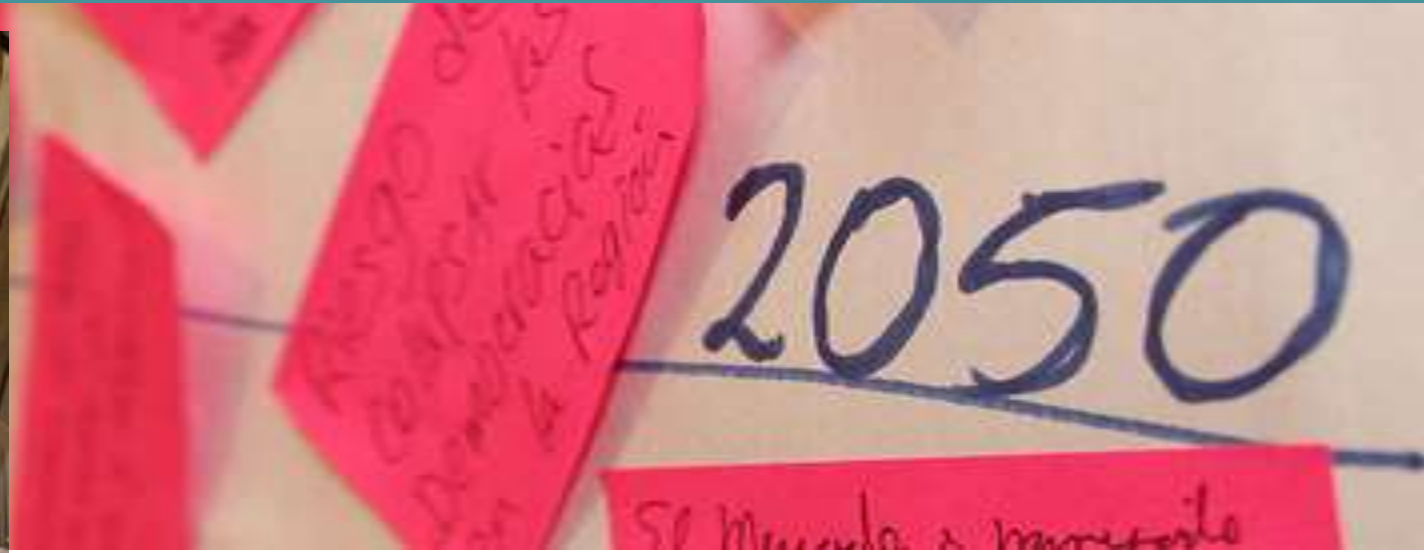


Understanding anticipatory climate governance in Central America: The links between anticipation and policy



Nov 6th 2019 – Earth System Governance Conference Oaxaca
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Adaptation challenges: Central America

- Region with most countries vulnerable to climate change
- Longer periods of severe droughts
- More intense periods of rain
- Institutional capacity to adapt to climate change is low – but growing
- Corruption – unstable governments – restless society – security issues

RE-IMAGINE WP2:

Assessing anticipation processes/practices and links to policy

Central America

Focus of research:

Understanding anticipatory climate governance in practice: links between anticipatory processes and policies (on climate adaptation) in Central America

Case study research: reviewing anticipatory processes and policies, semi-structured interviews at both sides of the foresight – policy interface

