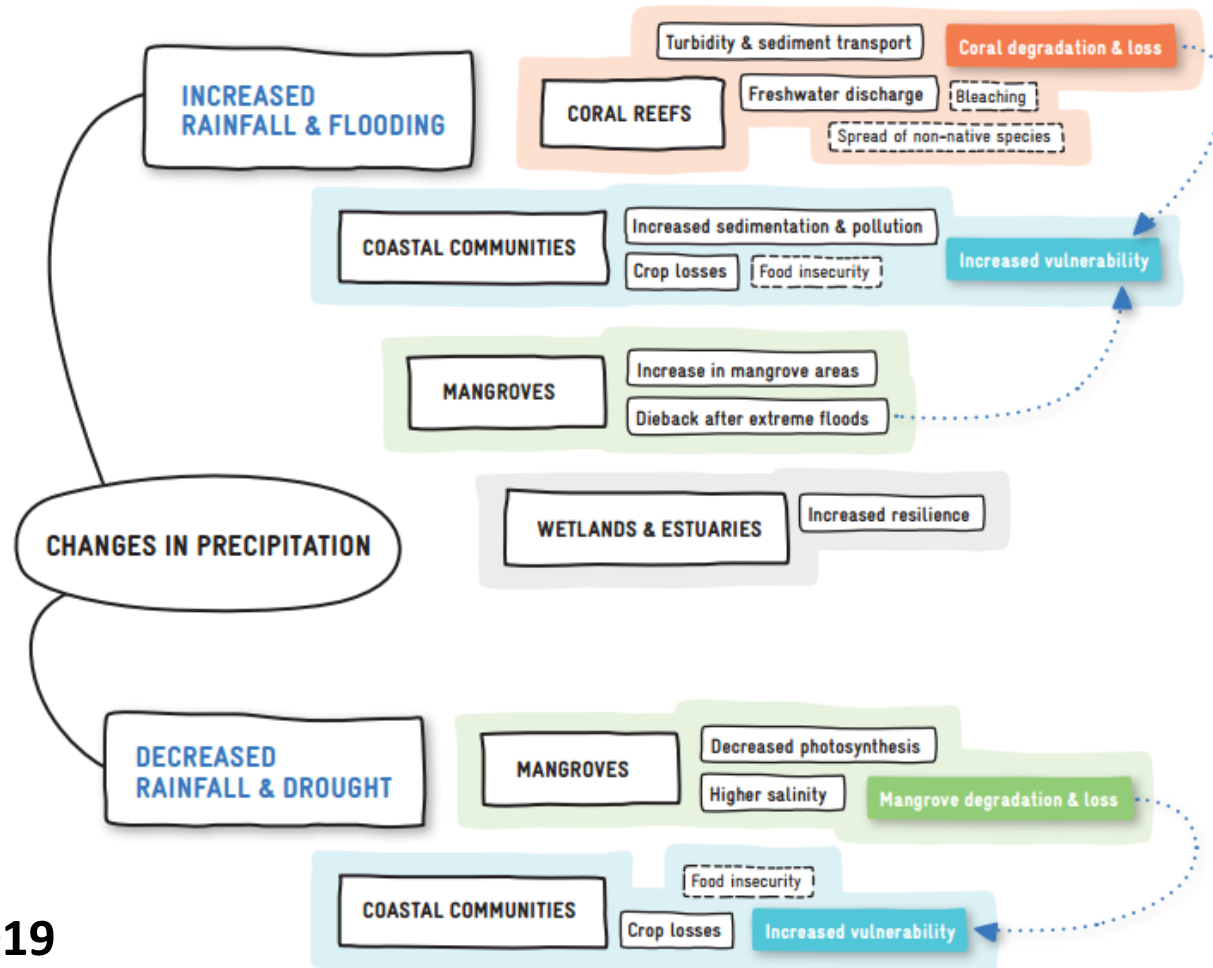


SESSION 2

Setting the Scene: How the NAP process can facilitate risk informed decision making – Dr Keith Bettinger

