Readiness Phase Fleet Transition Strategy -Govt

CHALLENGES TO ACHIEVING A RESILIENT ENERGY SECTOR

- Policy framework
- Finance
- Capacity

THANK YOU