

**Rasmus Lauridsen**



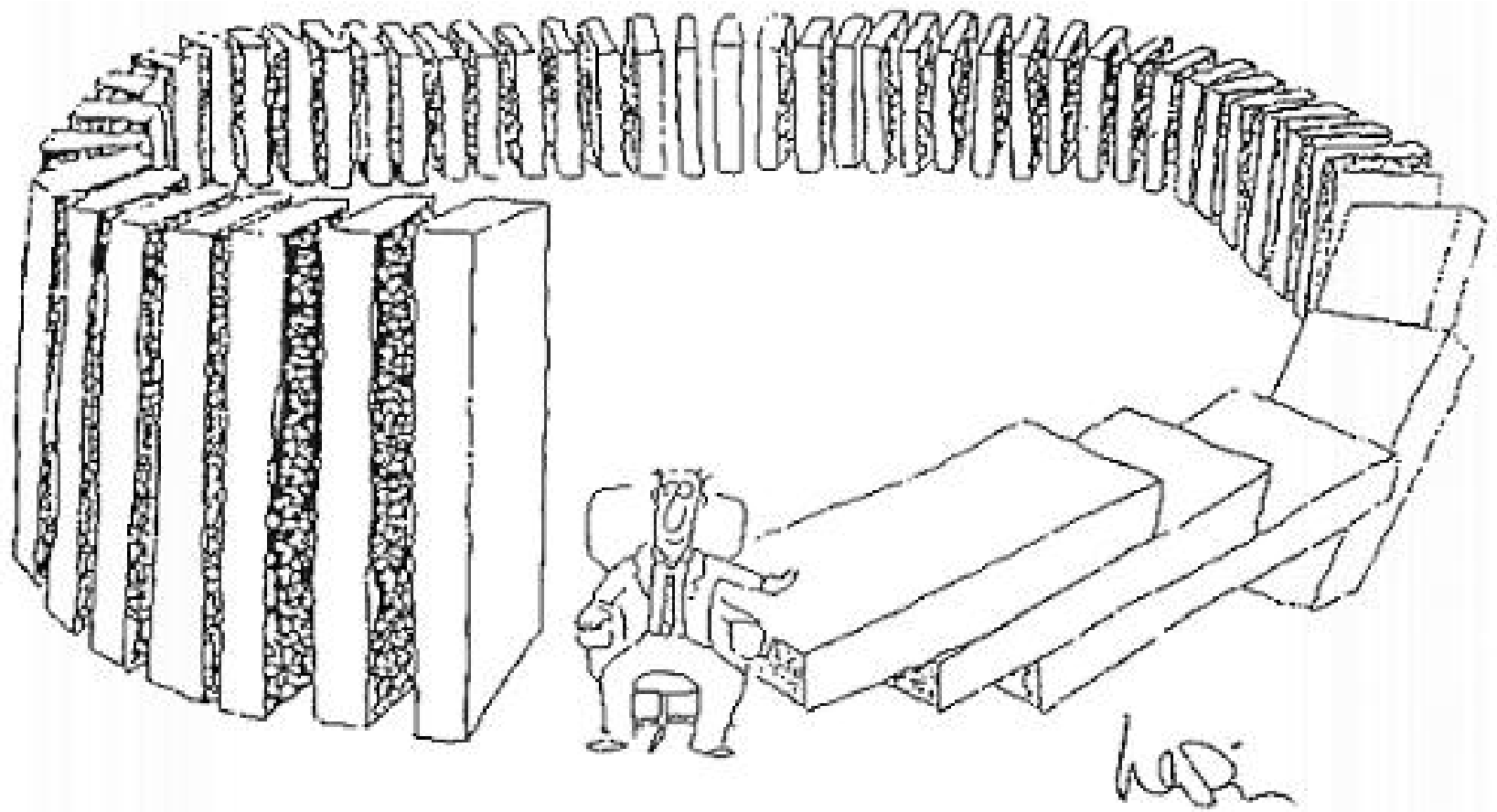
PJ/ECOSO - Environment, Climate and Social Office

**Climate Change Impact, Mitigation and Adaptation  
in ACP**

**Brussels 15 March 2015**



# Climate change is happening and humans caused it!



# Climate Change - A Wicked Problem!

Why is global climate governance so difficult?

Unlike any other public policy problem, even environmental, climate change has four unique features in that it is:

- i) truly global,
- ii) long-term,
- iii) irreversible and
- iv) uncertain – the latter not only of climate scenarios, but of impacts.

## Last time the globe experienced 400ppm CO<sup>2</sup>



We currently have CO<sup>2</sup> concentration 400ppm, and 3 million years ago when it was also 400ppm the sea level was 20m higher and there were camels in what is now Canada.