Session 2: Setting the Scene



19 August 2019

Addis Ababa, Ethiopia

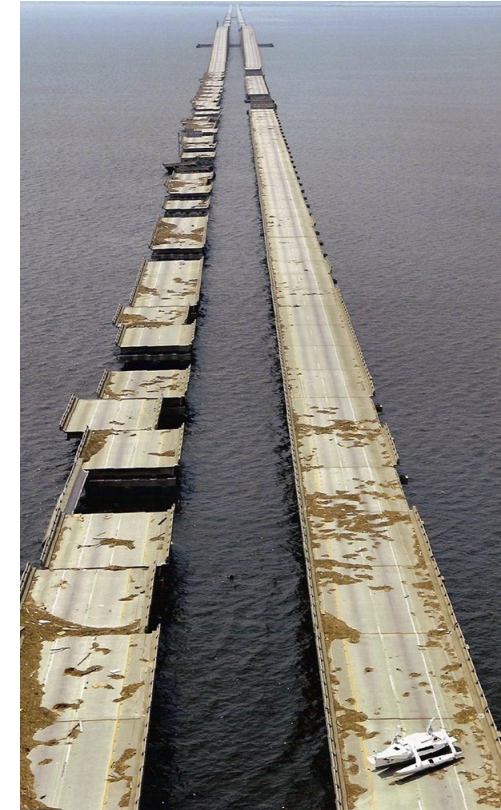
Keith Bettinger

Stationarity: mean, variance, statistical properties remain the same over time



Source: ABC News 27 May 2015

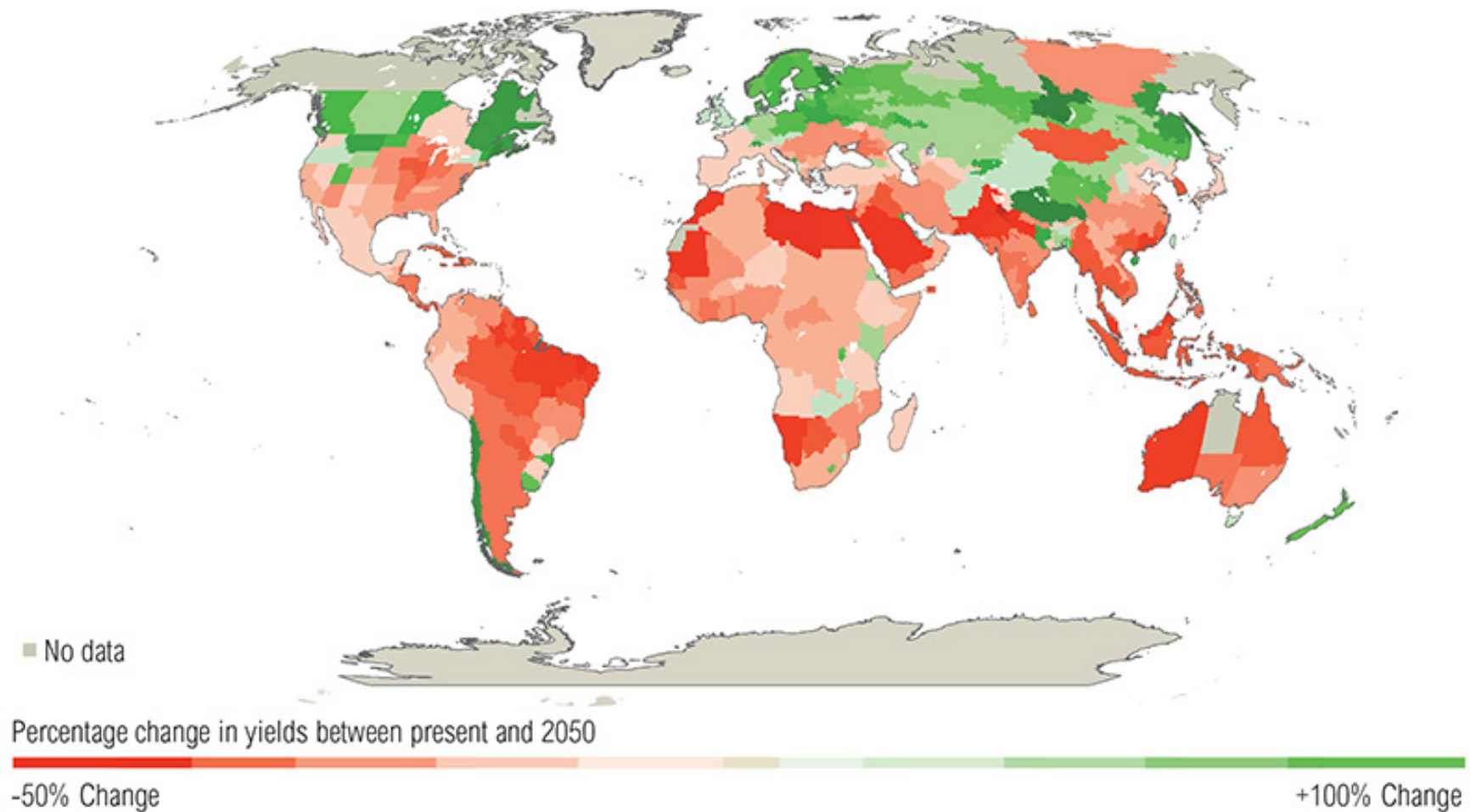
The effects of climate change on highway pavements and how to minimise them: Technical report



