

# First Workshop on Strengthening Integrated Flood Risk Management

Climate change  
Truths and myths

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TA 9634-REG: Strengthening Integrated  
Flood Risk Management

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Climate change is new.

We don't know yet what to do.

True or False

THE  
LONDON, EDINBURGH, AND DUBLIN  
PHILOSOPHICAL MAGAZINE  
AND  
JOURNAL OF SCIENCE.

[FIFTH SERIES.]

APRIL 1896.

XXXI. *On the Influence of Carbonic Acid in the Air upon the Temperature of the Ground.* By Prof. SVANTE ARRHENIUS\*.

I. *Introduction: Observations of Langley on Atmospheric Absorption.*

A GREAT deal has been written on the influence of the absorption of the atmosphere upon the climate. Tyndall† in particular has pointed out the enormous importance of this question. To him it was chiefly the diurnal and annual variations of the temperature that were lessened by this circumstance. Another side of the question, that has long attracted the attention of physicists, is this: Is the mean temperature of the ground in any way influenced by the presence of heat-absorbing gases in the atmosphere? Fourier‡ maintained that the atmosphere acts like the glass of a hot-house, because it lets through the light rays of the sun but retains the dark rays from the ground. This idea was elaborated by Pouillet§; and Langley was by some of his researches led to the view, that "the temperature of the earth under direct sunshine, even though our atmosphere were present as now, would probably fall to  $-200^{\circ}$  C., if that atmosphere did not possess the quality of selective

\* Extract from a paper presented to the Royal Swedish Academy of Sciences, 11th December, 1895. Communicated by the Author.

† 'Heat a Mode of Motion,' 2nd ed. p. 495 (London, 1865).

‡ *Mém. de l'Ac. R. d. Sci. de l'Inst. de France*, t. vii. 1827.

§ *Comptes rendus*, t. vii. p. 41 (1838).

Official Web Site of the  
Third Conference of the Parties  
Kyoto, December 1 - 10, 1997



[Kyoto International Conference Hall, KICH](#)

## Kyoto International Conference Hall, KICH



## Conference Secretariat

[About this Site](#)

[Conference Secretariat](#)

[Press Release: Kyoto Protocol opens for signature](#)

### KYOTO PROTOCOL

to the United Nations Framework Convention on Climate Change,

FINAL VERSION

[Kyoto Protocol, Final Version](#)

[Now available here in English, French, Russian and Spanish](#)  
([Arabic and Chinese versions can be obtained from the secretariat in hard copy.](#))

[No frame version](#)

[The Convention](#) - [Info for Participants](#) - [Info for Media](#) - [Official Documents](#)  
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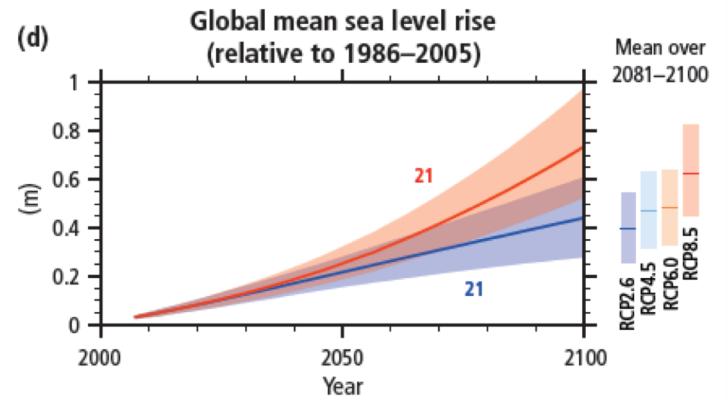
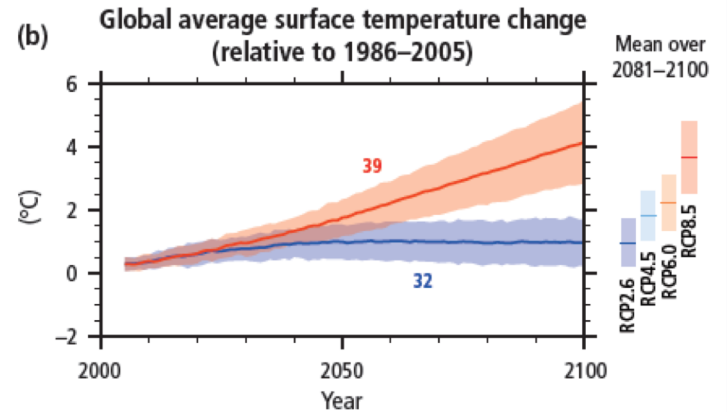
Everything is so uncertain. We  
don't know yet how to respond.

