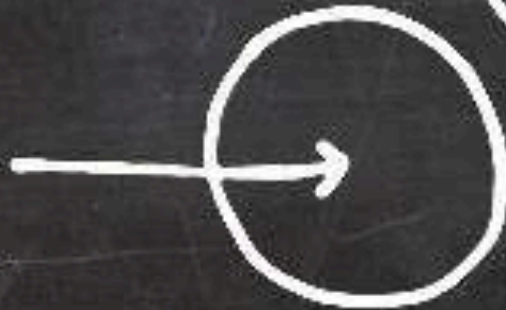


# WHY GAMES?

*Snap !*

Your  
Comfort  
Zone



Where the  
magic happens

*by Pablo Suarez , Ph. D.*

RED CROSS/RED CRESCENT

CLIMATE CENTRE



International Federation  
of Red Cross and Red Crescent Societies

The Netherlands  Red Cross

# IPCC Latest Report

Change in average precipitation (1986–2005 to 2081–2100)

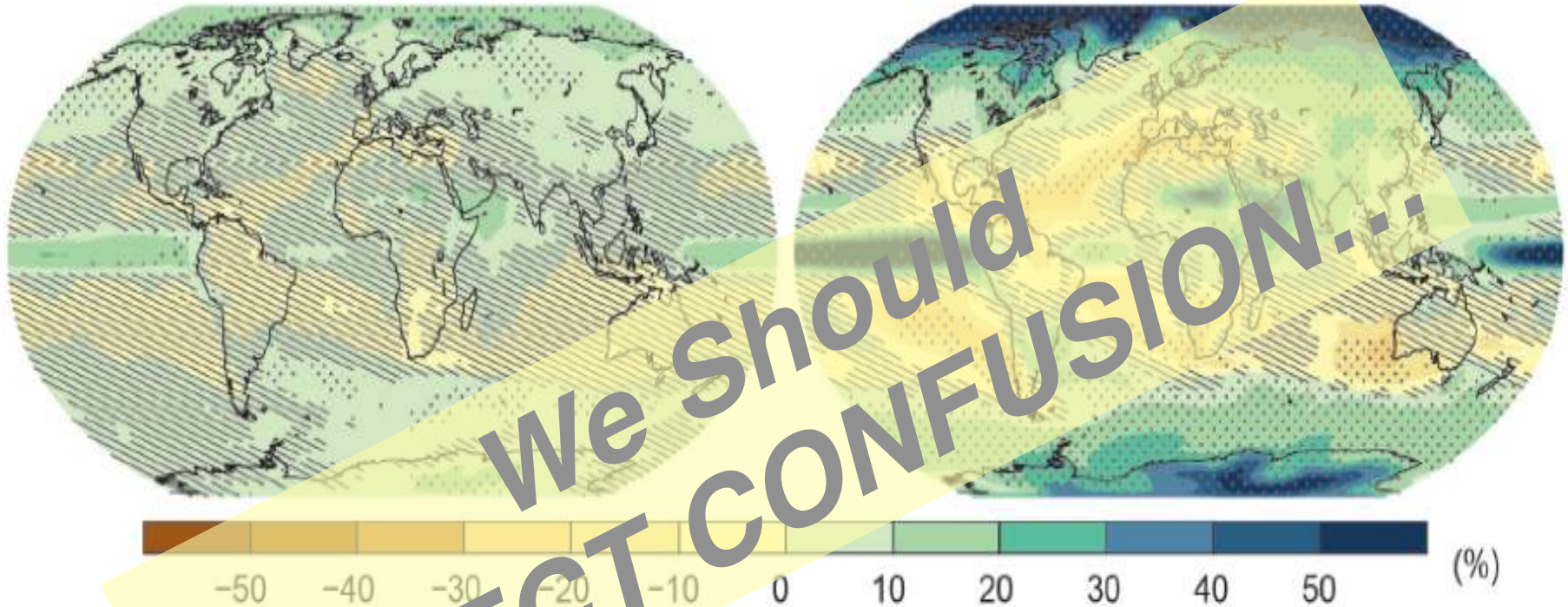


Figure 6 (SPM.8): Model results for possible changes in precipitation under two future scenarios (lower emissions on the left, higher emissions on the right). Colours show the average change that is expected for each region, but areas with hatching (diagonal lines) are uncertain about this change. Areas with stippling (dots) have stronger projections, and have more agreement among the models about the projected changes.



