A photograph of a wooden boat on a beach at sunset. The boat is in the foreground, partially on the sand and partially in the shallow water. The sky is filled with colorful clouds in shades of orange, yellow, and blue. The water is calm, reflecting the light from the sky.

**PACFA Expert Workshop on Assessing  
Climate Change Vulnerability In Fisheries  
And Aquaculture (8-10 April 2013)**

**Assessing vulnerability in  
developing countries' communities**

Some key-principles

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Vulnerability and Poverty Reduction Team  
Institute of Development Studies UK**

## Background, research material, acknowledgments

- Mills, D., Béné, C., Ovie, S., Tafida, A., Sinaba, F., Kodio, A., Russell, A., Andrew, N., Morand, P. & Lemoalle, J. (2011). Vulnerability in African small-scale fishing communities. *Journal of International Development* 23, 308-313.
- Schwarz, A. M., Béné, C., Bennett, G., Boso, D., Hilly, Z., Paul, C., Posala, R., Sibiti, S. & Andrew, N. (2011). Vulnerability and resilience of rural remote communities to shocks and global changes: empirical analysis from the Solomon Islands. *Global Environmental Change* 21, 1128-1140.
- Béné C., Evans, L., Mills, D., Ovie, S., Raji, A., Tafida, A., Kodio, A., Sinaba, F., Morand, P., Lemoalle, J. & Andrew, N. (2011). Testing resilience thinking in a poverty context: experience from the Niger river basin. *Global Environmental Change* 21, 1173-1184.
- Béné, C., Devereux, S. and Sabates-Wheeler, R. (2012). Shocks and social protection in the Horn of Africa: analysis from the Productive Safety Net programme in Ethiopia. *IDS Working Paper* 395, Brighton: Institute of Development Studies, 120 p



## Vulnerability assessment : Three 'basic' observations from the field

- **Multi-impact and multi-stressors** (one shock—several impacts - climate change is only one amongst many sources of vulnerability)
- **Perception versus fact** - vulnerability (and resilience) are socially constructed – perception is what drive people's decision
- **Vulnerability assessment for what?** - too often remains academic exercise with no commitment



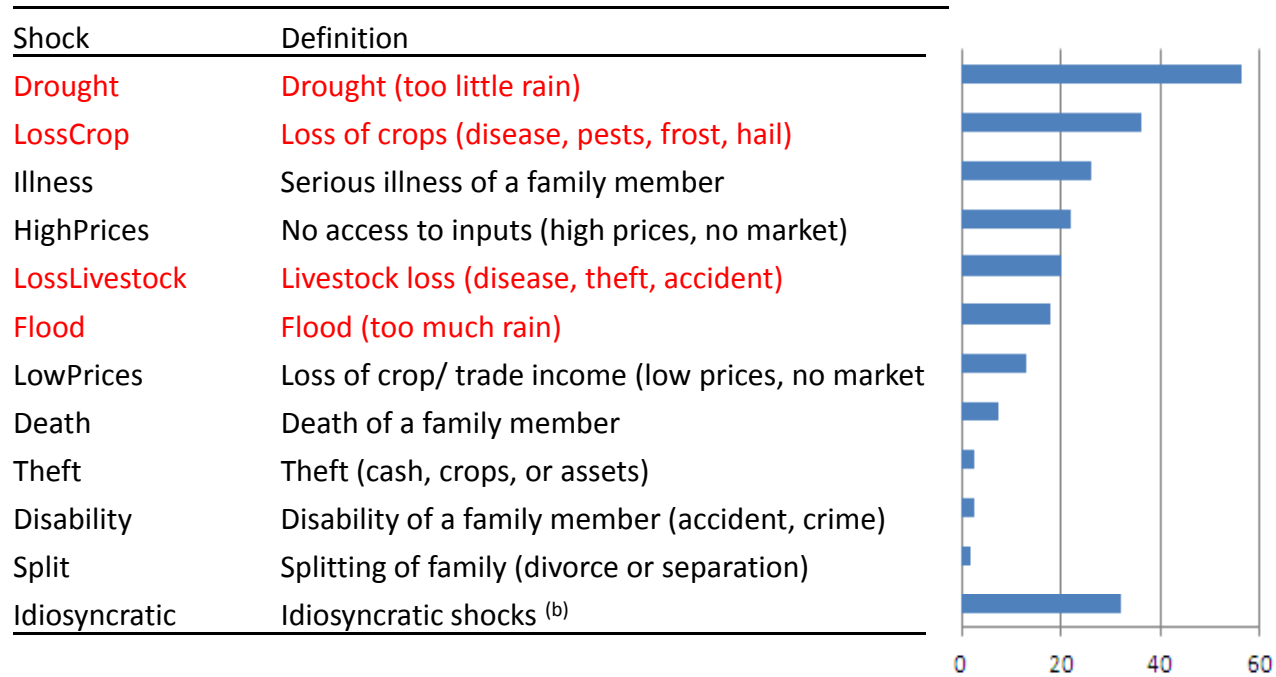
## **Multi-stressor: Climate change is only one amongst many sources of vulnerability**