## Climate Action - Mitigation & Adaptation

*“We have to mitigate to avoid the unmanageable. And we have to adapt to the unavoidable”*

*(Prof. Schellnhuber, Potsdam Institute)*

# Climate Action – mitigation and adaptation

## ➤ **Mitigation – addressing a global problem**

- Renewable Energy, Energy Efficiency, Biological sequestration e.g. forestry

## ➤ **Adaptation – addressing a local problem**

*“Adjustments in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderate harm or exploit beneficial opportunities”*

- Changes/modification to projects/systems that permit them to work as intended i.e. climate resilient projects – this will eventually be all projects in the bank, the **“NEW NORMAL”**  
Changes/modification to projects/systems help us all cope with the climate changes – this is a *climate action* project.

## Development and Adaptation – why we adapt!

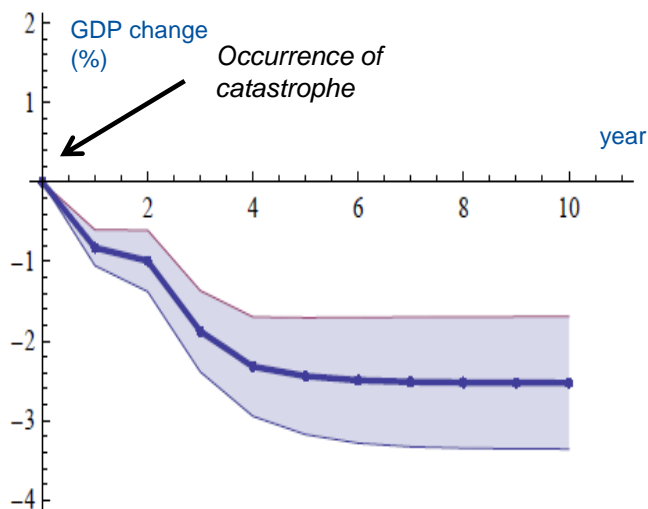
- Climate change will have serious impacts on livelihoods all over the world, so we need to adapt projects/systems
  - Additional flood and storm protection (dykes, flood barriers etc.)
  - Bigger reservoirs and water preservations (dams, recharging aquifers, recycling water).
  - Greening cities and developing drought resilient crops.
- **Climate Resilient projects:**
  - All projects need to be resilient. If power plants fail, bridges collapse, hospitals become inaccessible – then livelihoods also suffer.
  - Businesses need to be resilient: Buildings collapse, business supply and delivery lines interrupted, workers unable to work due to heat/cold, efficiency falls.
  - Food security and resilient land use.

**Cost are incremental and often small - so no excuse!**

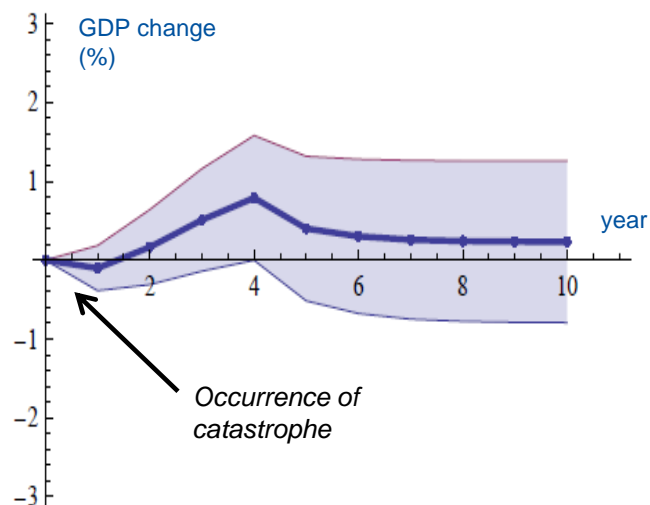
# Adaptation challenges

- Focus on resilience building and sustainable economic growth
- Key sectors: agriculture, infrastructure