# A Model of the Usual Experience

**Allegedly Actionable Info**

**Audience: Passive Role**

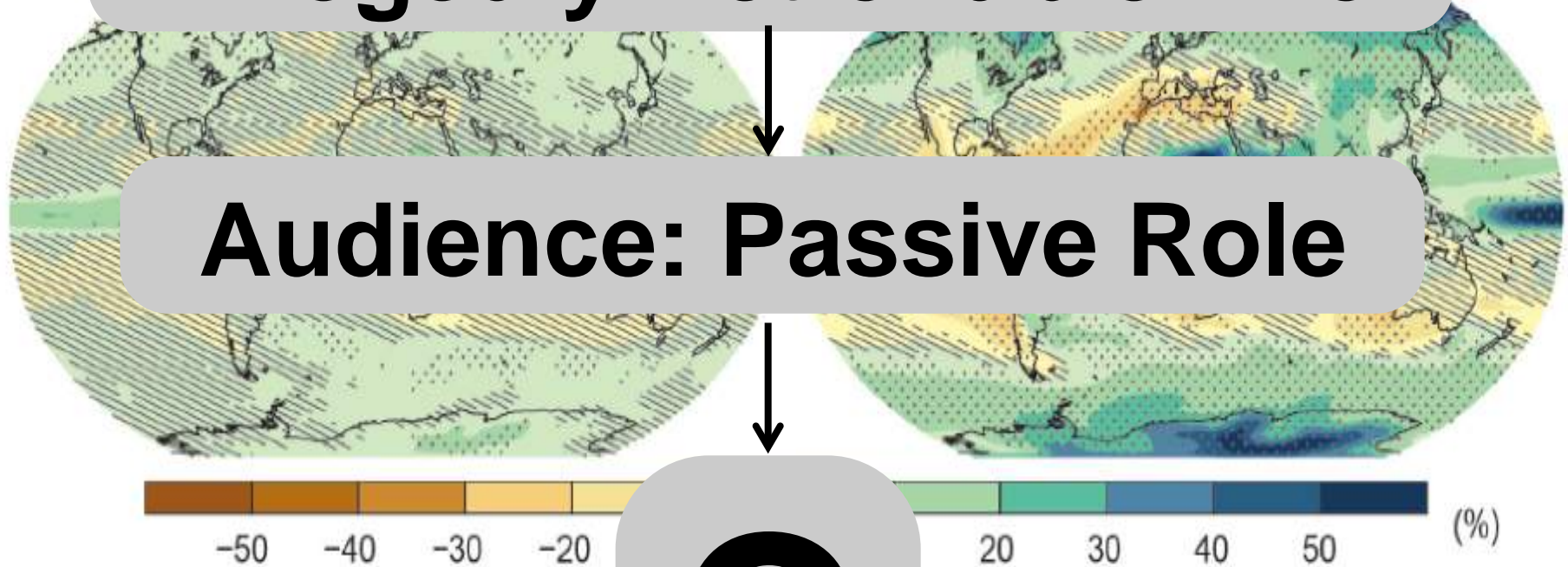


Figure 6 (SPM.8): Model results for possible changes in temperature under two future scenarios (lower emissions on the left, higher emissions on the right). The color scale shows the average change that is expected for each region, but areas with hatching (diagonal lines) indicate areas with stronger projections, and areas with stippling (dots) indicate areas with more agreement among models about the projected changes.

**LET'S**

**PLAY!**



# Decisions for the Decade

How to make smart long-term decisions?



**THE WORLD BANK**

RED CROSS/RED CRESCENT  
**CLIMATE CENTRE**

 International Federation  
of Red Cross and Red Crescent Societies  
The Netherlands  Red Cross

