



WORLD
RESOURCES
INSTITUTE

THE ROLE OF RESEARCH FOR EFFECTIVE SDG IMPLEMENTATION

RISING TO THE CHALLENGE

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World Resources Institute



A BIG RESEARCH GAP

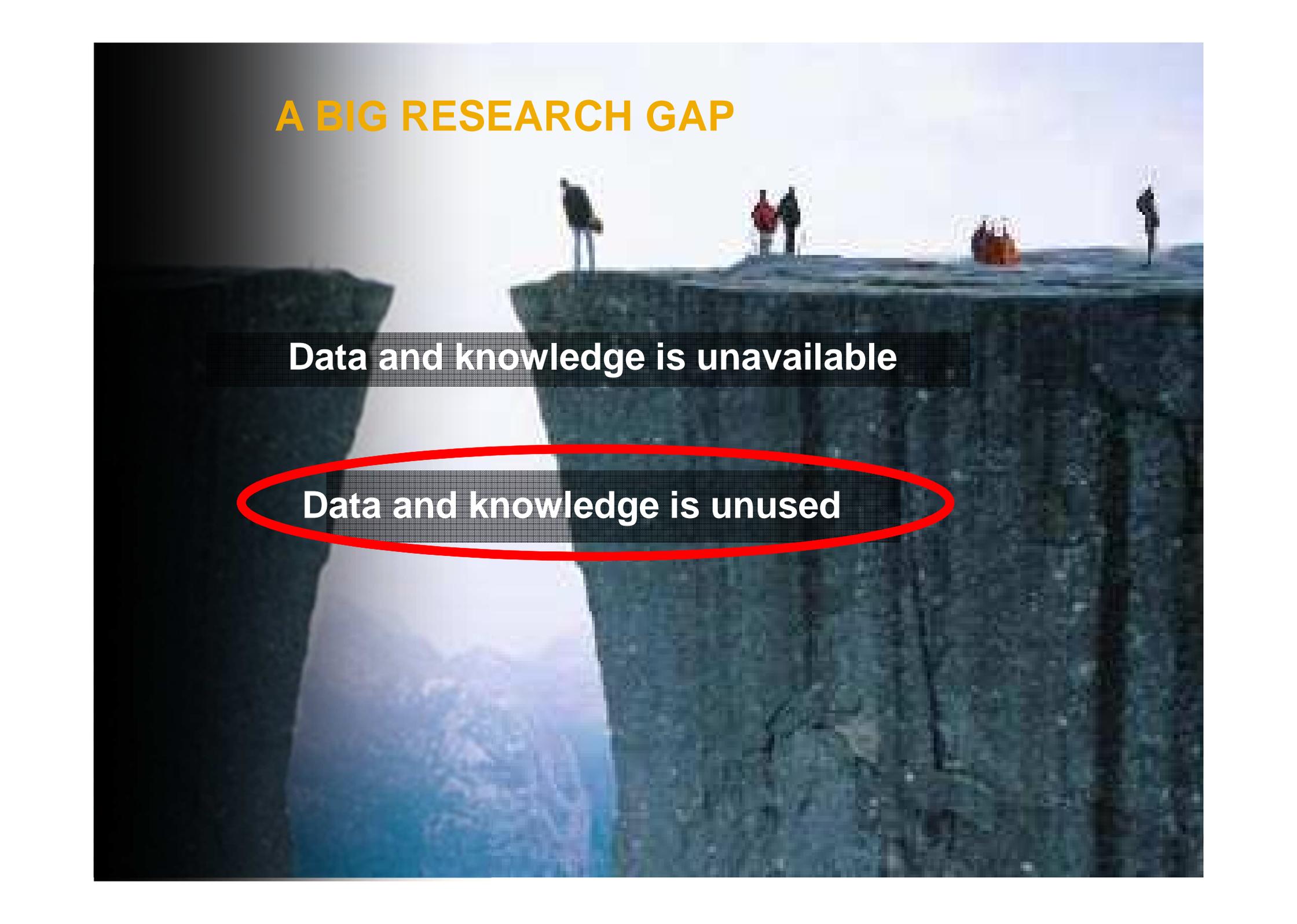
Data and knowledge is unavailable



Drawing in Data



A BIG RESEARCH GAP

A photograph of a deep canyon with people on the rim, used as a metaphor for a research gap. The canyon is wide and deep, with a clear gap between the two sides. Several people are standing on the rim of the canyon, looking down. The sky is overcast and grey.

