

The IPCC's climate risk framework

a slide show presentation to introduce the IPCC's climate risk framework

What is the IPCC?

History

The Intergovernmental Panel on Climate Change (IPCC) was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO) in 1988. The establishment of the IPCC was endorsed by UN General Assembly in 1988.

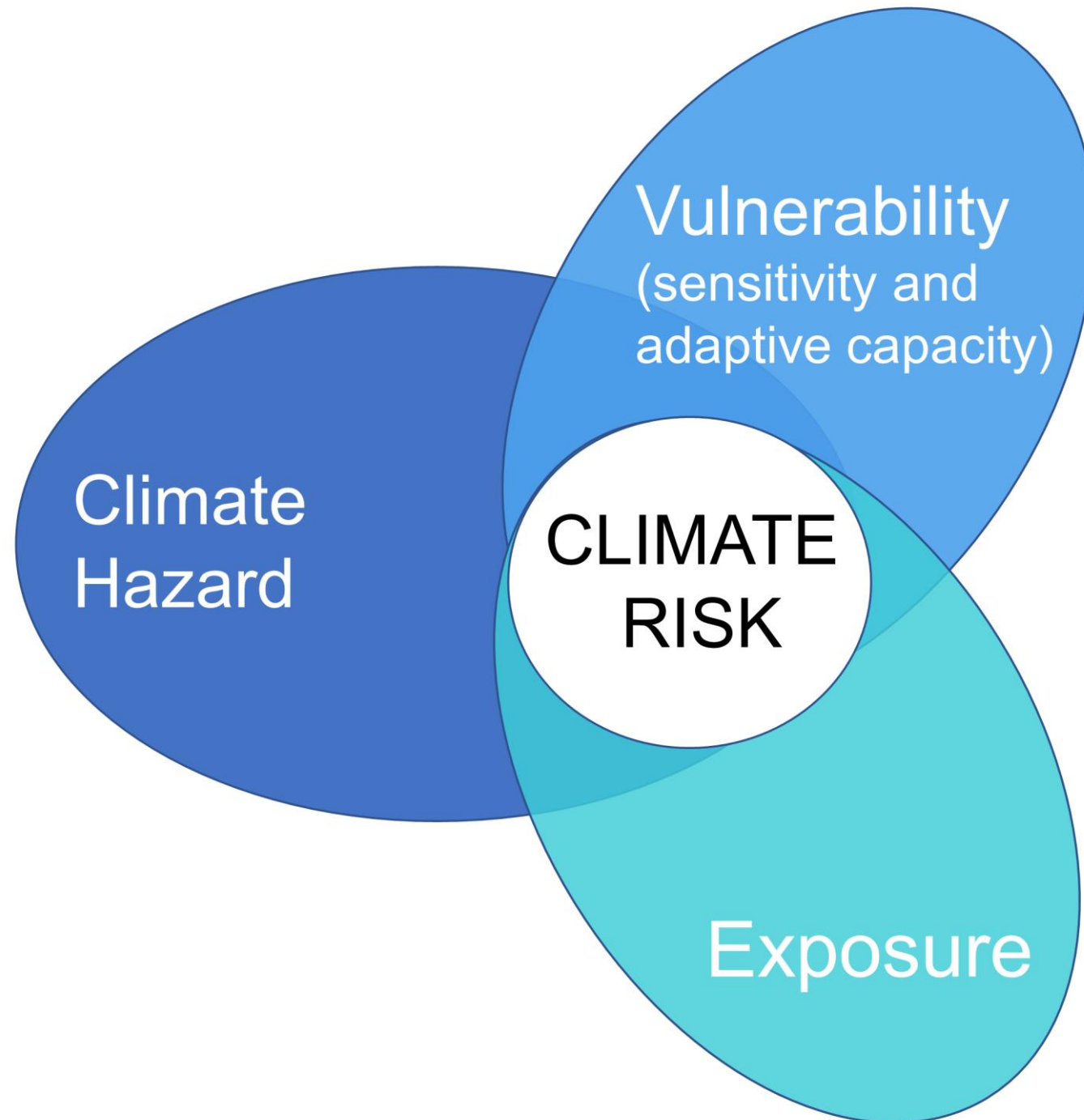
The IPCC is an intergovernmental body of the United Nations mandated to provide objective scientific information relevant to understanding human-induced climate change, its natural, political, and economic impacts and risks, and possible response options

Example:

Fifth assessment report (AR5)

- 3.830 experts
- 80 countries
- >30 thousand studies
- Robust review process

What is the IPCC's climate risk framework?



(adapted from IPCC, 2014)

A blue circle logo containing the text "Climate Hazard" in white.