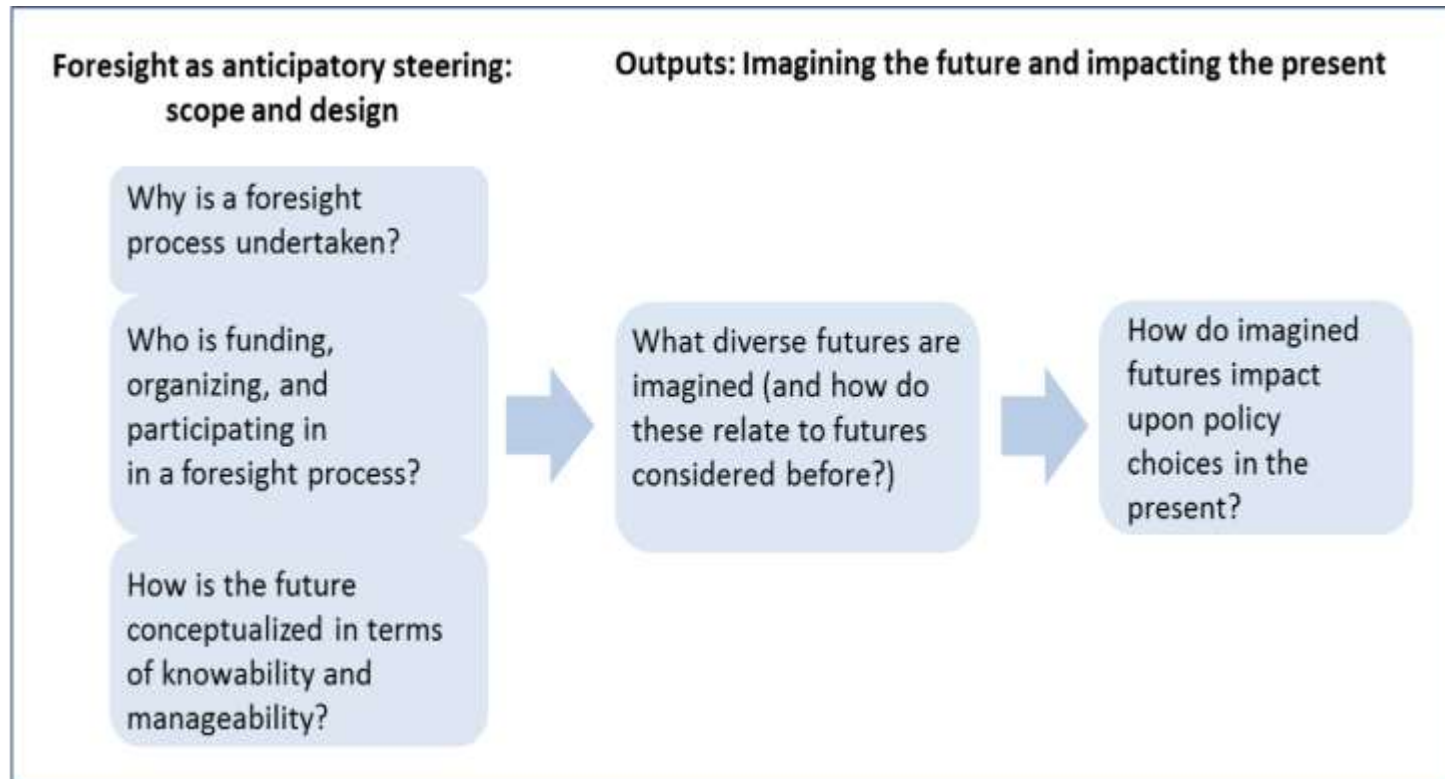


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Main research questions



Available online at www.sciencedirect.com

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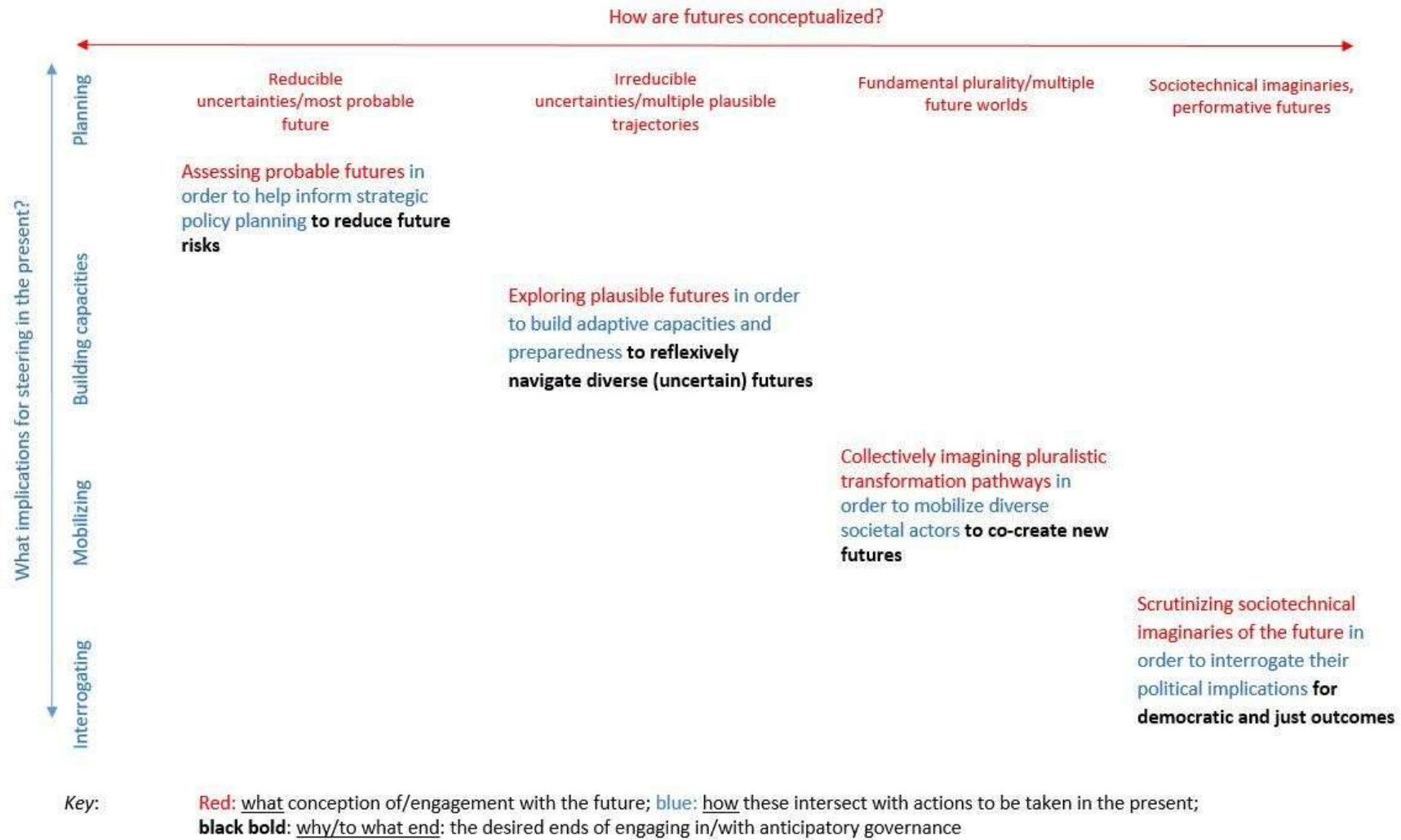


Anticipating climate futures in a 1.5 °C era: the link between foresight and governance

Joost Vervoort^{1,2} and Aarti Gupta³



Theoretical framework: approaches to anticipatory governance



Source: Muiderman, Gupta, Vervoort, Biermann – to be published

Case studies – Central America

- Most vulnerable countries to climate change: El Salvador, Honduras(2nd), Guatemala (9th), Nicaragua (4th) and Belize (Germanwatch 2017)
- Online search; then Scopus; then snowball method (CCAFS contacts)
- Key words: [country] AND development AND policy AND climate AND change AND future
- Recent policies and publications: > the year 2000
- 26 cases in total
- *Anticipation-up*: 13 anticipation practices (vulnerability studies, risk assessments, climate change modeling, socioeconomic/environmental scenarios, etc) – foresight and forecasts
- *Policy-up*: 13 policies that used anticipation practices in their formulation process
- Emphasis on adaptation policies, national level studies