True or False

Climate certainties:

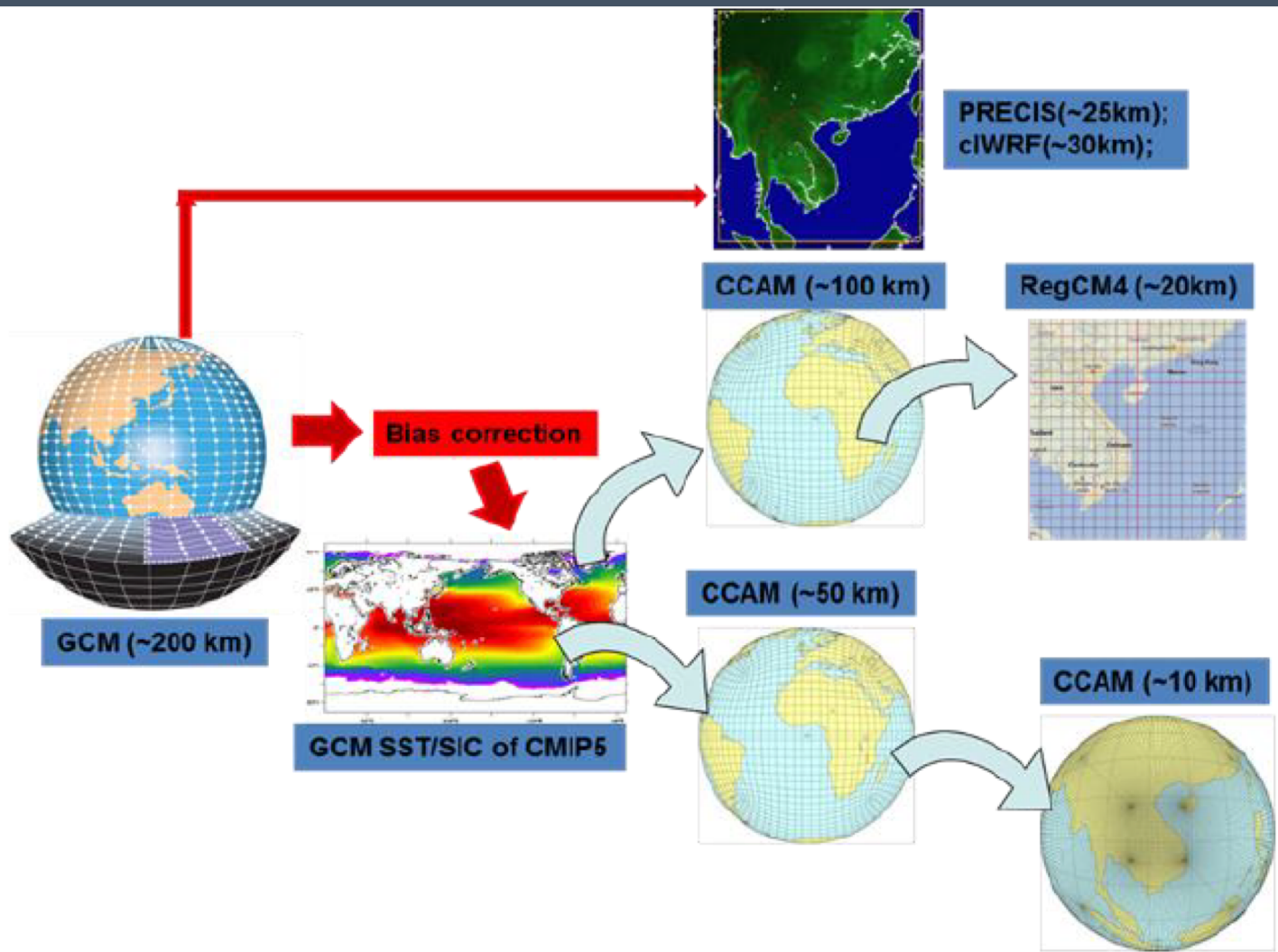
Temperature will increase

Sea levels will rise



We need to wait because  
in a few more years we'll have  
more certainty.