# BASIC GAME RULES

## 1. Simplification of reality

*No challenging the rules!*

## 2. Decisions are individual

*But team consultations welcome*

## 3. We will make 4 decades of investment decisions

*Each round is 10 years*

# WINNERS & LOSERS

**Losers:** *Most red stones  
(humanitarian crises)*

**Winning Player:** *No crisis, and  
Most beans for prosperity*

**Winning Team:** *Fewest crises  
(if tied: Most beans for prosperity)*



**FLOOD PROTECTION Investment**

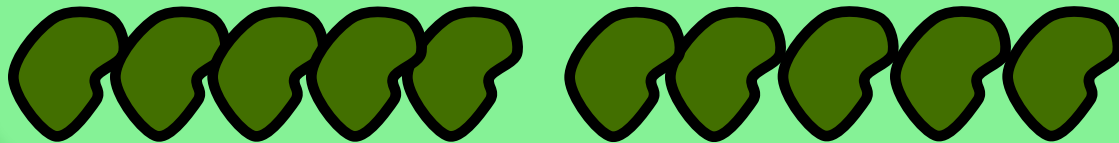
*If you roll a flood: lose 1 bean*



**DEVELOPMENT Investment**

*Earn 1 Prosperity Point per bean,*

*But only if no Crisis*



**DROUGHT PROTECTION Investment**

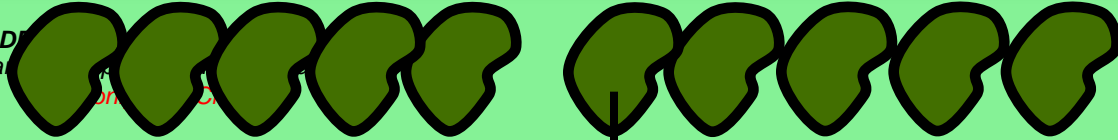
*If you roll a drought: lose 1 bean*



**FLOOD PROTECTION Investment**  
If you roll a flood: lose 1 bean



D  
Ea



**DROUGHT PROTECTION Investment**  
If you roll a drought: lose 1 bean

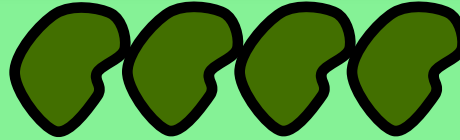


**Let's protect against 1 drought...**

**FLOOD PROTECTION Investment**  
If you roll a flood: lose 1 bean



D  
Ea  
om  
C



**DROUGHT PROTECTION Investment**  
If you roll a drought: lose 1 bean



Let's protect against 1 drought...

When a drought occurs, use a protection bean...

**FLOOD PROTECTION Investment**  
If you roll a flood: lose 1 bean



D  
Ea

1

2

3

4

5

6

7

8

9

**DROUGHT PROTECTION Investment**  
If you roll a drought: lose 1 bean



Let's protect against 1 drought...

When a drought occurs, use a protection bean...

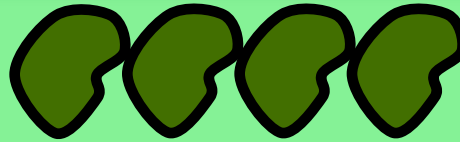
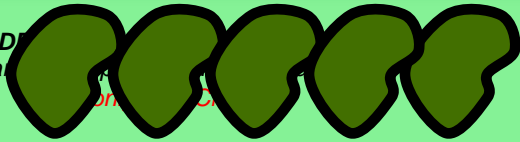
If just 1 drought occurs in the decade...

...you gain 9 Prosperity Points!

**FLOOD PROTECTION Investment**  
If you roll a flood: lose 1 bean



Dr  
Ea



**DROUGHT PROTECTION Investment**  
If you roll a drought: lose 1 bean

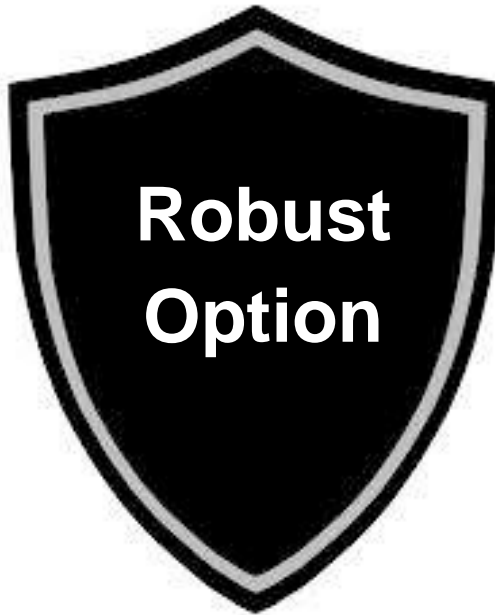


**But, what if we had a second drought?  
Not enough protection!**

**...triggers *humanitarian crisis*  
...NO prosperity points!**







**Guarantees: ? Points**  
*(Facilitator will announce)*

**Cost: 10 beans**

# The Climate is Changing...

Change in average precipitation (1986–2005 to 2081–2100)