Data and knowledge is unavailable

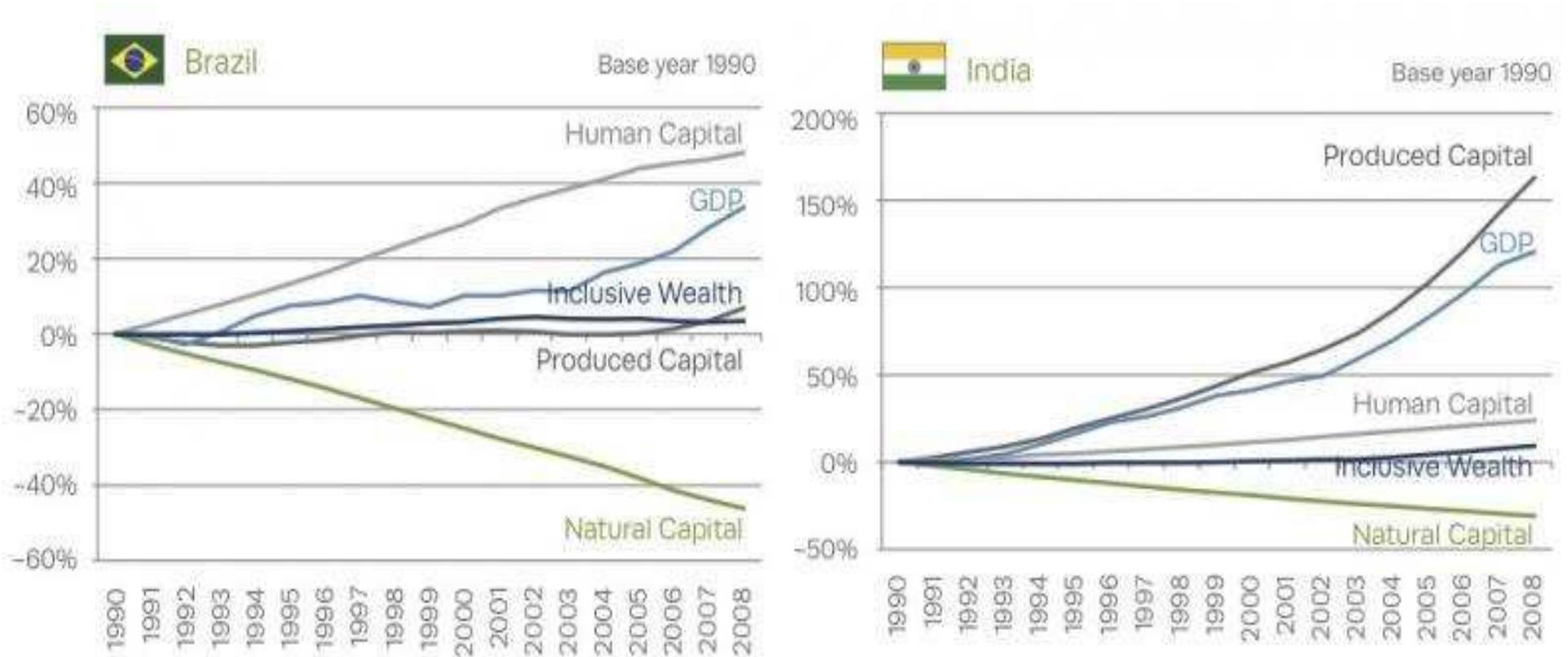
Data and knowledge is unused



1. MORE RESEARCH ON INTERCONNECTION BETWEEN 3 PILLARS OF SUSTAINABLE DEVELOPMENT