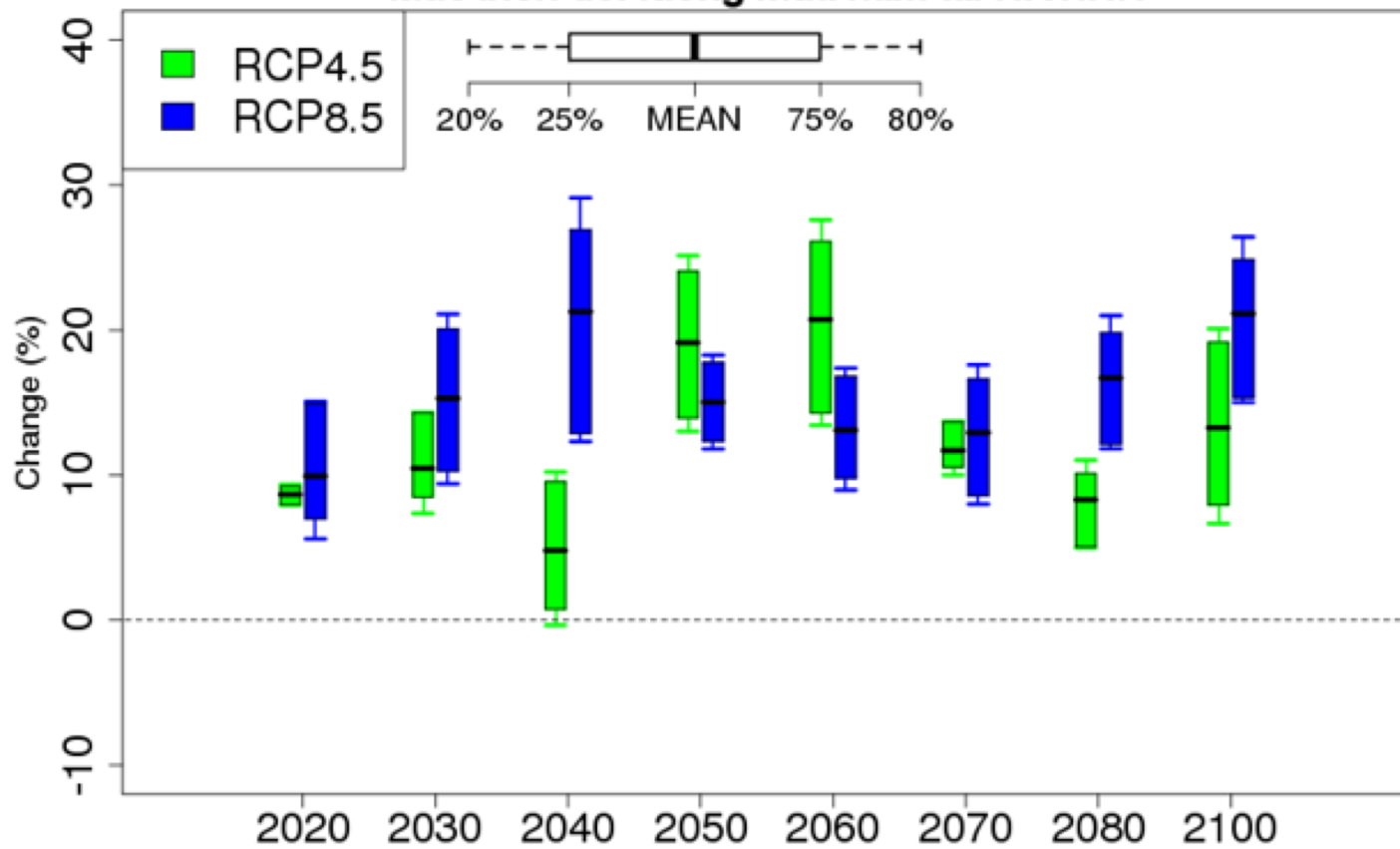
True or False

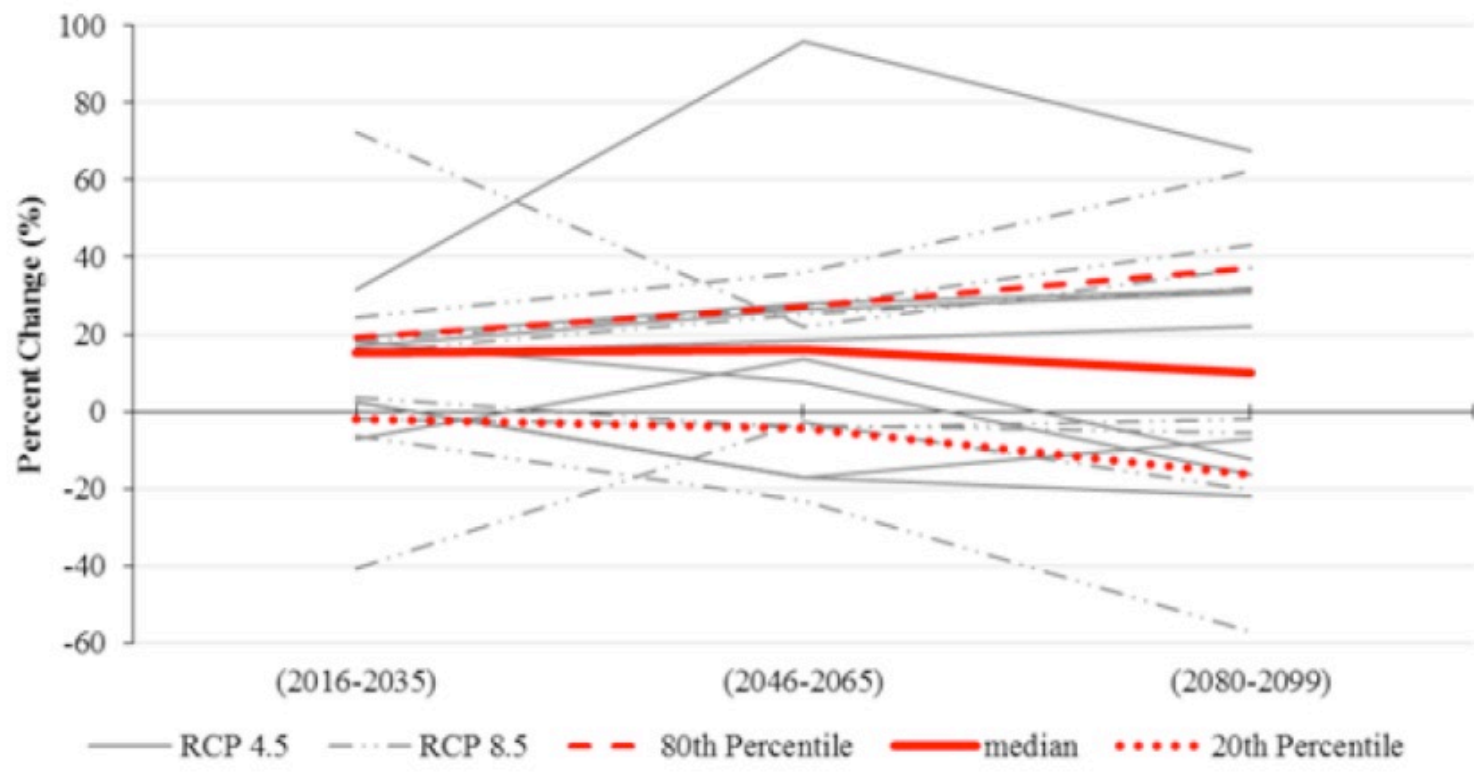


Mô Hình	Điều kiện biên Từ mô hình toàn cầu	Độ phân giải	Thời kỳ có số liệu		
			Thời kỳ cơ sở	RCP4.5	RCP8.5
CCAM	ACCESS1-0	10km	1970-2005	2006-2099	2006-2099