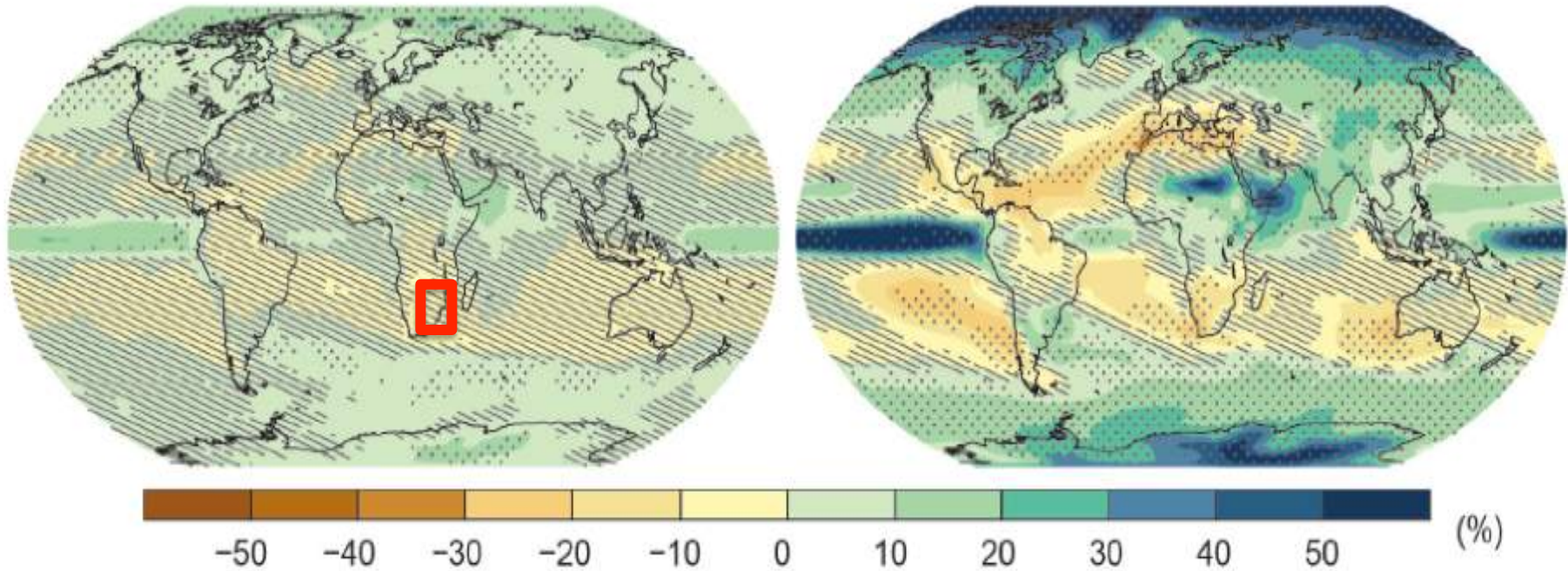
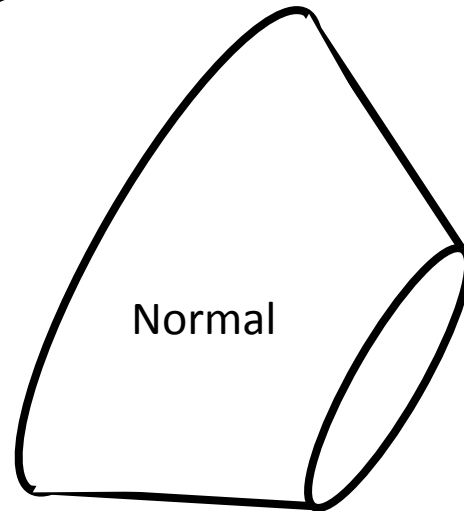


Figure 6 (SPM.8): Model results for possible changes in precipitation under two future scenarios (lower emissions on the left, higher emissions on the right). Colours show the average change that is expected for each region, but areas with hatching (diagonal lines) are uncertain about this change. Areas with stippling (dots) have stronger projections, and have more agreement among the models about the projected changes.