Source: Bon Bros Construction

Practical relevance: looking to the past as an indicator of future conditions for planning

Most studies now project adverse impacts on crop yields due to climate change (3°C warmer world)



IMPACTS OF CLIMATE CHANGE

By **2030**, nine out of 10 of the major crops will experience reduced or stagnant growth rates, while average prices will increase dramatically as a result, at least in part, due to climate change.



MAIZE

12%

GROWTH RATE
DECREASE

90%

PRICE
INCREASE

RICE

23%

GROWTH RATE
DECREASE

89%

PRICE
INCREASE

WHEAT

13%

GROWTH RATE
DECREASE

75%

PRICE
INCREASE

OTHER CROPS

8%

GROWTH RATE
DECREASE

83%

PRICE
INCREASE

EMBED | DOWNLOAD

References
FAO
Oxfam

Planning for Adaptation: the Role of the NAP...

- **NAP process has two main objectives (LEG 2012: 22):**
 - *To reduce vulnerability to the impacts of climate change, by building adaptive capacity and resilience*
 - *To facilitate the integration of climate change adaptation, in a coherent manner, into relevant new and existing policies, programmes and activities, within all relevant sectors and at different levels, as appropriate*

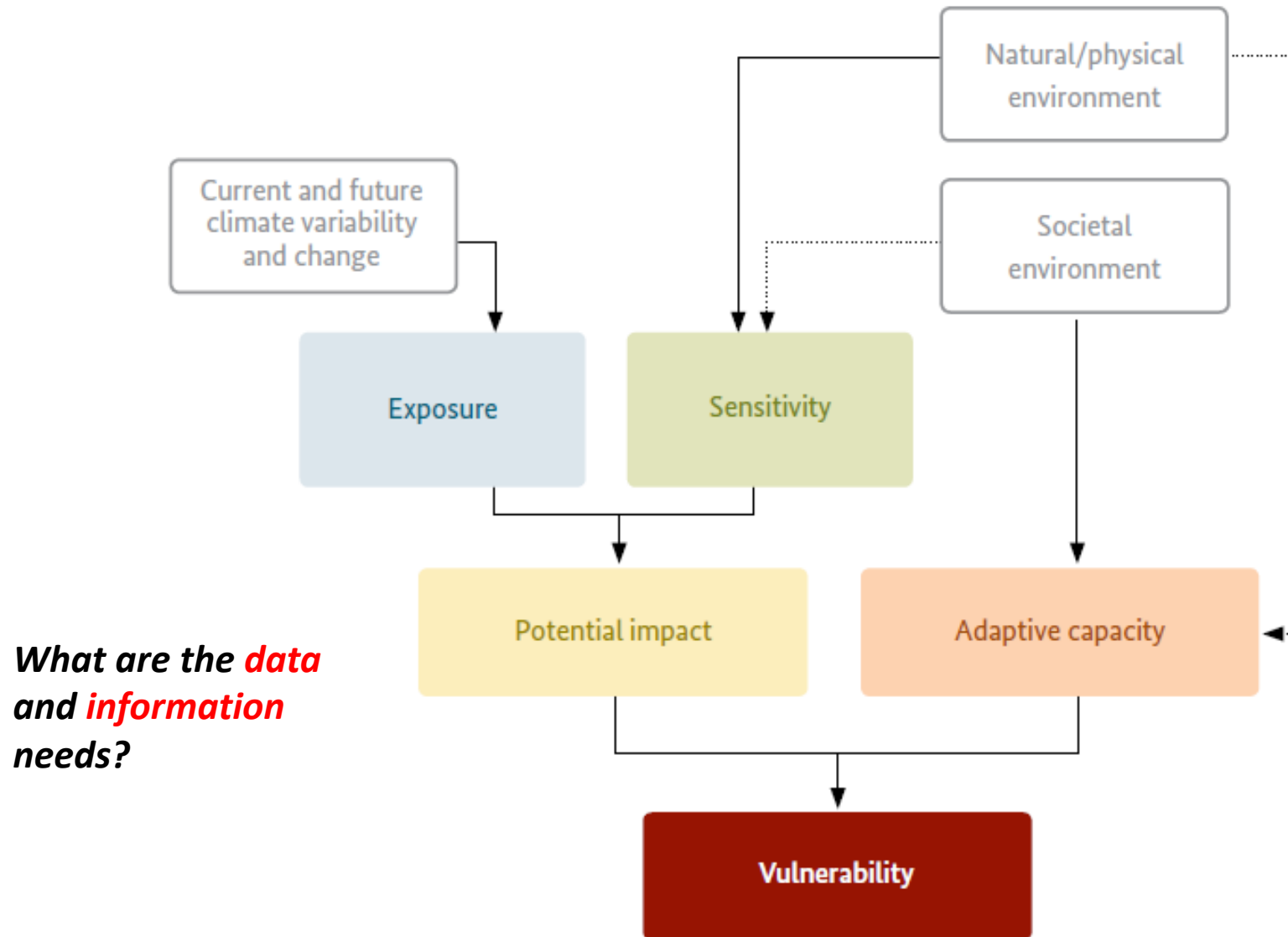
Data and information are critical elements of the *EVIDENCE BASE* for the NAP process