- Vulnerability to climate change may be the consequence of another type of vulnerability / institutional failure
- Climate change may not be the main source of vulnerability



# In some part of the world, Climate Change shocks are already prevalent for some people...

## Shocks analysis in Ethiopian farmers



Shocks experienced by rural Ethiopian households (2004 -2008)

Notes:

<sup>(a)</sup> Occurrence: percentage of households having been affected.

<sup>(b)</sup> Idiosyncratic shocks: include illness, death, disability, theft, and family split



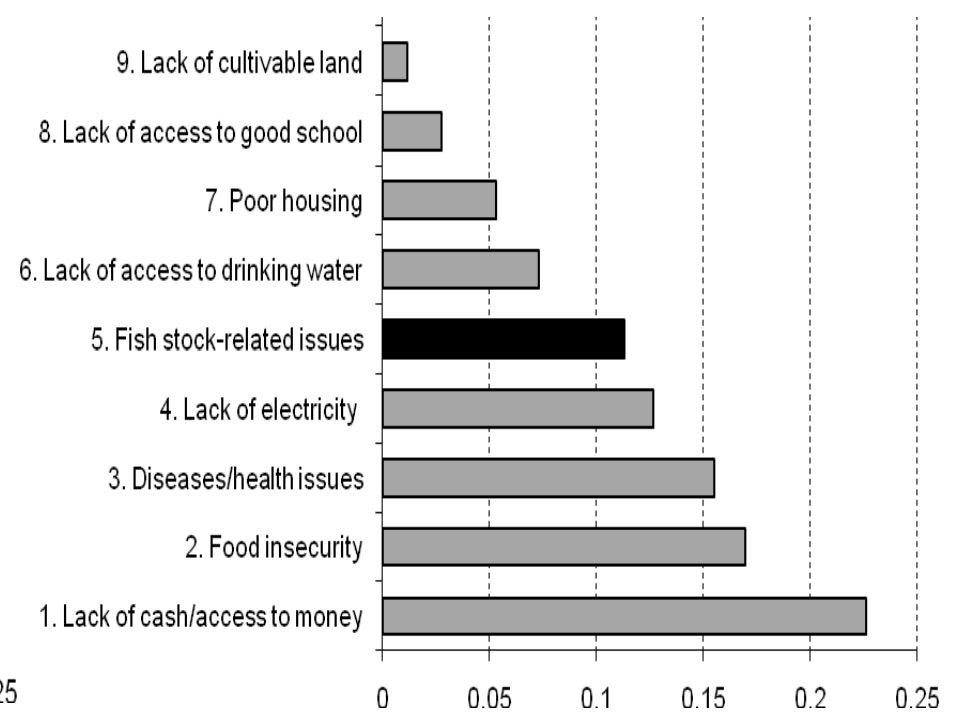
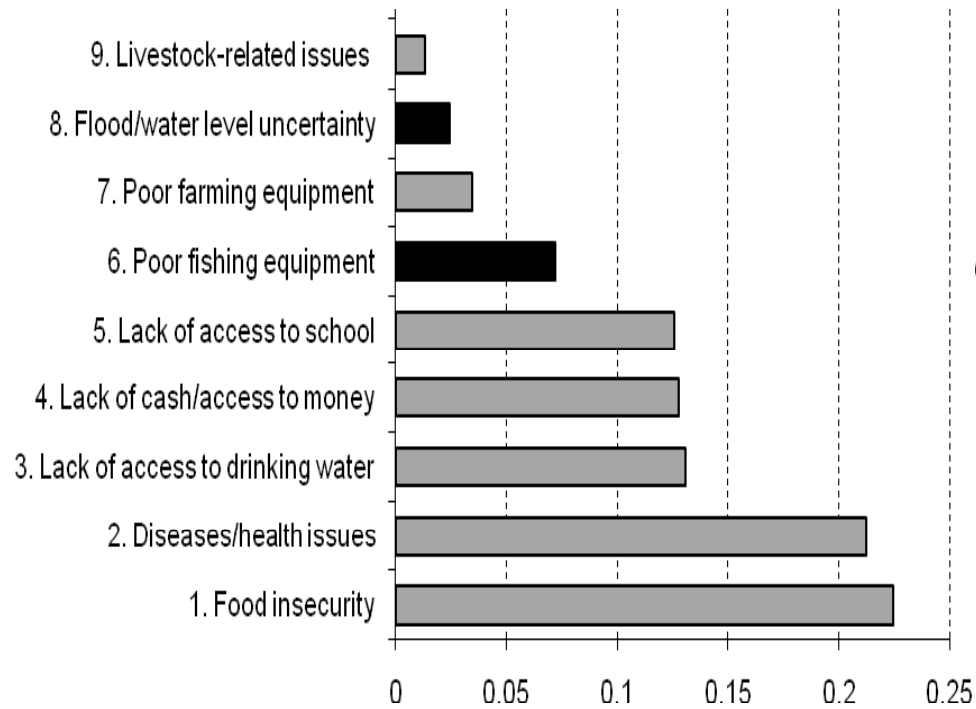