1^a. What anticipation practices are used? (foresight/forecasts)

POLICIES

- Mostly use vulnerability/risk assessment studies and global/regional climate scenarios
- Mostly international studies (IPCC, CEPAL, academia/research centers) but also national research with own data (universities, private sector)
- Of 13:
 - 3 used only quantitative projections (modelling based on data and climate scenarios)
 - 7 used combination of quant and qualitative
 - 3 only used qualitative practices (vulnerability assessments for strategic planning)

1^a. What anticipation practices are used? (foresight/forecasts)

ANTICIPATION-UP

- Half of the studies found were regional (Central America, Latin America, Caribbean). Others at the municipal / basin level. 3 are included in this investigation - other cases are national level.
- Several series of studies on the impact of climate change (agriculture, economy, tourism) - ECLAC, CCAFS, CIAT
- 6 studies based only on quantitative modeling (climatic scenarios, land use, crop yields / aptitude
- 2 qualitative studies (vulnerability study, future Belize development scenarios)
- Others: Combination: Vulnerability / impact studies complemented with climate scenarios modeling

SUMMARY

- Climate scenarios (IPCC)
- Impact studies of climate change on crops /economy (modeling/cuantitative foresight)
- Vulnerability/risk assessments

What anticipation practices are used?



RESEARCH PROGRAM ON
Climate Change,
Agriculture and
Food Security



Future scenarios project (CCAFS)

- Participatory development of multiple scenarios on the future of agriculture, SAN and the environment - based on drivers of change
- Scenarios are modeled to give stakeholders insight on possible economic impacts of the scenarios under different climatic scenarios (IFPRI, IIASA)
- Key actors in governments, NGOs, academia, civil society, propose policy formulation processes to be supported by the scenarios



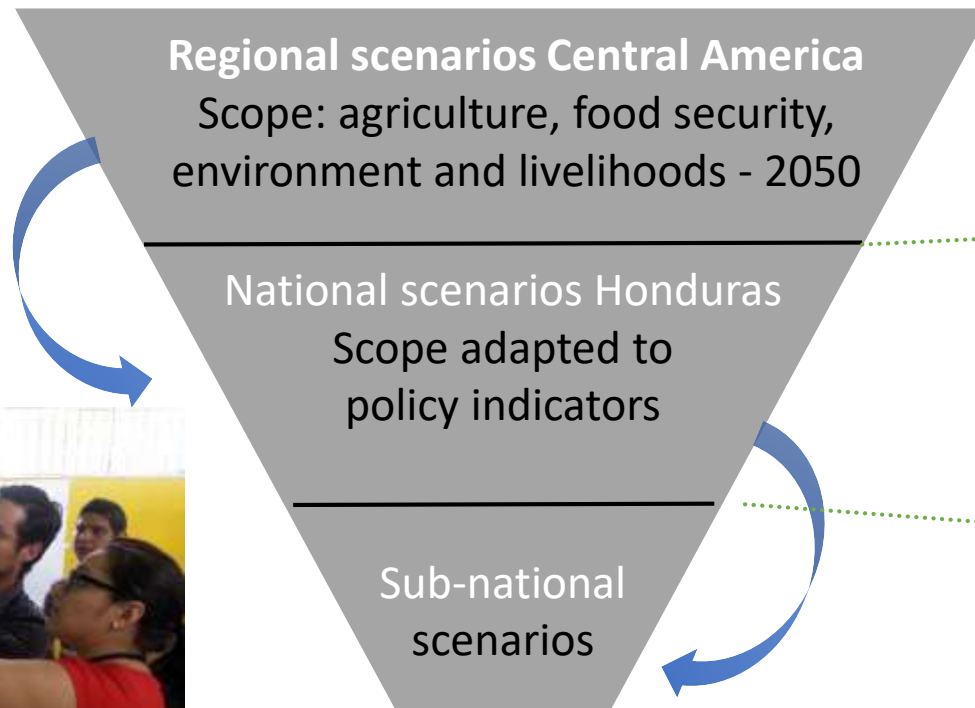
CCAFS: Participatory scenario guided policy making