# NEW MODEL for climate change...

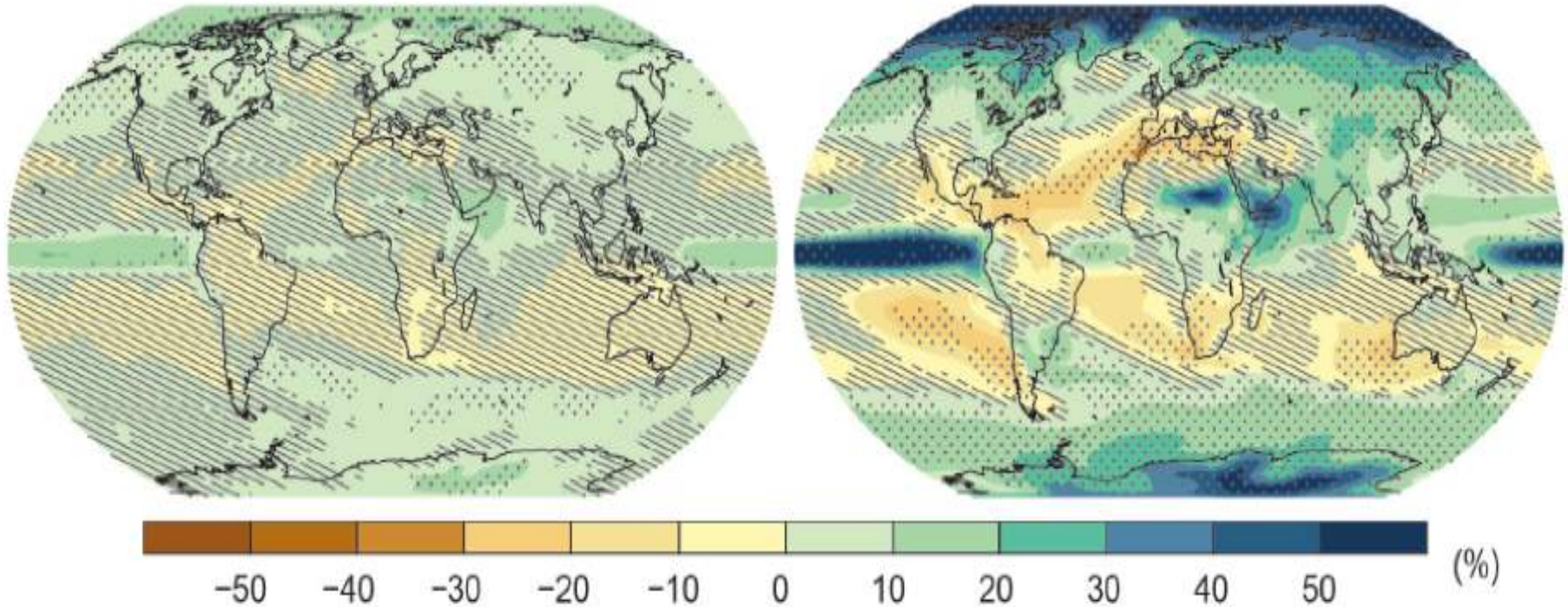
The cone can land 3 ways:





# IPCC Latest Report

Change in average precipitation (1986–2005 to 2081–2100)



*Figure 6 (SPM.8): Model results for possible changes in precipitation under two future scenarios (lower emissions on the left, higher emissions on the right). Colours show the average change that is expected for each region, but areas with hatching (diagonal lines) are uncertain about this change. Areas with stippling (dots) have stronger projections, and have more agreement among the models about the projected changes.*