## But not for some others...

### Shocks analysis in fishers-farmers in Sahel

Mali (households N = 90)

Nigeria (households N = 40)

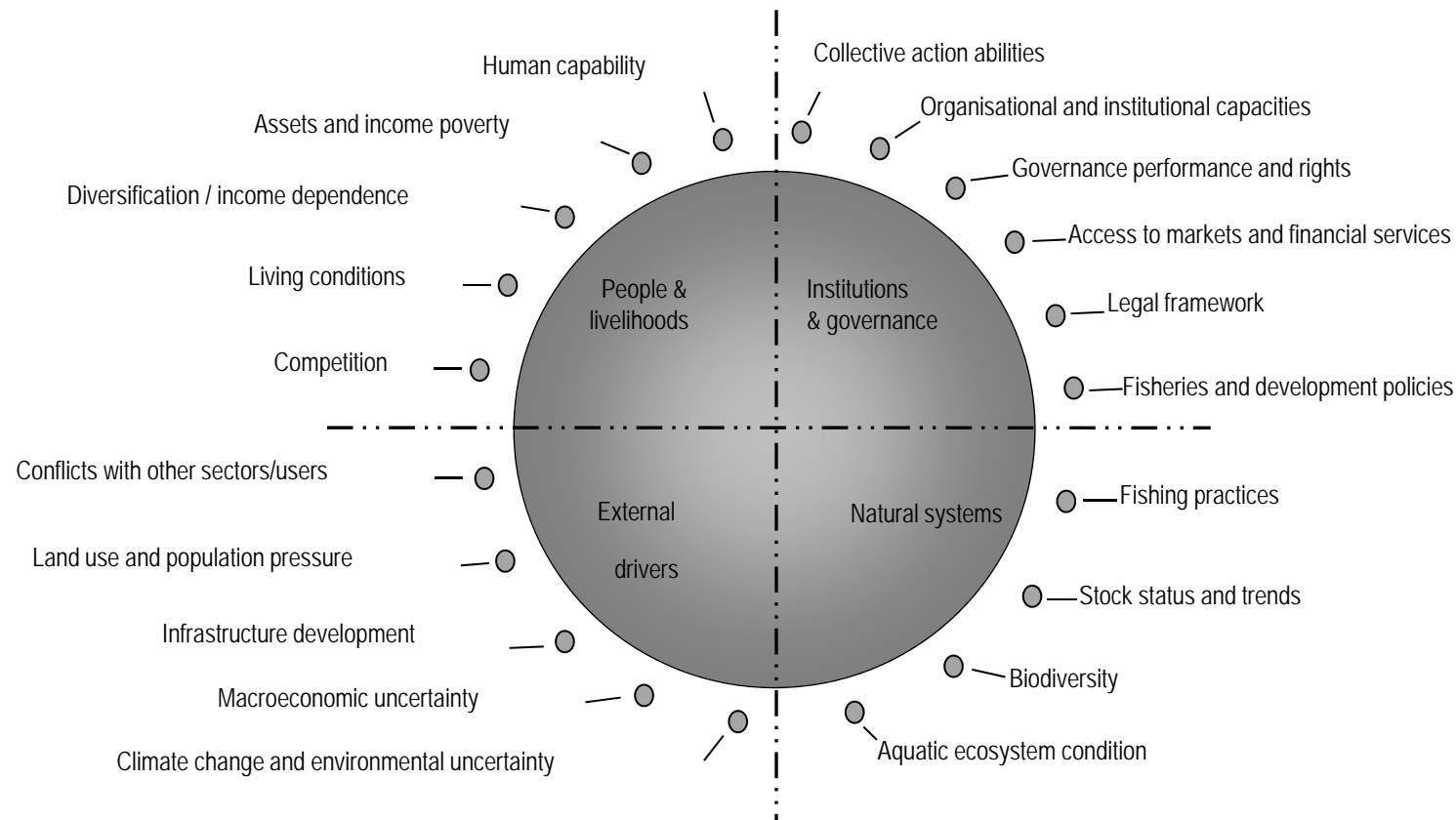


Source: Mills et al. 2011

# Principle No.1. -- a good vulnerability assessment =

**Integrated – multi-stressor / multi impact vulnerability scanning**  
(capturing social-ecological and more...)

(360° integrated assessment map)