RESEARCH PROGRAM ON
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Food Security



- From regional to sub-national scale-
HONDURAS (SAG/CCAFS)



Scenarios creation

Workshop 1 (2013) 3 days
30 Regional cc experts public-private-
research

Scenarios use

Workshop 2 (2014) 2 days
National strategy for climate change
adaptation and risk management

Scenarios use

Workshop 3 (2015) 2 days
Sub-national plans for climate change
adaptation and risk management

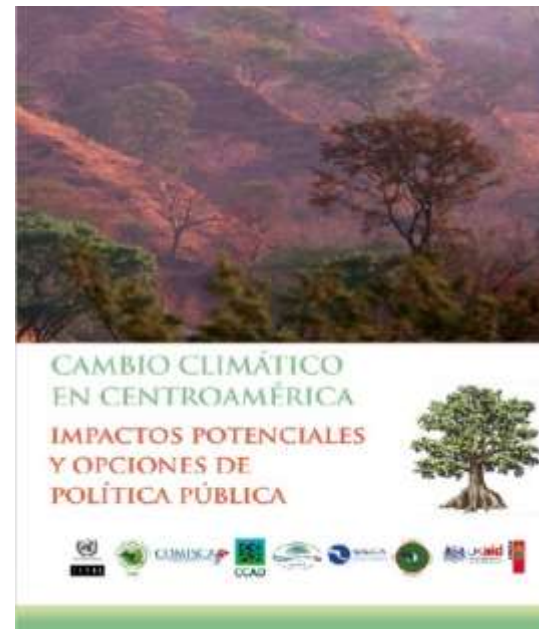


Future: fundamental
plurality
Link to present: for
planning – CB- mobilizing



CEPAL studies - Economic Commission for Latin America and the Caribbean

- Collective initiative of CEPAL, regional and national gov organs
- Funded by UKAID, DANIDA, BID
- Futures under climate change are uncertain
- They need to be assessed to understand risks and enhance readiness - planning



Belize City Master Plan

Scenarios of Urban Development (IDB/Ministry of Tourism)

- Concept of future: Multiple future city development pathways explored
- Link to steering in the present: City master plan developed – based on exploration of scenarios
- Expert developed but participatory sourced (civil society)
- High involvement of city council and Ministry of Tourism
- Facilitation: Consultant IDB
- Funding: Japan

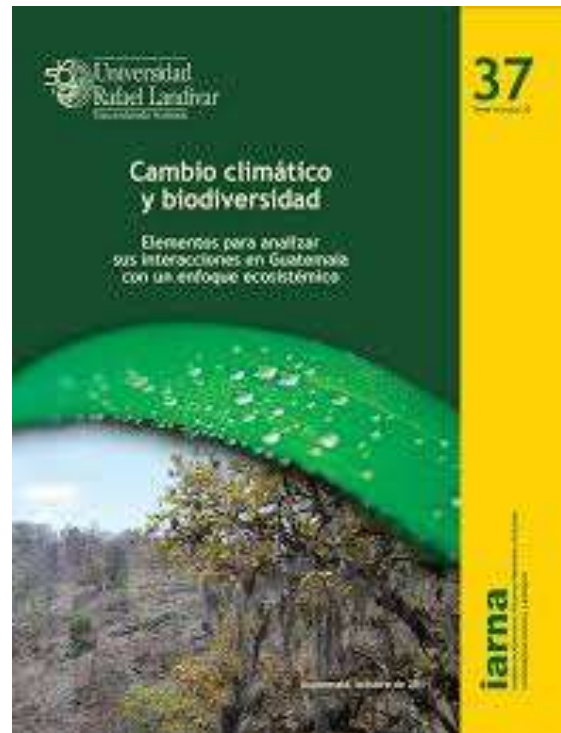


URBAN DEVELOPMENT SCENARIOS FOR BELIZE CITY 2010-2030

Recommended Scenario, Evaluation of
national infrastructure plans and key
investment projects

What anticipation practices are used?