	CCSM4				
	CNRM-CM5				
	GFDL-CM3				
	MPI-ESM-LR				
	NorESM1-M				
RegCM	ACCESS1-0	20km	1980-2000	2046-2065	2046-2065
	NorESM1-M			2080-2099	2080-2099
Precis	HadGEM2-ES	25km	1960-2005	2006-2099	2006-2099
	GFDL-CM3				
	CNRM-CM5				
CLWRF	NorESM1-M	30km	1980-2005	2006-2099	2006-2099



### Muc bien doi luong mua nam tai HATINH





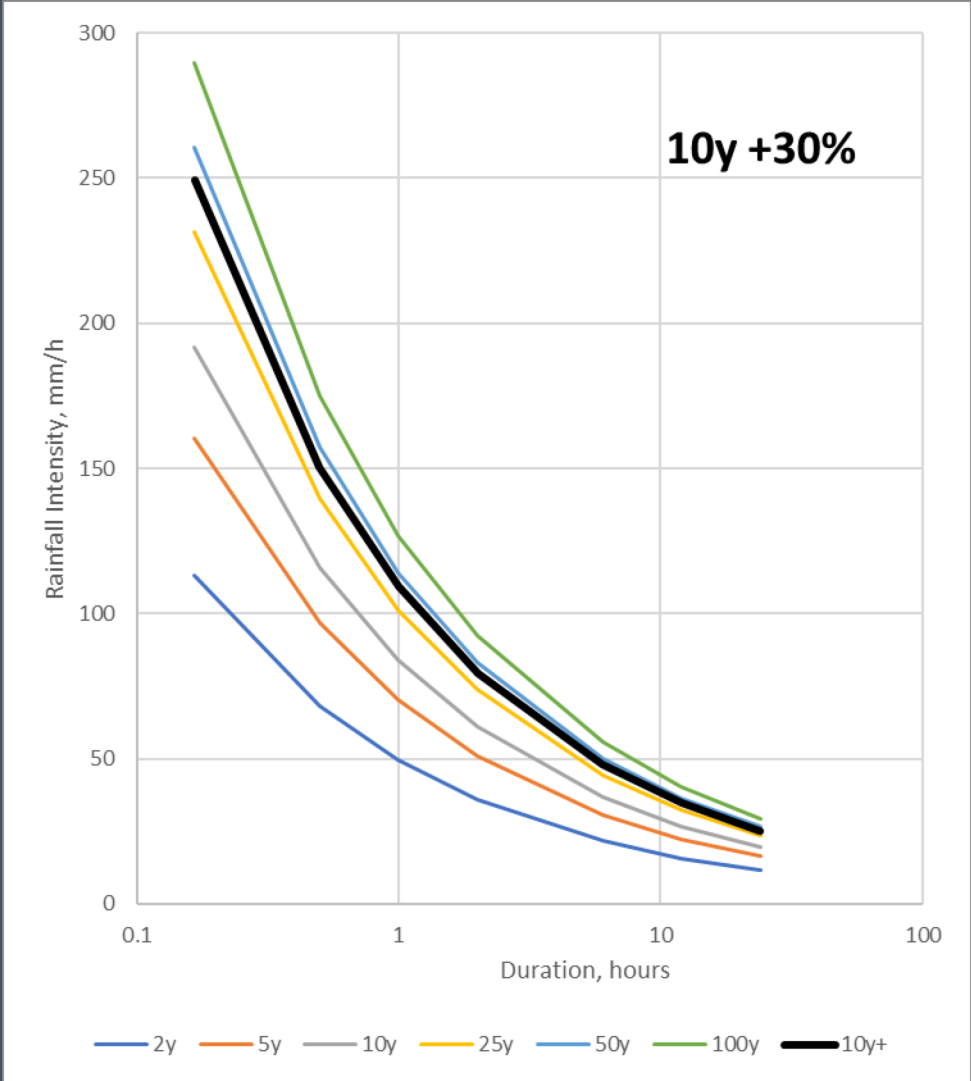
Climate change is all bad.  
Everything is getting worse.  
*We'll all be rooned\**