Key Concepts

- **Vulnerability**: the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change
- **Risk**: the degree to which is system is susceptible to harm from a **hazard**
 - Incorporates **probability**

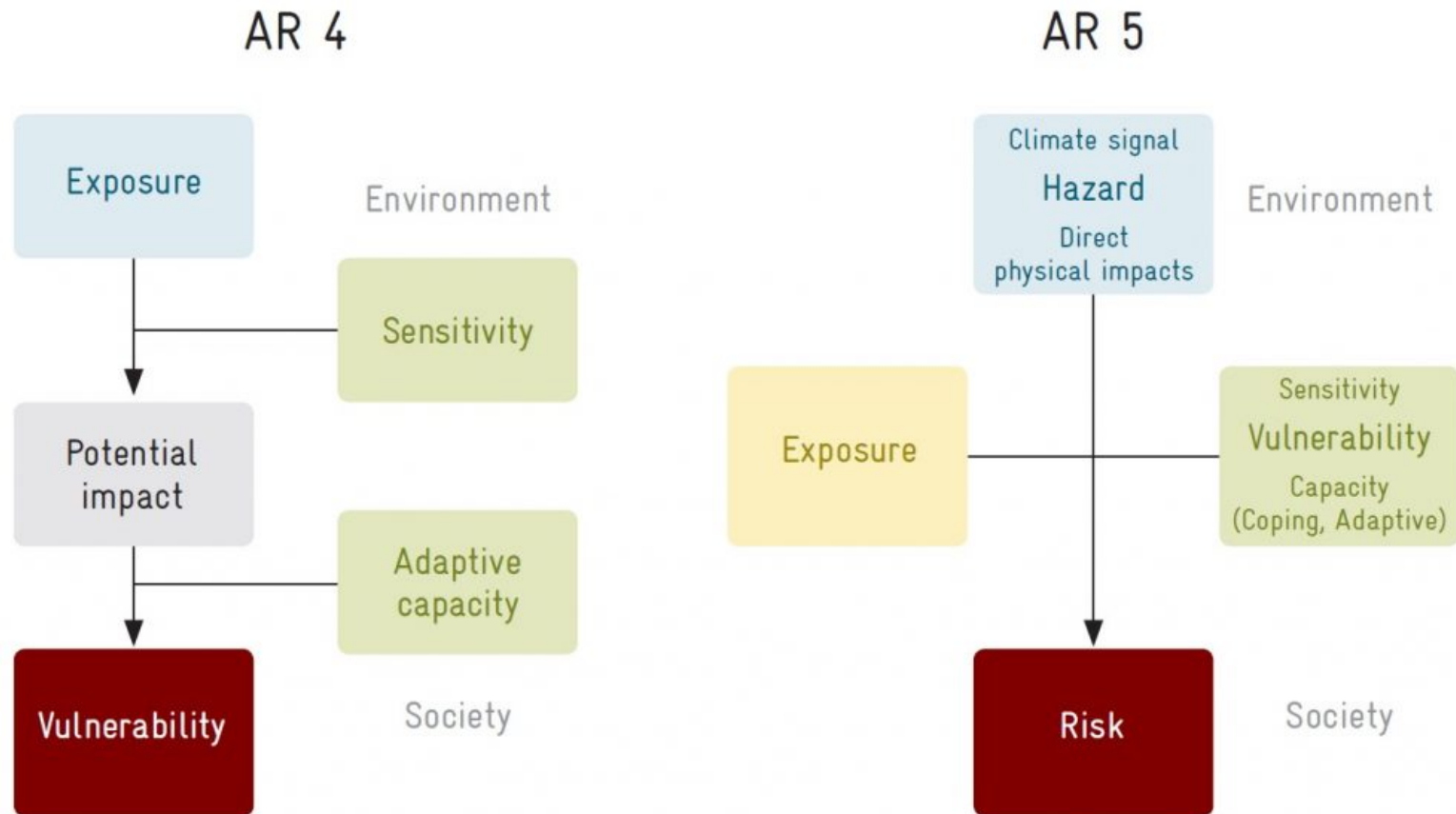
Consider **physical processes + non-physical characteristics**