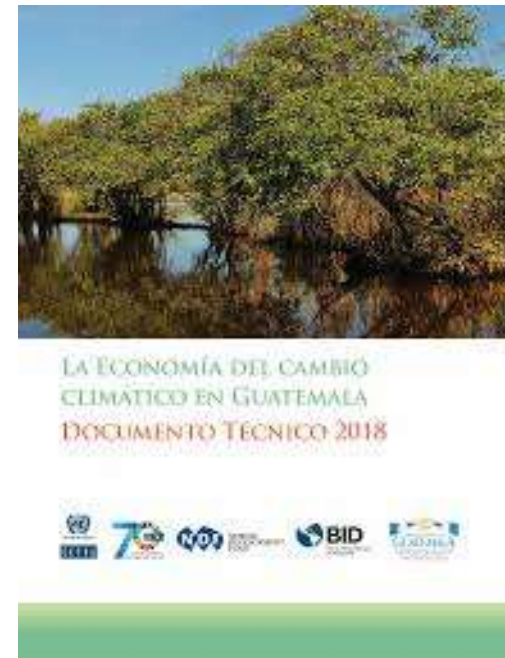
Guatemala



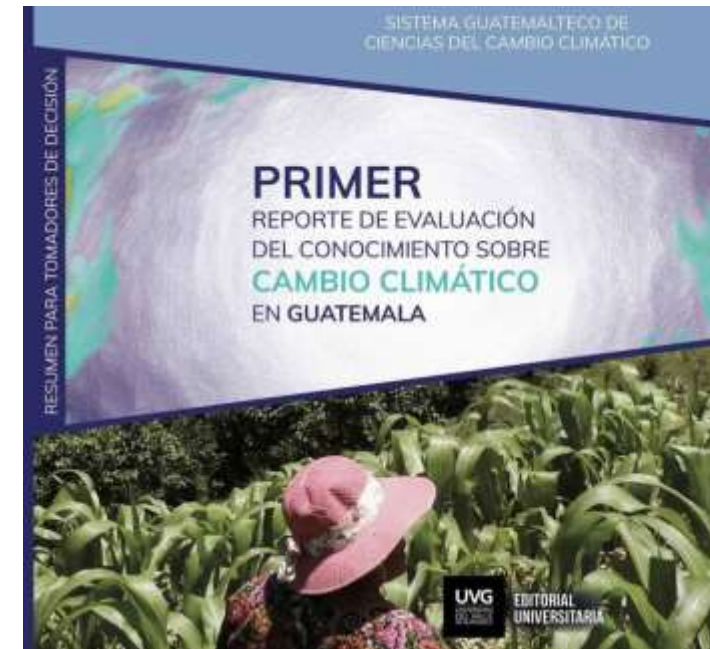
2011
Universidad
Rafael Landívar
IARNA



2014
MARN, IDB



2018
CEPAL, BID,
MARN



2019
SGCCC, UVG
University of
Nebraska

1B. Who is funding, organising, and participating in foresight processes?

FUNDING

- Policy-up : 10 of 13 anticipation practices used were developed with financial and/or technical support of development agencies and research/academia.
- Anticipation up: development cooperation, universities (nat/int)

ORGANISING

- Research organisations – academia – ministries

PARTICIPATING

- 4 of 13 policies used expert based anticipation practices – others processes with different grades of participation
- 6 of 13 anticipation-up cases were expert based – others were participatory sourced and expert made OR expert made and then validated for recommendations