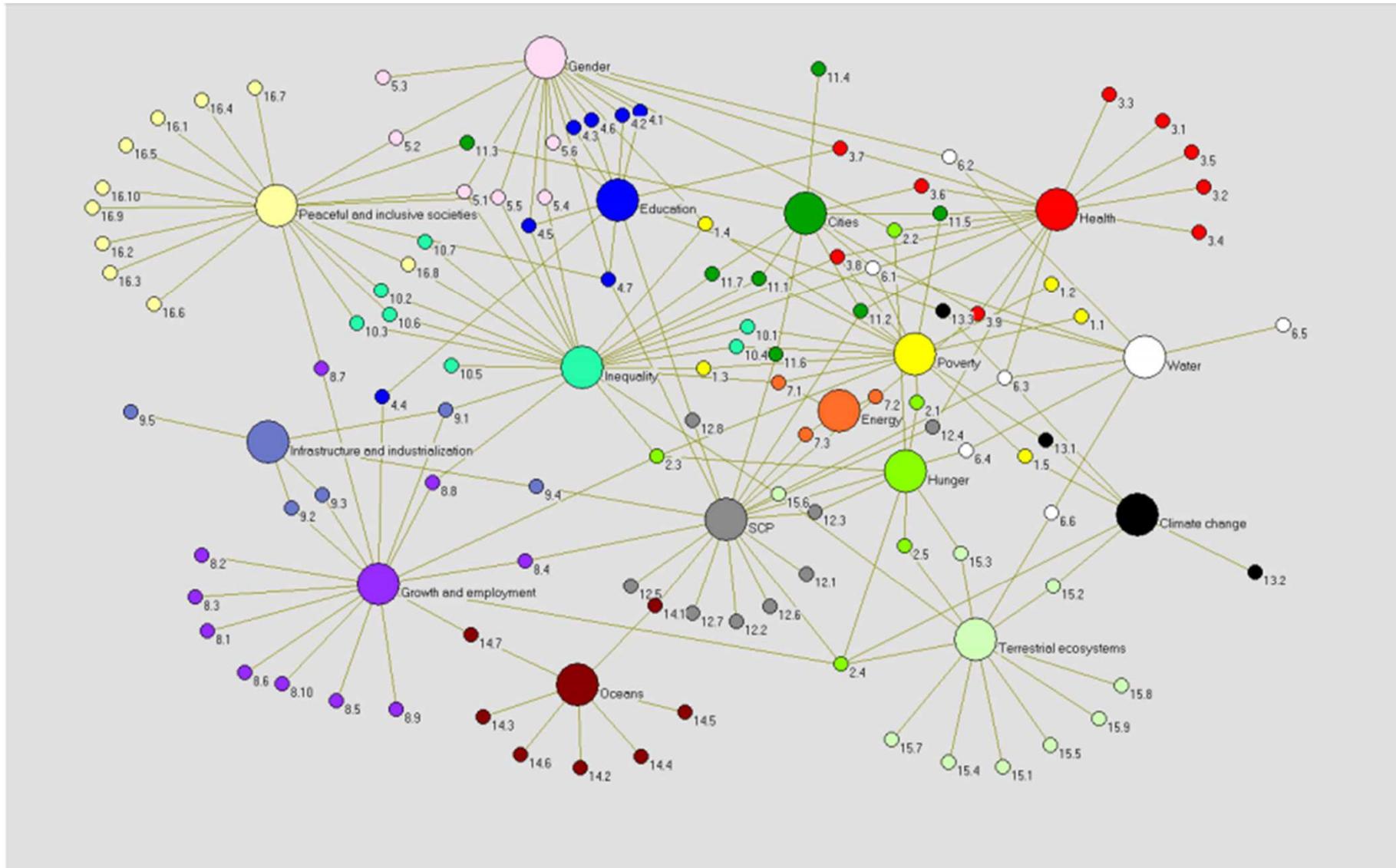


UNECONOMIC GROWTH



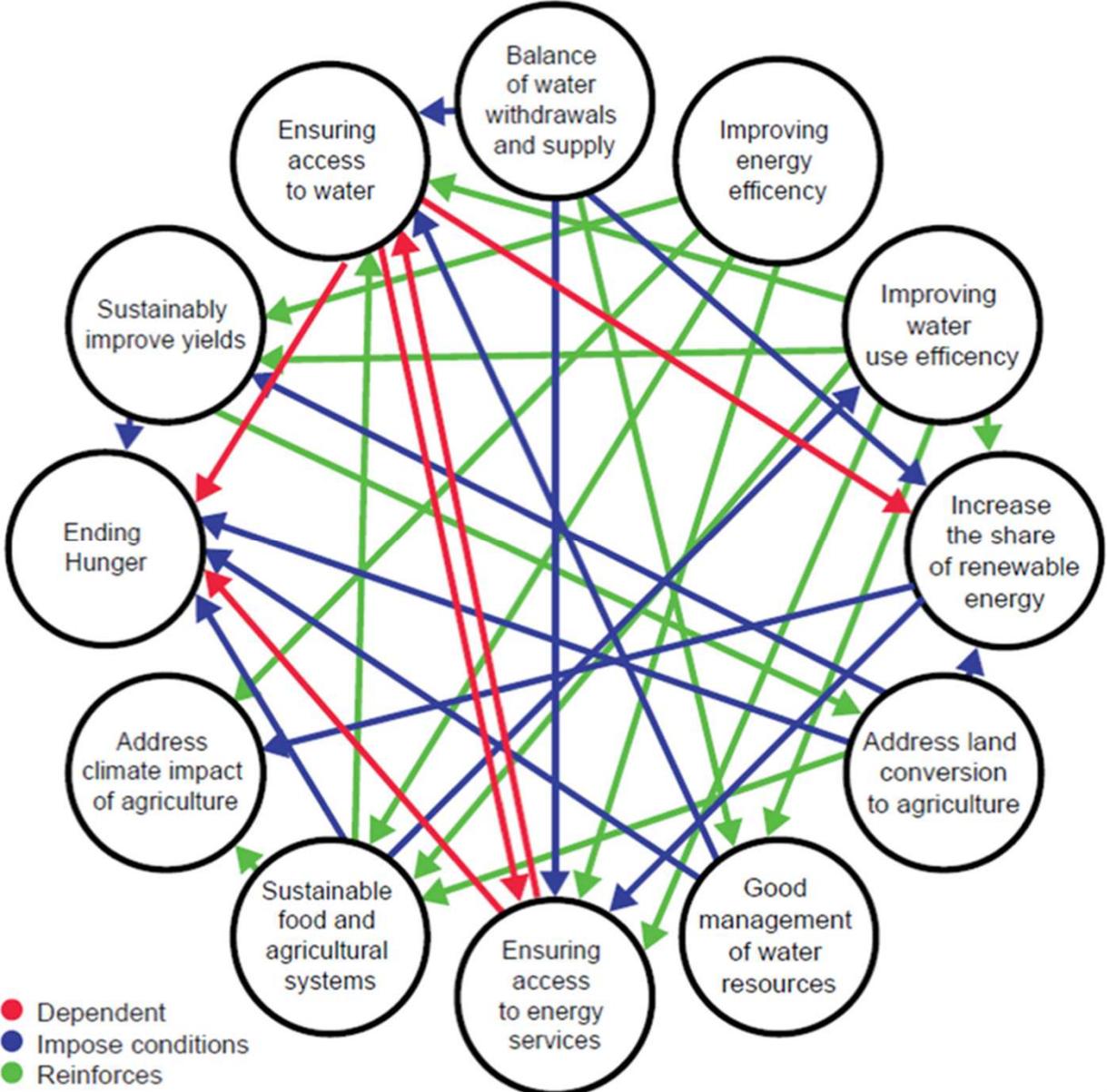
Source: UNU-IHDP, 2012

SDGS AS ARE AN INTEGRATED ECOSYSTEM



Source: David Le Blanc, Rio+20 Working Paper 4,