Climate Hazard

Potential occurrence of a natural or induced event that can cause loss of life, injuries or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, provision of services and environmental resources



It refers to the presence (location) of people, livelihoods, environmental services and resources, infrastructure, or economic, social or cultural assets in places that could be harmed and affected by physical events



Propensity or predisposition to be negatively affected. It includes the characteristics of a person, group, structures and systems that influence their ability to anticipate, cope with, resist and recover from the adverse effects of physical events

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graph TD; V([Vulnerability]) --- S[Sensitivity]; V --- AC[Adaptive Capacity];
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Vulnerability

Sensitivity

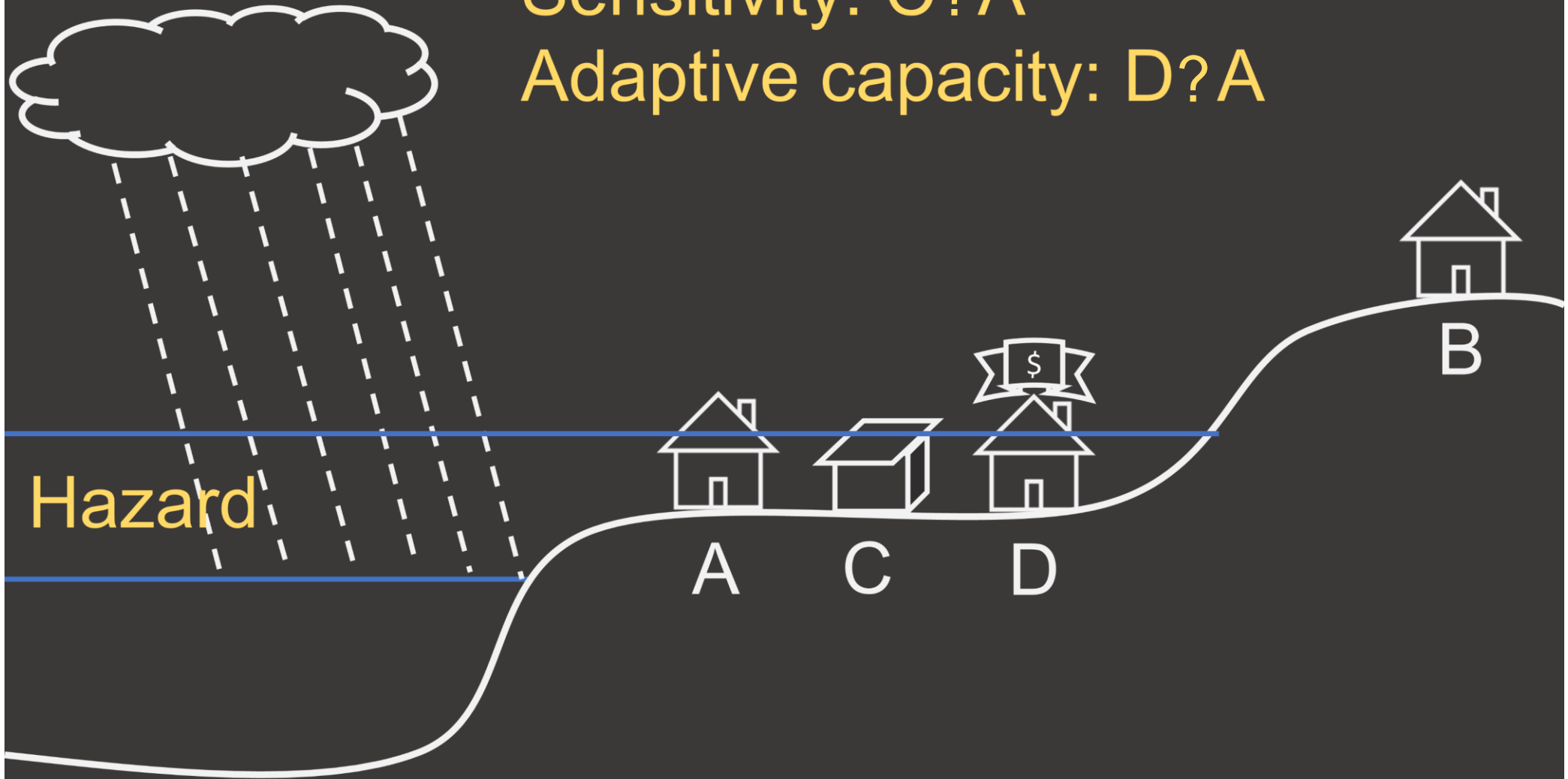
Degree to which a person, object or system is negatively or positively affected