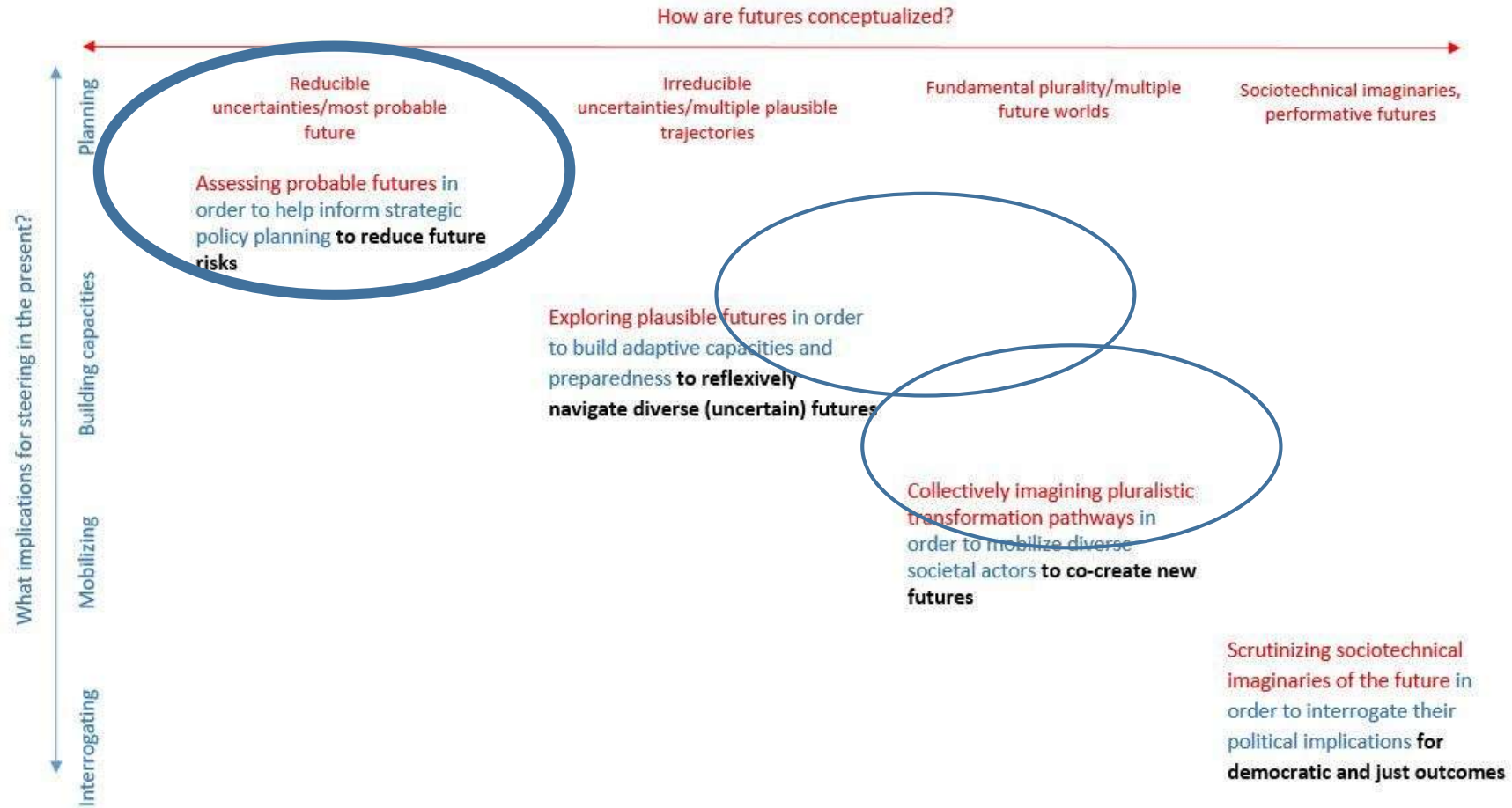
2. Why are foresight processes undertaken?