True or False

\* "We'll all be rooned," said Hanrahan  
John O'Brien, Australian poet. 1919

The increase in rainfall is only about 20%. That's not much, right?

True or False



The frequency of typhoons in this region is increasing.

True or False

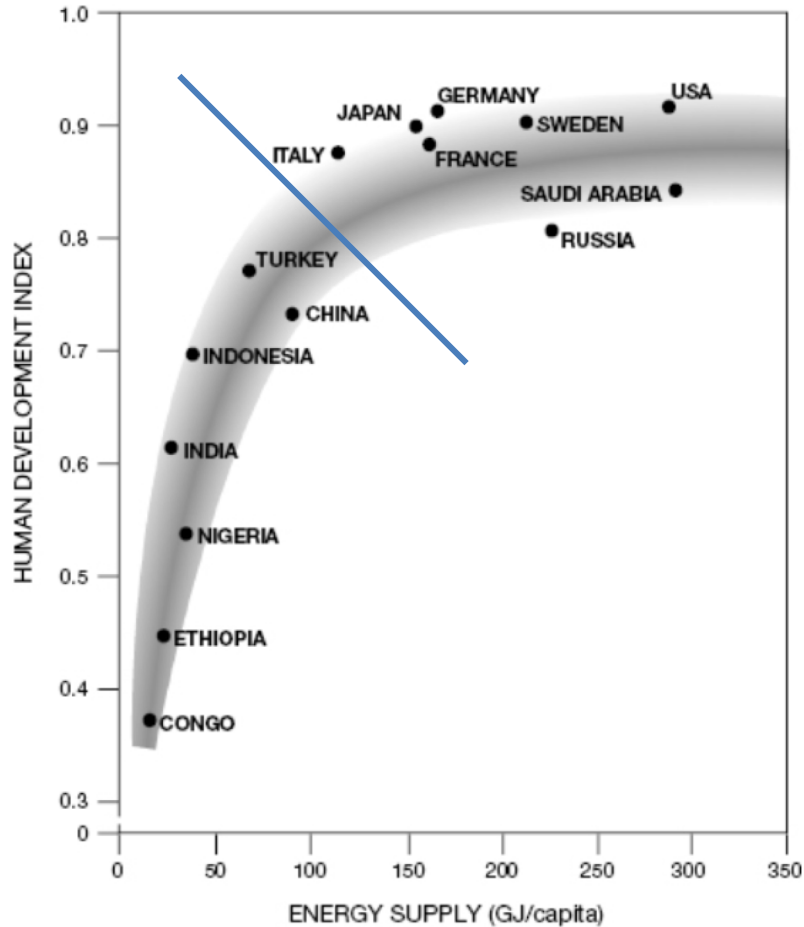
**“There is low confidence that long-term changes in tropical cyclone activity are robust, and there is low confidence in the attribution of global changes to any particular cause. However, it is virtually certain that intense tropical cyclone activity has increased in the North Atlantic since 1970”**

IPCC Fifth Assessment Report 2014

Compared to every other country in the world, the GHG emissions are only a few percent. That's not much. We don't need to control our emissions.

True or False





Energy consumption and development are linked, up to a point

Vaclav Smil, 2017. Energy and Civilization: A History