# A Model of the Usual Experience

Allegedly Actionable Info

Audience **Passive** Role

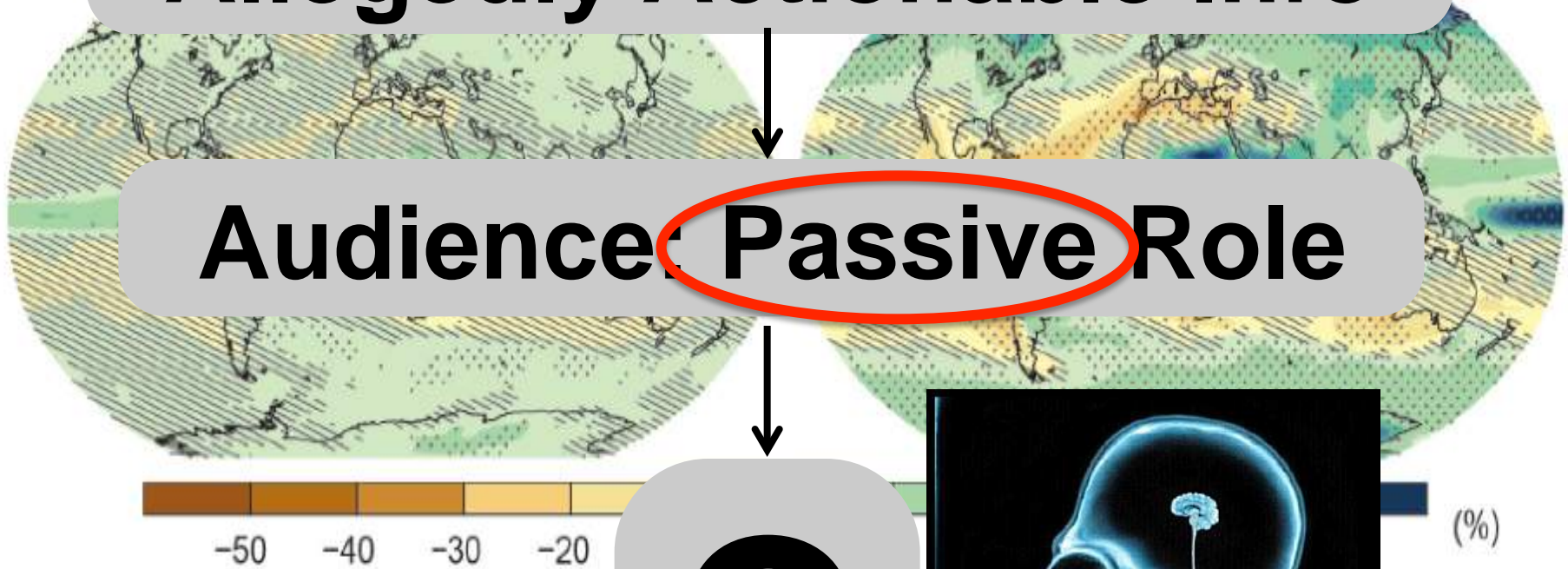
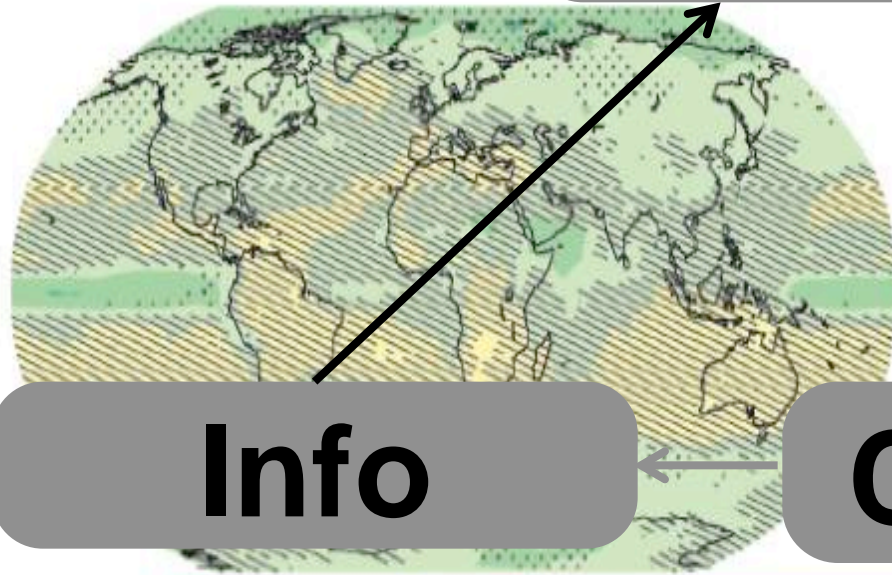


Figure 6 (SPM.8): Model results for possible emissions on the left, higher emissions on the right. Areas with hatching (diagonal lines) have stronger projections, and areas with dots have more agreement. The brain scan image shows a cross-section of a human head with a glowing brain, likely representing a model of the audience's experience.