“Towards Integration at Last? The SDGs as a Network of Targets”

INTERDEPENDENCIES IMPLY NEW RESPONSIBILITIES



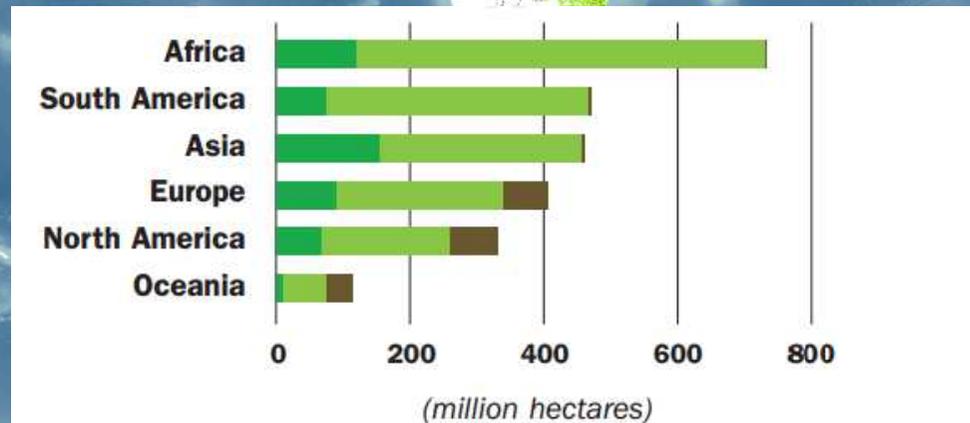
Source: SEI, Weitz *et al.* (2014).