Cumulative effect on GDP in the case of a completely uninsured catastrophe event



Cumulative effect on GDP in the case of a fully insured catastrophe event



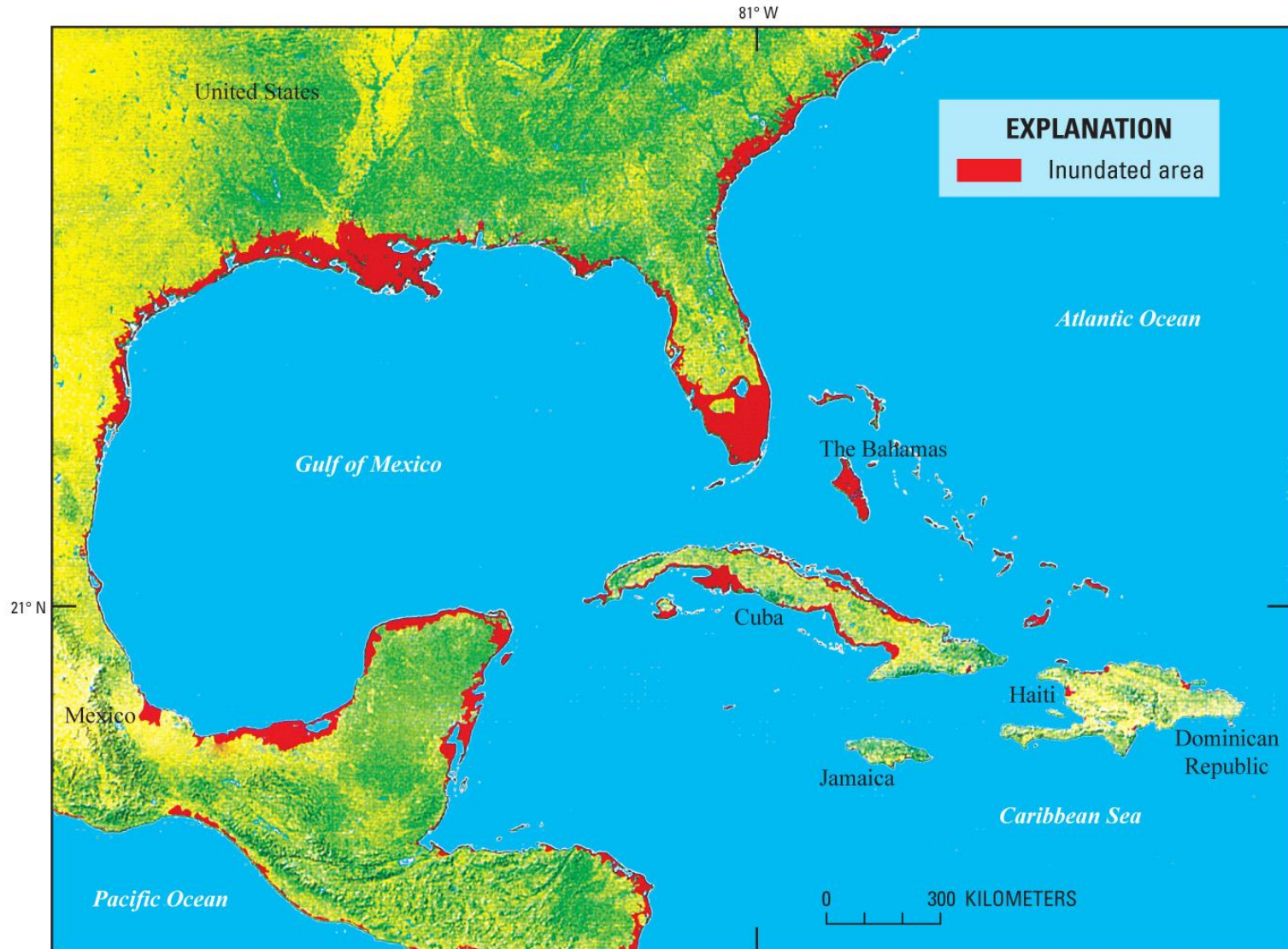
Ex-ante: vulnerability and risk information; loss-prevention measures

Ex-post: recovery financing and resilience-building support

## Expected Climate Changes in ACP

- The **Caribbean** islands will experience more extremes and more often – Disaster Risk Management, and Sea Level rise
- **Pacific** will also experience more extremes, but sea level rise is an even bigger problem than in the Caribbean as many islands are very low.
- **Sub Saharan Africa** will get dryer, in particular southern Africa, also negatively affecting food security but will experience more extreme rain i.e. floods.