1. Anticipation of futures to support climate change planning (most cases)
2. To improve understanding of climate change (possible impacts, vulnerability, risks) (most cases)
3. To involve stakeholders in thinking about the future (and change its course for the best) (4 of 26 cases)

4. How do imagined futures impact upon policy choices in the present?

- Half of anticipation-up cases were done independently, but with intention to be used for policymaking – not clear if used
- Other half initiated from collaboration between gov/NGO's/research org/academia
- Policy-up cases: Most cited studies initiated from collaboration between gov/NGO's/research org/academia

Applying the theoretical framework



Key: **Red:** what conception of/engagement with the future; **blue:** how these intersect with actions to be taken in the present; **black bold:** whv/to what end: the desired ends of engaging in/with anticipatory governance

Source: Muiderman, Gupta, Vervoort, Biermann – to be published

What challenges exist to use anticipation practices in the formulation of plans/policies?

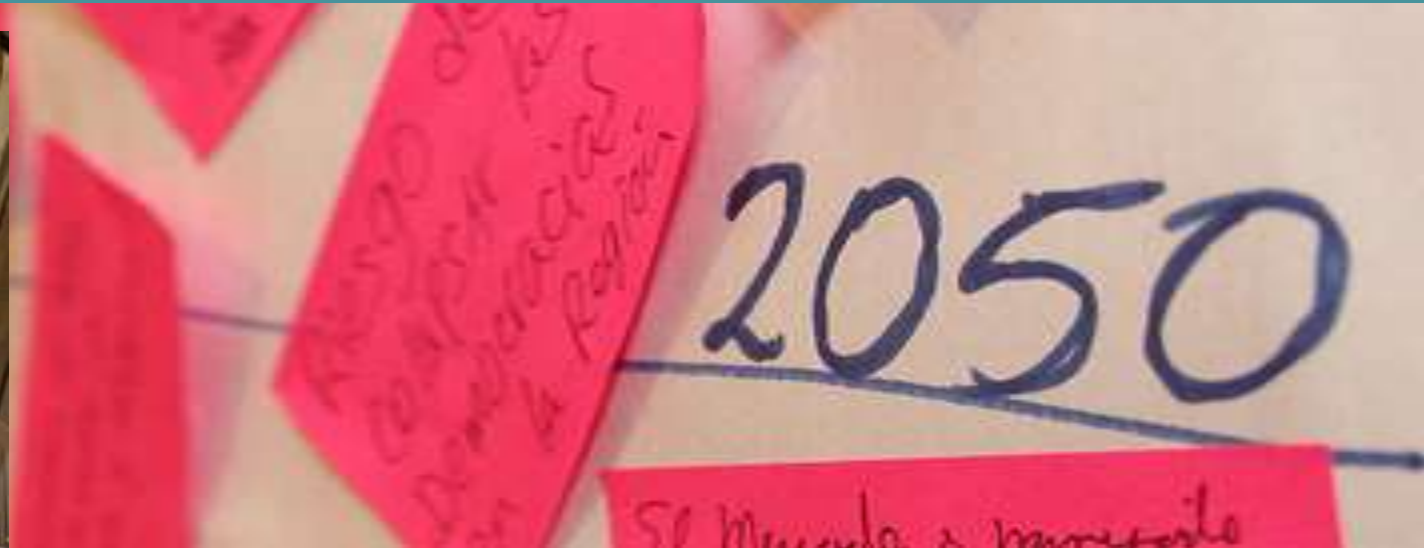
1. One of most vulnerable regions: Urgency of actions/reactions to drought and food security in the present complicate planning for the future
2. Data is scattered or incomplete
3. Lack of colaboration between institutions
4. Lack of capacity (modelling/methodology)

What opportunities exist for a more effective use of anticipation practices?

1. National universities (public and private) with increased capacities
 1. Universidad del Valle –
 2. Universidad Rafael Landívar (IARNA) - different foresight departments
2. International climate commitments increase data harvest on local scale
3. More developed countries in the region with interesting learning curve – possibility for south-south exchange (Costa Rica)
4. Multilateral organisations willing to fund prototyping/testing/implementation of new approaches



Thank you!
Questions?



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