Accelerate multi-disciplinary research that break down traditional academic silos and the corresponding governance silos



Example: restoration

More than 2 billion hectares have opportunity for restoration globally



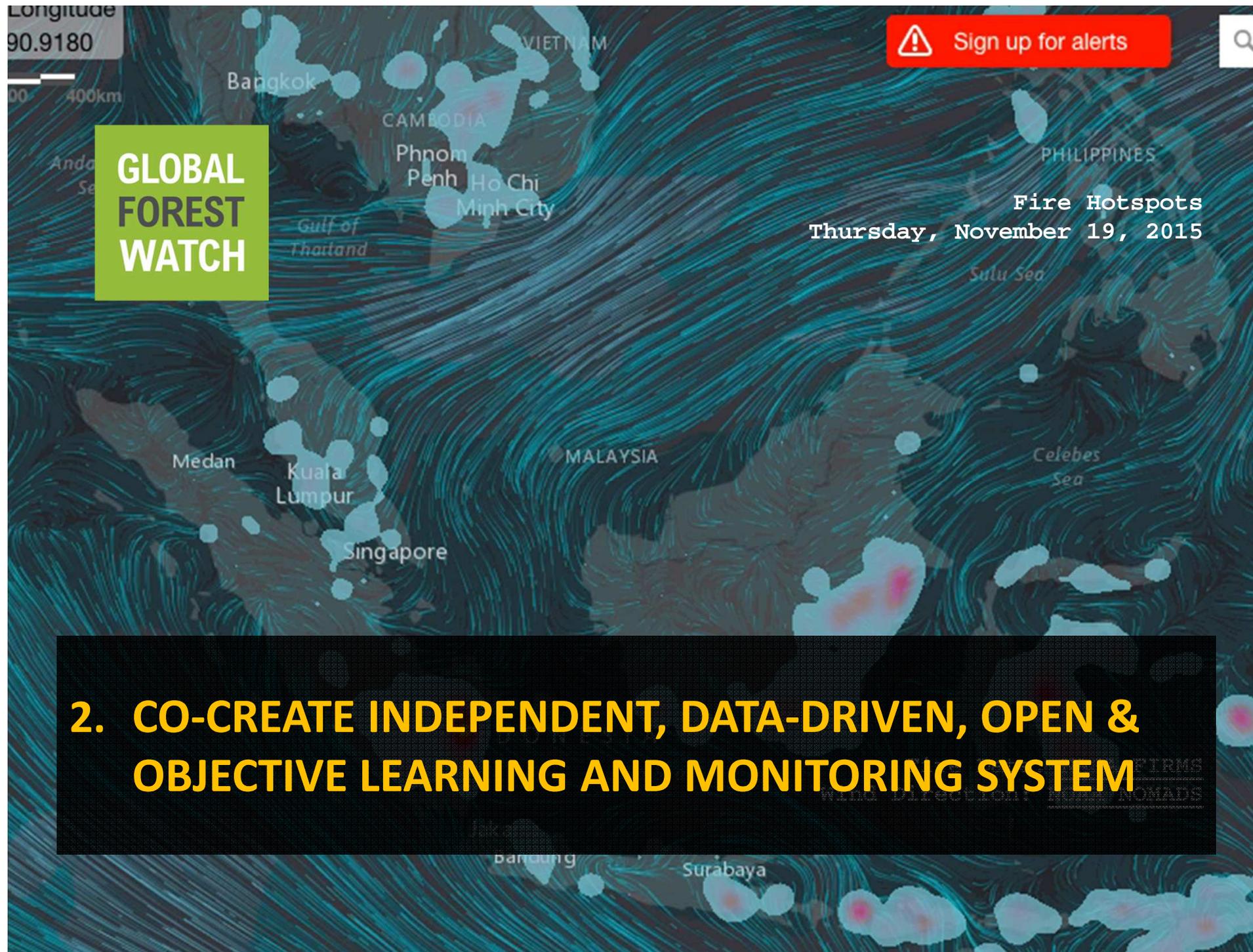
Is it about restoring the benefits that trees provide in the landscape



Benefits of restoring 150 mln hectares:

- \$84 billion in economic benefits annually
- 47 gigatons of CO₂e captured (up to 15% reduction in emissions gap)
- Cultural benefits