Adaptive Capacity

Ability that a person, object or system can adjust to potential harm

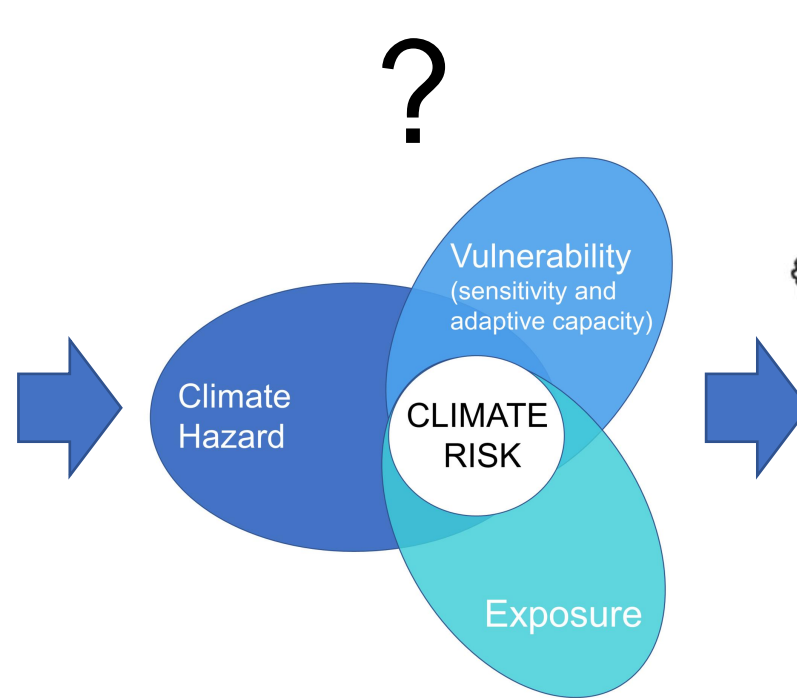
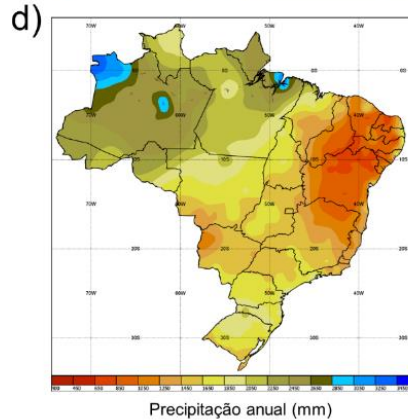
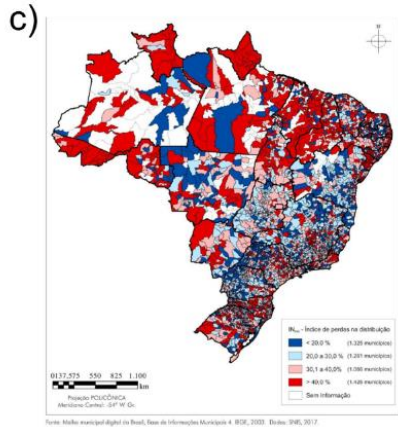
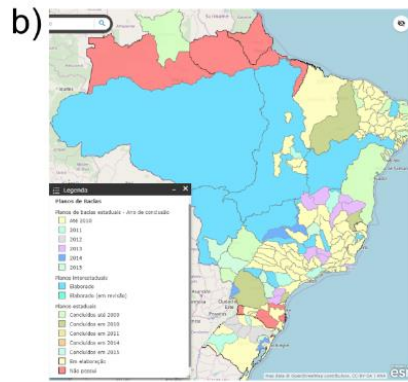
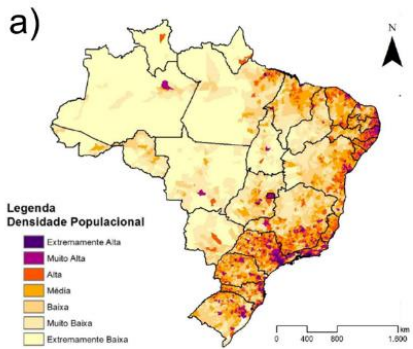
Interactive exercise

Exposure: A?B
Sensitivity: C?A
Adaptive capacity: D?A



Group Exercise

Exercise explanation



(adapted from MMA, 2017; Planos de Recursos Hídricos, 2020; Brasil, 2017; Normais climatológicas do Brasil, 2020)

(adapted from IPCC, 2014)

(adapted from Mapa do Brasil, 2019)

Goals:

1. Identify areas with significant climate risk
2. Assess adaptation options to reduce the risk

Step 1. Associate socioeconomic, biophysical, and climate data with the climate risk components (20 min.)

Step 2. Map climate risk and classify risk zones (20 min.)

Step 3. Assess adaptation options (20 min.)

Step 4. Communicate via presentation (5 min/group)

References:

Brasil: Sistema Nacional de Informações sobre Saneamento: Diagnóstico dos Serviços de Água e Esgotos – 2017, Ministério do Desenvolvimento Regional. Secretaria Nacional de Saneamento – SNS, Brasília, DF, 2017.

IPCC: Climate change 2014: impacts, adaptation, and vulnerability: Working Group II contribution to the fifth assessment report of the Intergovernmental Panel on Climate Change, Cambridge University Press, New York, NY, 1132 pp., 2014.

Mapa do Brasil: <https://www.infoescola.com/geografia/mapa-do-brasil/>, last access: 10 March 2019.

MMA: Índice de vulnerabilidade aos desastres naturais relacionados às secas no contexto da mudança do clima, Ministério do Meio Ambiente (MMA), Brasília, DF, 2017.

Normais climatológicas do Brasil: <http://www.inmet.gov.br/portal/index.php?r=clima/normaisClimatologicas>, last access: 20 May 2020.

Planos de Recursos Hídricos: <https://portal1.snirh.gov.br/ana/apps/webappviewer/index.html?id=29ef3cf04a584c0da35cf267ae69d0ea>, last access: 20 May 2020