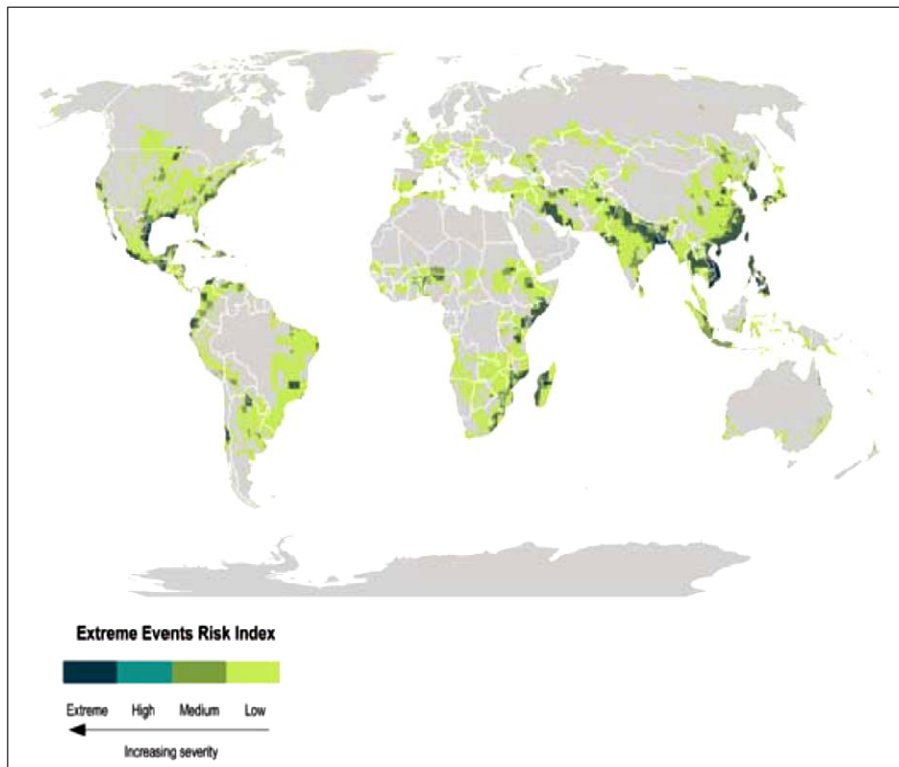


## Vulnerability assessment : Three 'basic' observations from the field

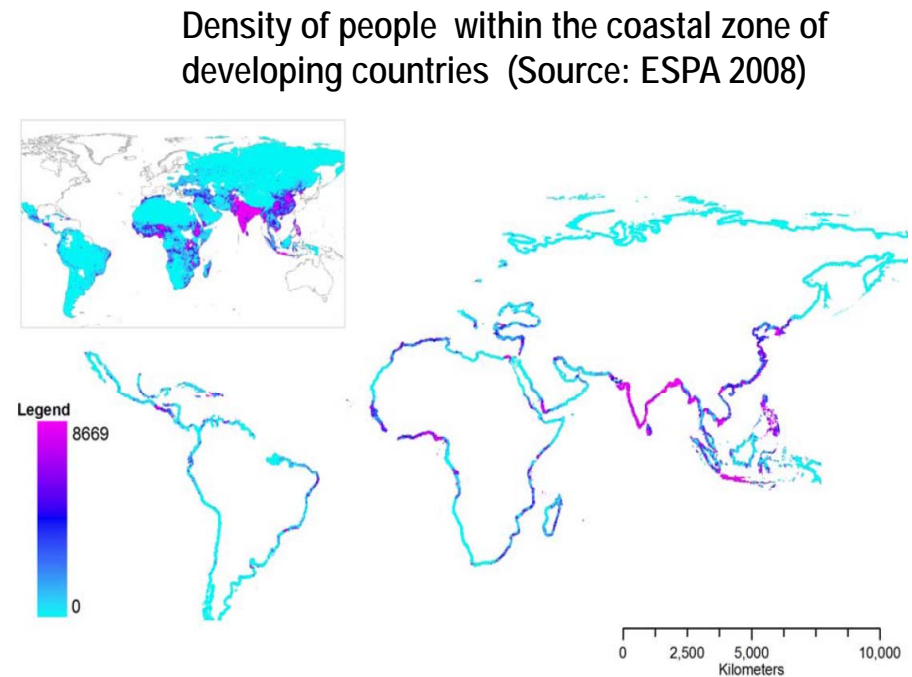
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## Impact of climate change