 Sign up for alerts

**GLOBAL
FOREST
WATCH**

Fire Hotspots
Thursday, November 19, 2015

2. CO-CREATE INDEPENDENT, DATA-DRIVEN, OPEN & OBJECTIVE LEARNING AND MONITORING SYSTEM

Data drives impact





AQUEDUCT WATER RISK ATLAS



Analyze Locations ▼

Risk Categories: [Clear All](#) [Add Location](#) [Import](#) [Export](#)

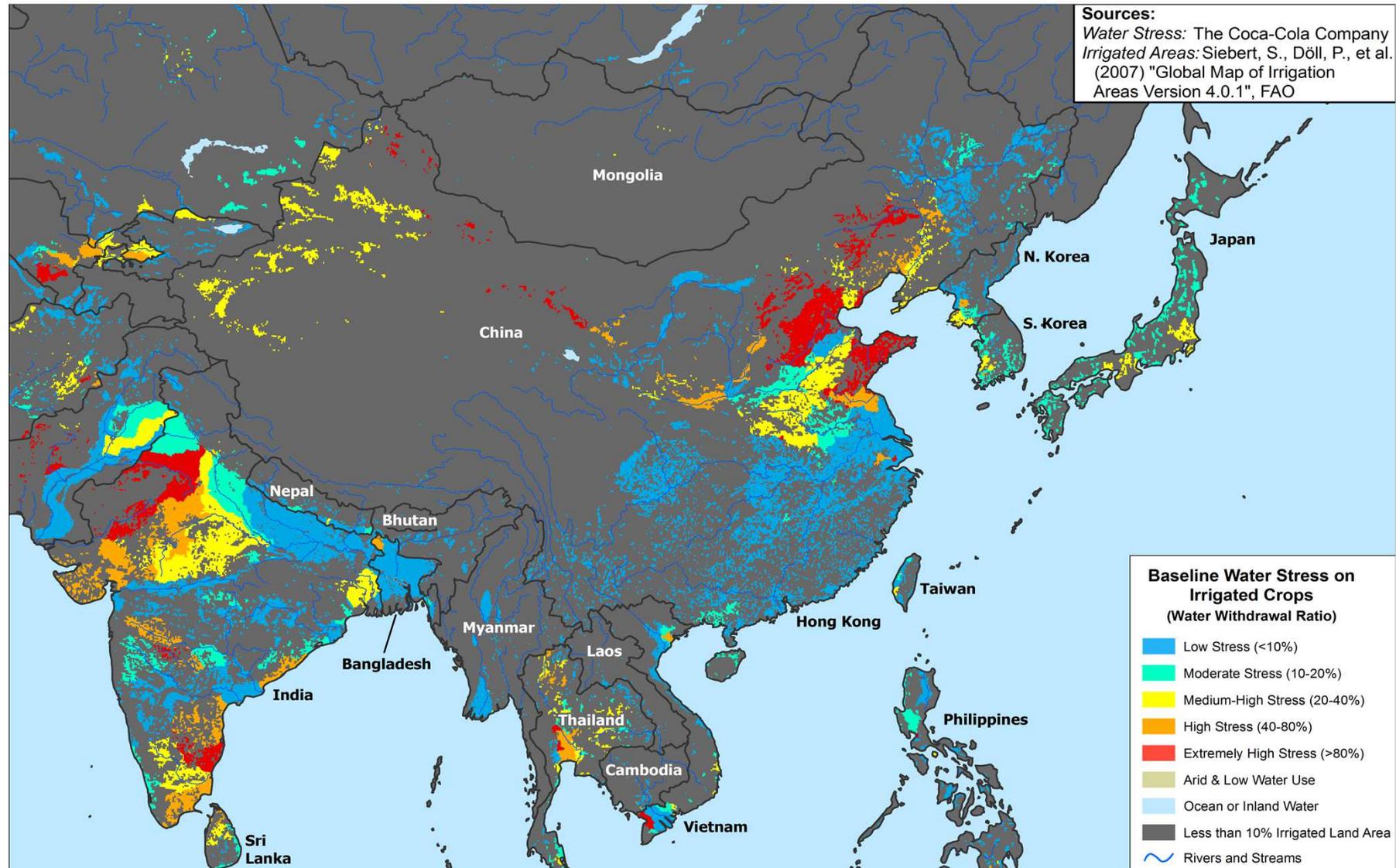
Overall Water Risk | Physical Risk QUANTITY | Physical Risk QUALITY | Regulatory & Reputational Risk | Projected Change