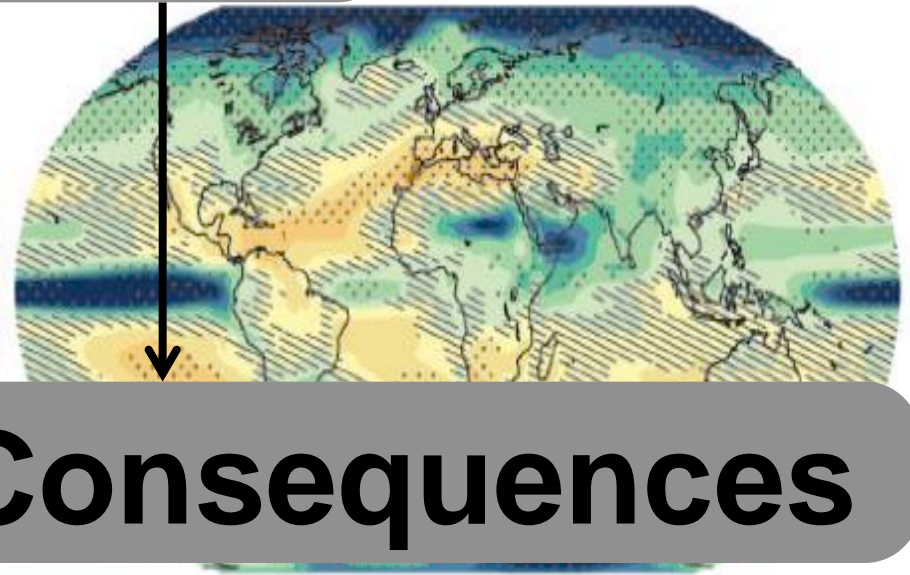


# A Model of the Gameplay Experience

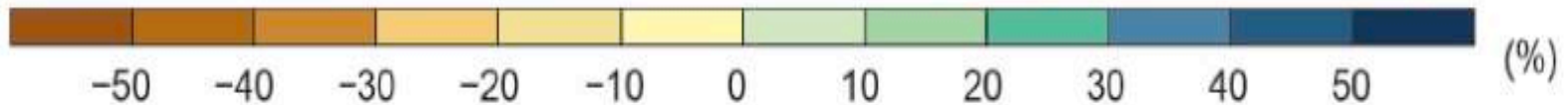
**Decisions**



**Info**



**Consequences**



*Figure 6 (SPM.8): Model results for possible changes in precipitation under two future scenarios (lower emissions on the left, higher emissions on the right). Colours show the average change that is expected for each region, but areas with hatching (diagonal lines) are uncertain about this change. Areas with stippling (dots) have stronger projections, and have more agreement among the models about the projected changes.*

# Making 'The Cone of Uncertainty'



# Gameplay *beats* Powerpoint

- 1. Active learning** (*Peer-to-peer, “Aha!” moments* UNFCCC)
- 2. Serious, fun engagement** (*Emotions matter!* RockFound)
- 3. Data collection on decisions** (*In real time* GEC)
- 4. Optimization platform** (*illiteracy no problem*)

[WWW.CLIMATECENTRE.ORG](http://WWW.CLIMATECENTRE.ORG)

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The Netherlands  Red Cross





*with University Students*





**8** Fritz Policelli (Goddard)  
Science Advisor Spotlight

**16** Lauren Makely (Langley)  
Center Lead Spotlight

**40** Stennis Space Center  
Node Spotlight



imate Change Adaptation (CCA) seeks to disburse funding for  
aster, allowing communities to prepare for the oncoming forces of  
rather than simply react once the damage has been done. As Dr.

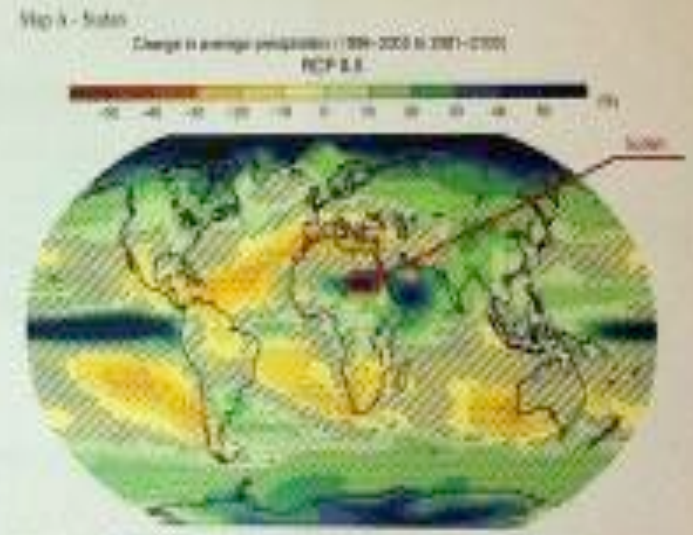




Climate-Resilient Investment Options

Decade	Protection from Too Little Rain	Production	Protection from Too Much Rain
1	0123456789	1234567890	0123456789
2	0123456789	1234567890	0123456789
3	0123456789	1234567890	0123456789
4	0123456789	1234567890	0123456789

Your Name: \_\_\_\_\_ Your Gender: (Male / Female) \_\_\_\_\_



Increasing extreme weather events when the multi-model mean is small compared to internal variability (i.e., less than one standard deviation of thermal variability in 20-year means). Dipping indicates regions where the multi-model mean is large compared to internal variability (i.e., greater than two standard deviations of internal variability in 20-year means) and where 80% of models agree on the sign of change.