on fisheries and aquaculture expert-driven analysis

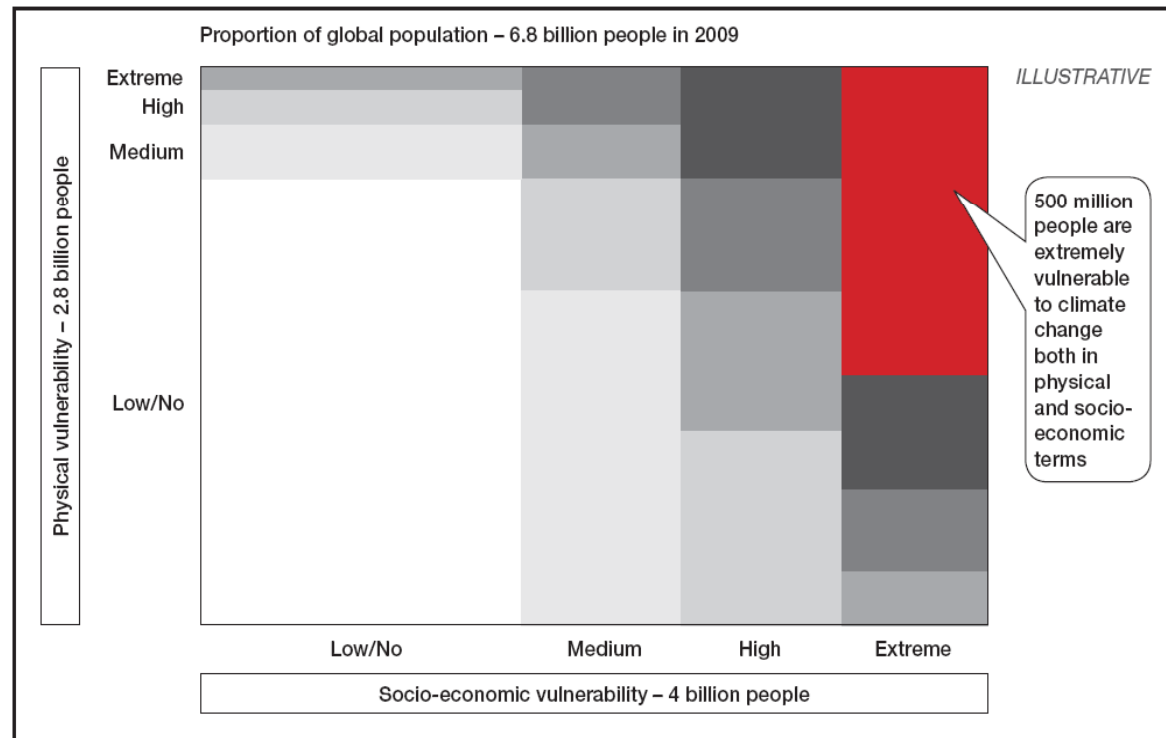


Areas at risk from floods, droughts, storms and sea level rise associated with climate change.  
(Source: CHRR, CIESIN, CU, WB, UNDP 2009)