	Location Title	Country	Catchment	Overall Water Risk		
				Overall Water Risk	Physical Risk QUANTITY	Physical Risk QUALITY
⊗ ⊗	Location 1	Democratic Republic of the Congo	CONGO	2. Low to medium risk (1-2)	1. Low risk (0-1)	2. Low to medium risk (1-2)
⊗ ⊗	Location 3	India	INDUS	5. Extremely high risk (4-5)	5. Extremely high risk (4-5)	5. Extremely high risk (4-5)



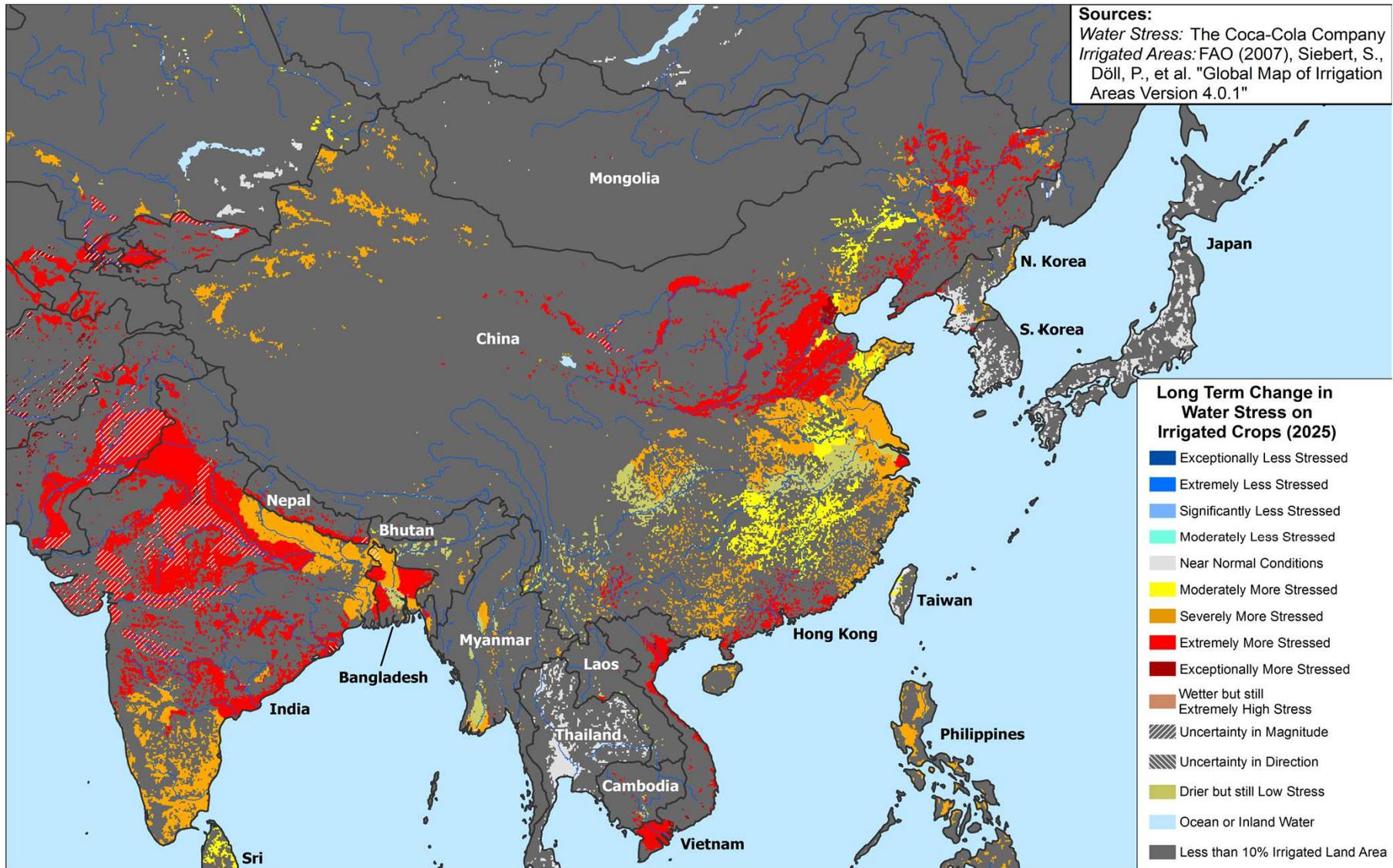
39% of irrigated cropland in this region is located in areas of water stress concern