**with IPCC Lead Authors**



**Games for a New Climate: US. Pablo Suarez plays *Dodging the Storm* at the White House in Washington, DC. (Photo: American Red Cross)**

*at the White House*

# WHY GAMES for Actionable Info:

**HUH?**



**AHA!**





**Games for a New Climate:  
Experiencing the Complexity  
of Future Risks**

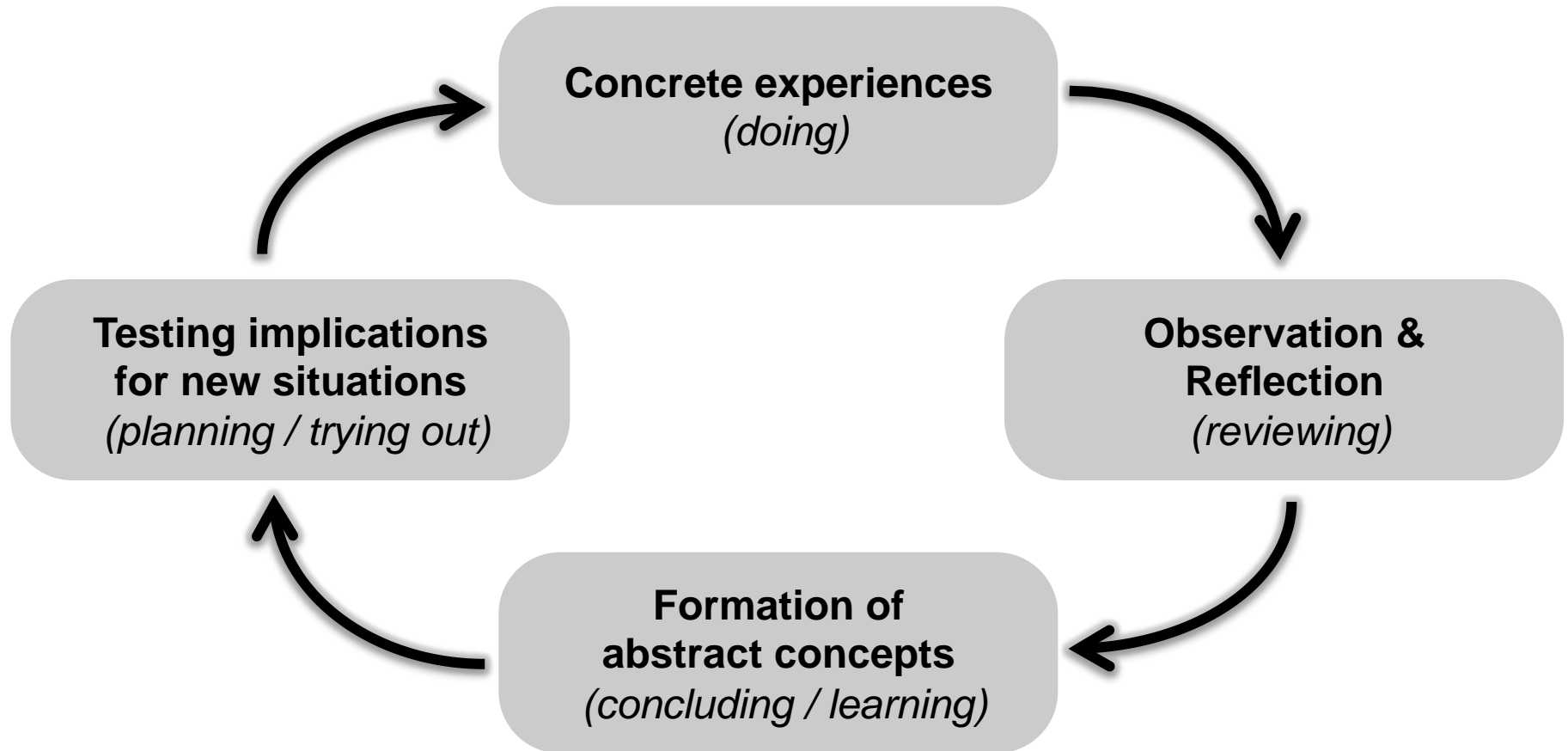
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2.2.2 Rules, Play, Culture	
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# Risk Management Framework





# The Experiential Learning Cycle



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The Netherlands **Red Cross**

START  
GLOBAL CHANGE SYSTEM FOR ANALYSIS,  
RESEARCH, AND TRAINING

ISDR  
International Strategy for Disaster Reduction  
Africa

THE  
ROCKEFELLER  
FOUNDATION

IFAD



African Union  
a United Nations System Org.



WORLD  
RESOURCES  
INSTITUTE

**THANK YOU!!!**



A  
Aalto University

Oxfam  
America



Stanford  
University

OPDS  
Organismo Provincial  
para el Desarrollo Sostenible

HARVARD  
HUMANITARIAN  
INITIATIVE



American  
Red Cross



Climate & Development  
Knowledge Network

ipcc  
INTERGOVERNMENTAL PANEL ON climate change  
WMO UNEP