## Impact of climate change on fisheries and aquaculture expert-driven analysis

objective facts –  
+ big picture



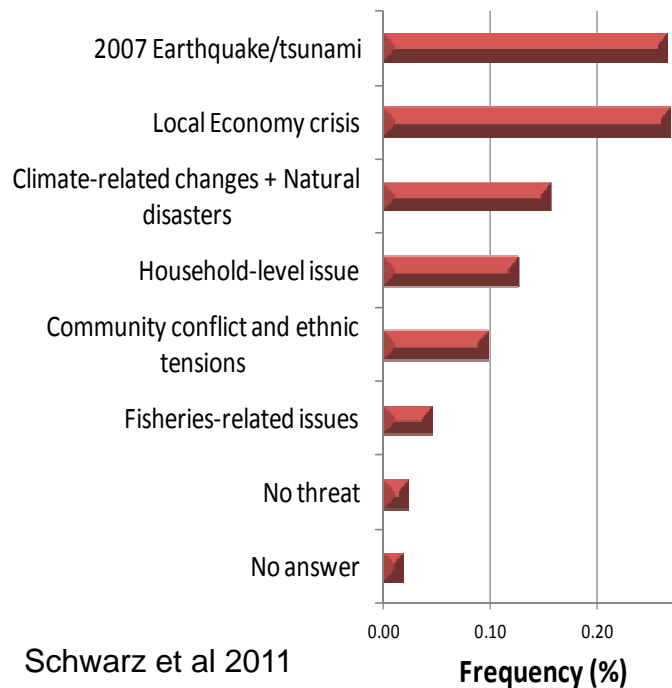
Physical and socio-economic vulnerability to climate change  
(Source: GHF 2009)



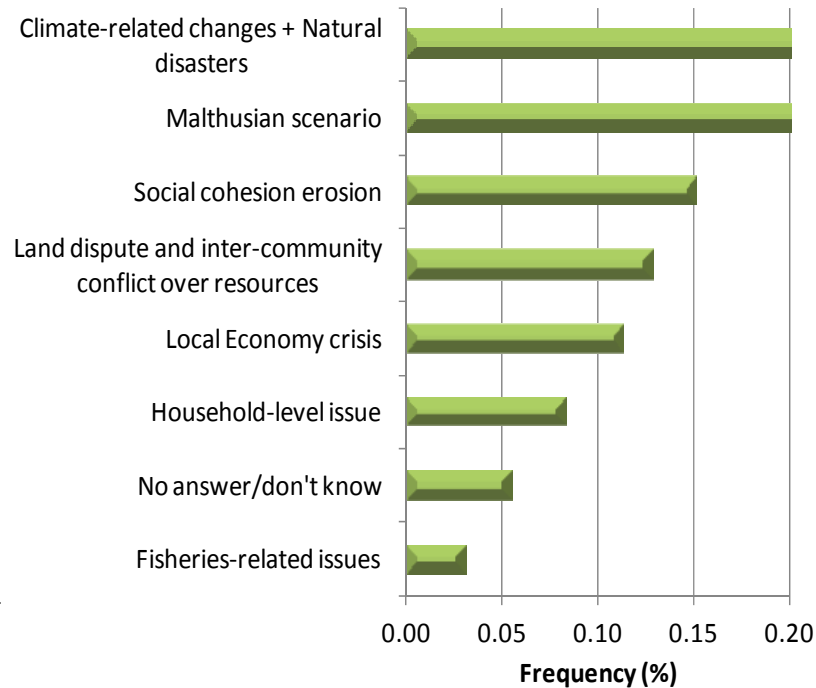
## Impact of climate change on fisheries and aquaculture participatory assessment

Pacific Islands (Solomon) – vulnerability assessment

**Past threats (N=134)**



**Future threats (N=145)**



- subjective
- perception
- ‘day-to-day’ (myopic)
- local

**Perception are people’s driver of decision**

**(in particular in relation to adaptation, innovation, mitigation)**

- **“A non-perceived risk is a non-addressed source of vulnerability”**
- **uncertainty, inhibitor of decision**