Exposure, Sensitivity, Impacts, Adaptive Capacity



Elements of vulnerability (*Vulnerability Sourcebook, GIZ 2017*)

Vulnerability vs. Risk...



Source: AdaptationCommunity.net

Differential Vulnerabilities

- Climate change impacts people differently...**Differential Impacts**
 - Gender
 - Disability (PWDs)
 - Ethnicity
 - Migrant Status
- Existing inequalities often made worse by changing environmental conditions
- Consider **Marginalizing Factors**



Key Concept: **Additionality**

- The additional costs for climate resilience/climate proofing
- The additional “problemness” caused by climate change to an existing problem



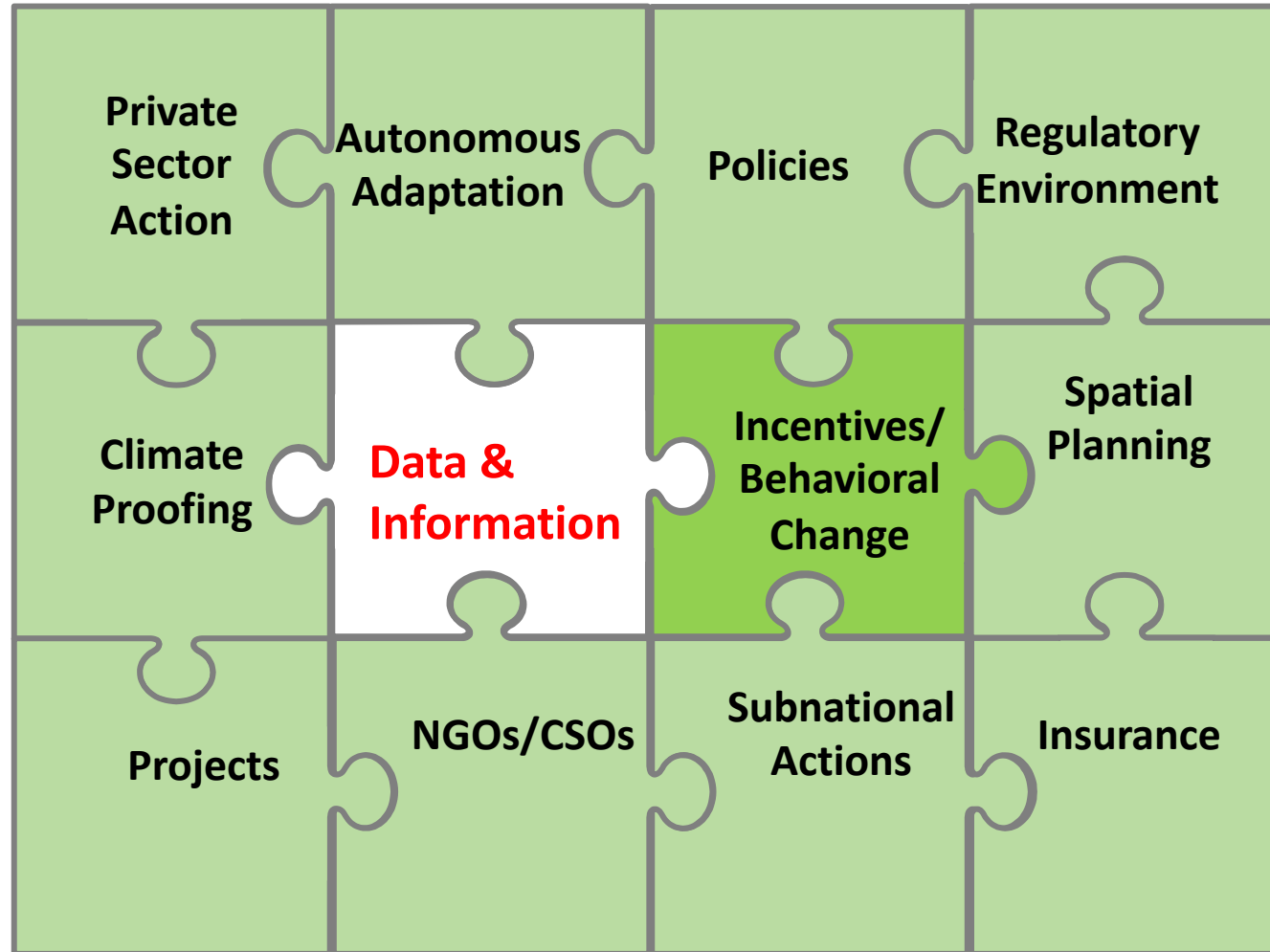
Source: Rolling Stone



Source: Miami Herald

- Consider development trajectory...
- Consider data and information needs...

NAP Process Coordinates Elements of Adaptation...



Adaptation as an element of good governance

Development Baseline	Climate Change Driver	Climate change Hazard	Channel	Health Impact	Barriers	Priorities	Strategy/ Policy	Adaptation solution and inputs	Additional Result/Outcome
Industry: Mining, Fishing, Deforestation, Agriculture	Increasing temperatures	Surface water - leading to a reduction in water accessed Landslides	Reduction in drinking water	Dehydration	Insufficient health sector capacity: human and financial				
			Poor sanitation	Diarrhoeal disease					
Expansion of farming and pastoralism	SLR	Ambient temperatures	Contamination of water supply	Heat/cold morbidity/ mortality	Limited and fragmented HIS and meteorological data				