# Climate change and sea level rise in the Caribbean



# Recent cyclone Pam in Vanuatu - BBB



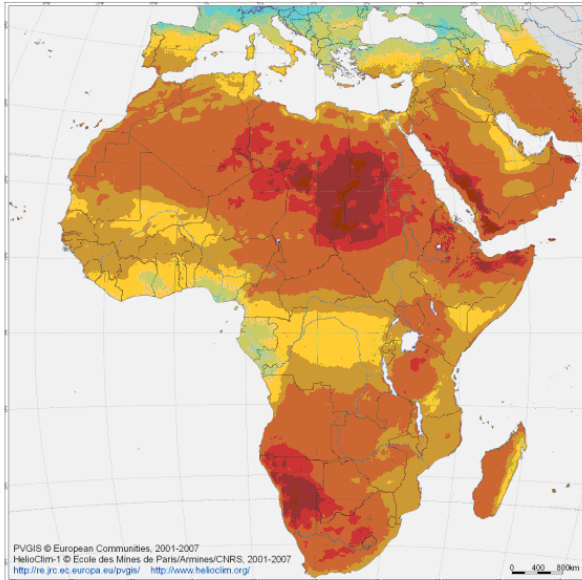
# Drought in Africa



## Power to Africa and the NDCs

- ❖ Africa is growing quickly both in population and economically – so there will be a massive need for more power.
- ❖ Under **Kyoto** there was a clear distinction between Annex 1 and not Annex 1 – rich countries to finance, poor countries received funds and no obligation to mitigate.
- ❖ Under **Paris Agreement** nearly all countries have submitted **National Determined contributions (NDC)** so everyone has an obligations to mitigate.
- ❖ How to help Africa towards and affordable **green power transition** – the role of EU and the MDBs.

Photovoltaic Solar Electricity Potential  
Mediterranean Basin, Africa, and Southwest Asia



PVGIS © European Communities, 2001-2007  
 HelioClim-1 © Ecole des Mines de Paris/Armines/CNRS, 2001-2007  
<http://re.jrc.ec.europa.eu/pvgis/> <http://www.helioclim.org/>

Yearly sum of global irradiation incident on optimally-inclined equator-oriented photovoltaic modules  
 Yearly sum of solar electricity generated by 1 kW<sub>pv</sub> system with optimally-inclined equator-oriented photovoltaic modules and system performance ratio 0.75

Global irradiation [kWh/m <sup>2</sup> ]	Solar electricity [kWh/kW <sub>pv</sub> ]
1200	800
1400	1000
1600	1200
1800	1350
2000	1500
2200	1650
2400	1800
2600	1950
2800	2100



# Caribbean Development Bank (CDB)

## Background

- EUR 50m Climate Action Line of Credit for climate action in infrastructure in Caribbean countries (initial focus 100% adaptation)
- EUR 4m Technical Assistance package:
  - 1.5m Technical Assistance capacity building within CDB to integrate adaptation processes and build pipeline
  - 1m grant facility for specific climate action project preparation by clients
  - 1.5m grant facility for capacity in BMCs for upstream sector adaptation studies to systematically build climate resilience into sector planning
- **Opportunities:** Institutional adaptation, pipeline development, knowledge sharing, replication effect

# EIB Climate Strategy

## Reinforce the impact of climate financing

- Define high impact and increase pipeline of high impact eligible projects – climate action indicator
- Financial innovation
- Supporting green bond market

## Build resilience to climate change

- Making operations more resilient to climate change
- Increasing the portfolio of adaptation projects
- Developing the use of climate risks and vulnerability assessment tools

## Further integrating climate change considerations across EIB standards, methods and processes

- Improving mainstreaming tools
- Extending coverage of sector policies
- Managing portfolio climate risks

# EIB Response: Increased focus outside EU

In the lead up to COP-21, the EIB committed to increase its climate finance for **developing countries** to 35% by 2020.



**>25%** worldwide

2015 → 2020



**35%** in world's  
developing regions

EIB's 2015 Climate Strategy  
We are increasing our climate commitment:  
**USD 100bn** over next 5 years

# Overview of products presented

EIB Products	GEEREF	REPP	REPIN	Layered funds
<b>1. Investment opportunity</b>	Equity	Senior & junior debt	Senior debt (notes)	Equity and/or senior debt (notes)
<b>2. Asset type</b>	New assets	New assets	Existing assets	New assets
<b>3. Asset stage</b>	Primarily greenfield, some mature	Only greenfield	Mature	Primarily greenfield, some mature
<b>4. Sector focus</b>	RE & EE	RE & EE	RE	RE & EE
<b>5. Geography</b>	World-wide	Africa	World-wide	EU & Southeast Europe
<b>6. EIB role</b>	Manager	Sponsor / investor	Sponsor / investor?	Sponsor / investor
<b>7. Risk mitigation</b>	Yes	Yes	Potentially	Yes
<b>8. Return profile</b>	Market return (with priority for investors)	Low (developmental focus)	Market rates	Market return (with risk mitigation)

# Thank you!

**For more information:**

**- Contact PJ/ECSO Adaptation Team and the PJ Adaptation Task Force  
Adaptation Team - Nancy Saich and Rasmus Lauridsen**

**- Look at the new Adaptation page on Intranet:**

<http://projects/horizontal-issues/climate/mainstreaming-adaptation/>

**- European Climate Adaptation Platform**

<http://climate-adapt.eea.europa.eu/>

For country information see World Bank Climate Change Knowledge Portal 2.0

<http://sdwebx.worldbank.org/climateportal/>