## Objective assessments

- big picture
- factual
- ability to have long-term  
assessment
- disconnected from day-to-day life
- not participatory (top-down)
- not always perceived as (ST)  
threat

## Subjective assessments

- local (close to people 'reality')
- perception-based
- 'empowering' (bottom up)
- myopic (ST)
- inability to get the big picture
- affected by uncertainty

## Principle No.2. -- a good vulnerability assessment

=

Combines both objective and subjective assessments

Top-down and bottom up

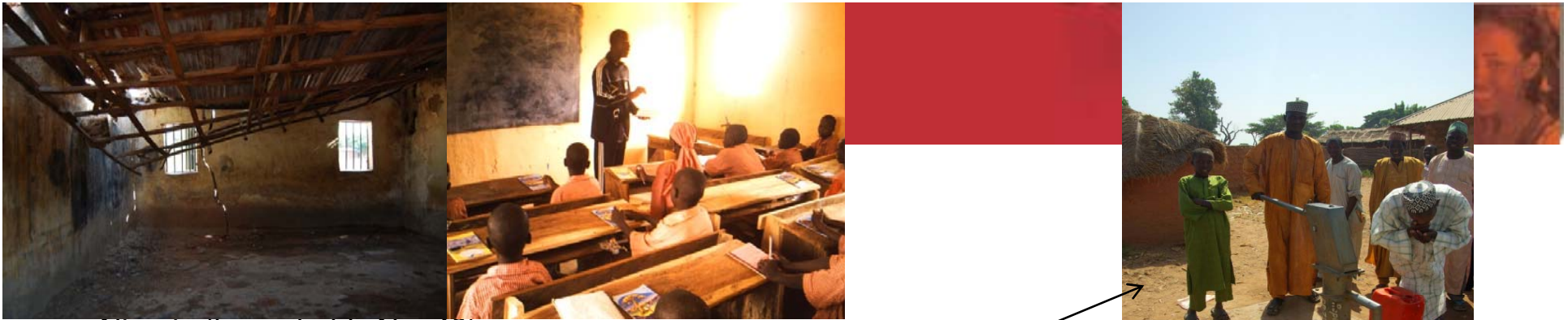
Short-term day-to-day 'reality' and long term projection

**Reconcile and make both converge**

## Vulnerability assessment : Three 'basic' observations from the field

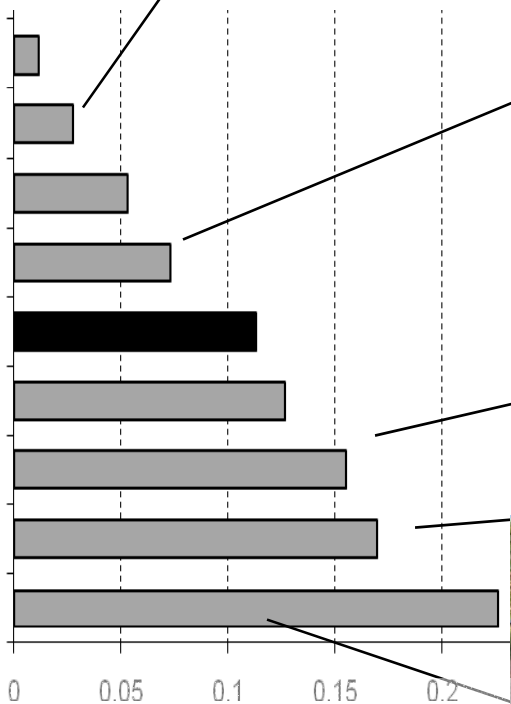
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Nigeria (households N = 40)

- 9. Lack of cultivable land
- 8. Lack of access to good school
- 7. Poor housing
- 6. Lack of access to drinking water
- 5. Fish stock-related issues
- 4. Lack of electricity
- 3. Diseases/health issues
- 2. Food insecurity
- 1. Lack of cash/access to money



**Principle No.3. -- a good vulnerability assessment is:**  
**Leads to concrete, tangible actions**  
**(vulnerability reduction)**

## **Principle No.1.**

**Integrated – multi-stressor / multi impact**  
(capturing social-ecological and more...)

## **Principle No.2.**

**Combines both objective and subjective  
assessments - try to reconcile and make  
both converge**

## **Principle No.3.**

**Leads to concrete, tangible actions**  
(vulnerability reduction)

## **Principle No.4 .**

**Climate as amplifier rather than original  
source of vulnerable**