Infrastructure: Damming rivers, Road building		Frequency in intense floods	Uninhabitable land (prone to emergencies and disasters, undermining livelihoods)	Altering predator-prey relationships, thus vector populations can increase	Chronic diseases	Access to information			
Weather/Climate	Unpredictability of seasonal rains and increased intensity of rainfall events	Ecosystem and change of biodiversity (coverage, seasonal timing, dieback, composition)	Reduced yields for food and fodder	Injuries	Cognitive lack of consideration of CC				
Socio economic context: poverty, urbanisation, conflict, rapid population growth			Trigger Population displacement and conflict	Malnutrition					
Displacement and migration	Extreme weather events	Coastal erosion and flooding, including flash floods. Cyclones and storm surge	Reduction of habitat (such as wetlands) and spawning areas water	Mental health	Uncertainty				
Access to Energy			Drought	Create new habitats for insects, fish, mammals,	Vector borne diseases	Lack of water			
Water & sanitation		Change in ocean and coastal ecosystems (i.e. salinity, pH, nutrient changes and contaminant runoff)	Degradation of fresh water	Infectious disease	Governance failures and political economy				
Health infrastructure			Growth and spread of bacteria (SLR)	Water borne diseases					

Strategy/ Plan →

Project →

Mahalo! Let's Discuss!



Plenary Discussion