Baseline Water Stress in areas with Irrigated Agriculture



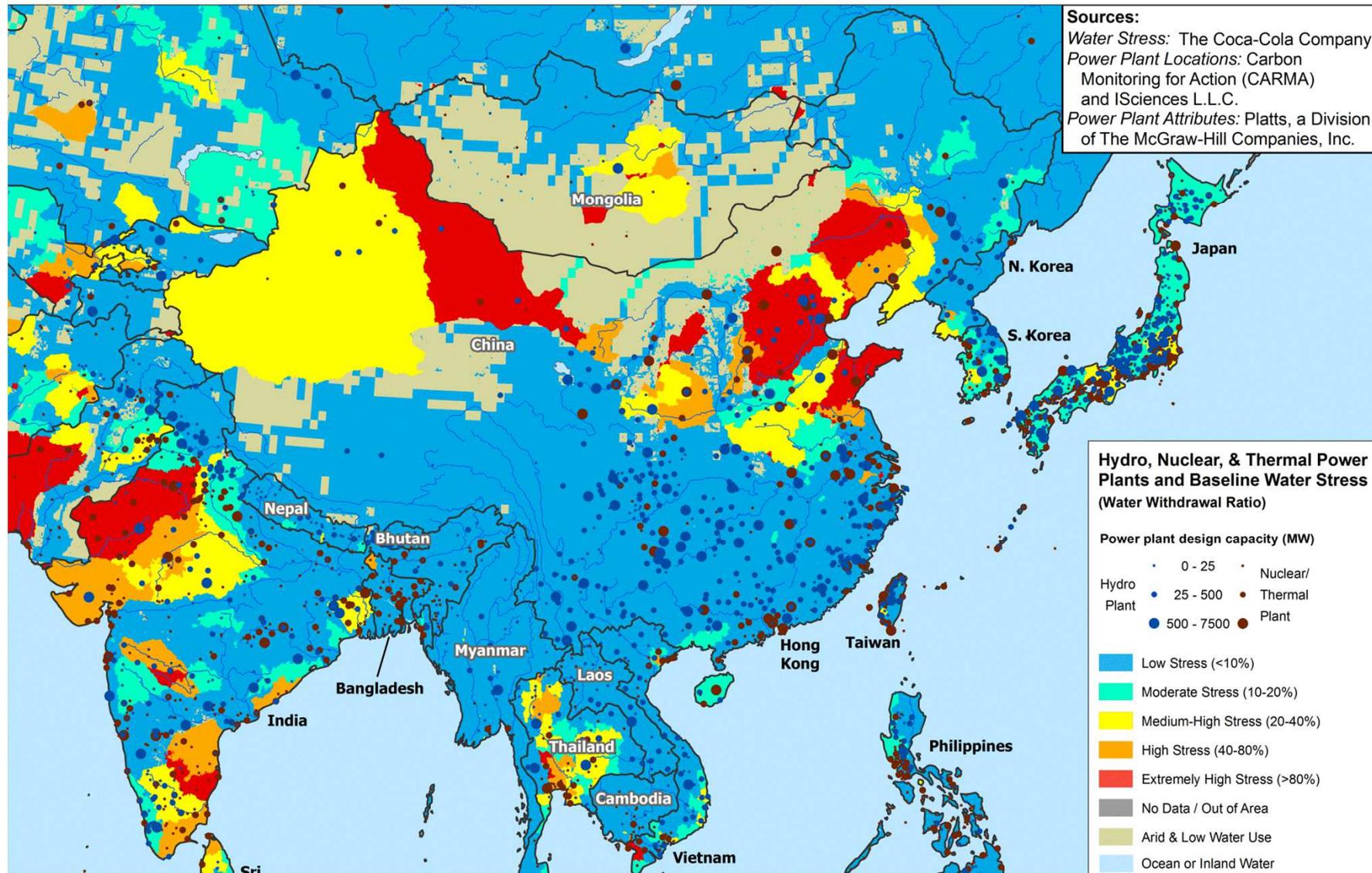
75% of current irrigated cropland in this region would see water stress grow 2 to 8 times worse by 2025

Change in Water Stress by 2025 in areas with Irrigated Agriculture (IPCC Scenario A1B)



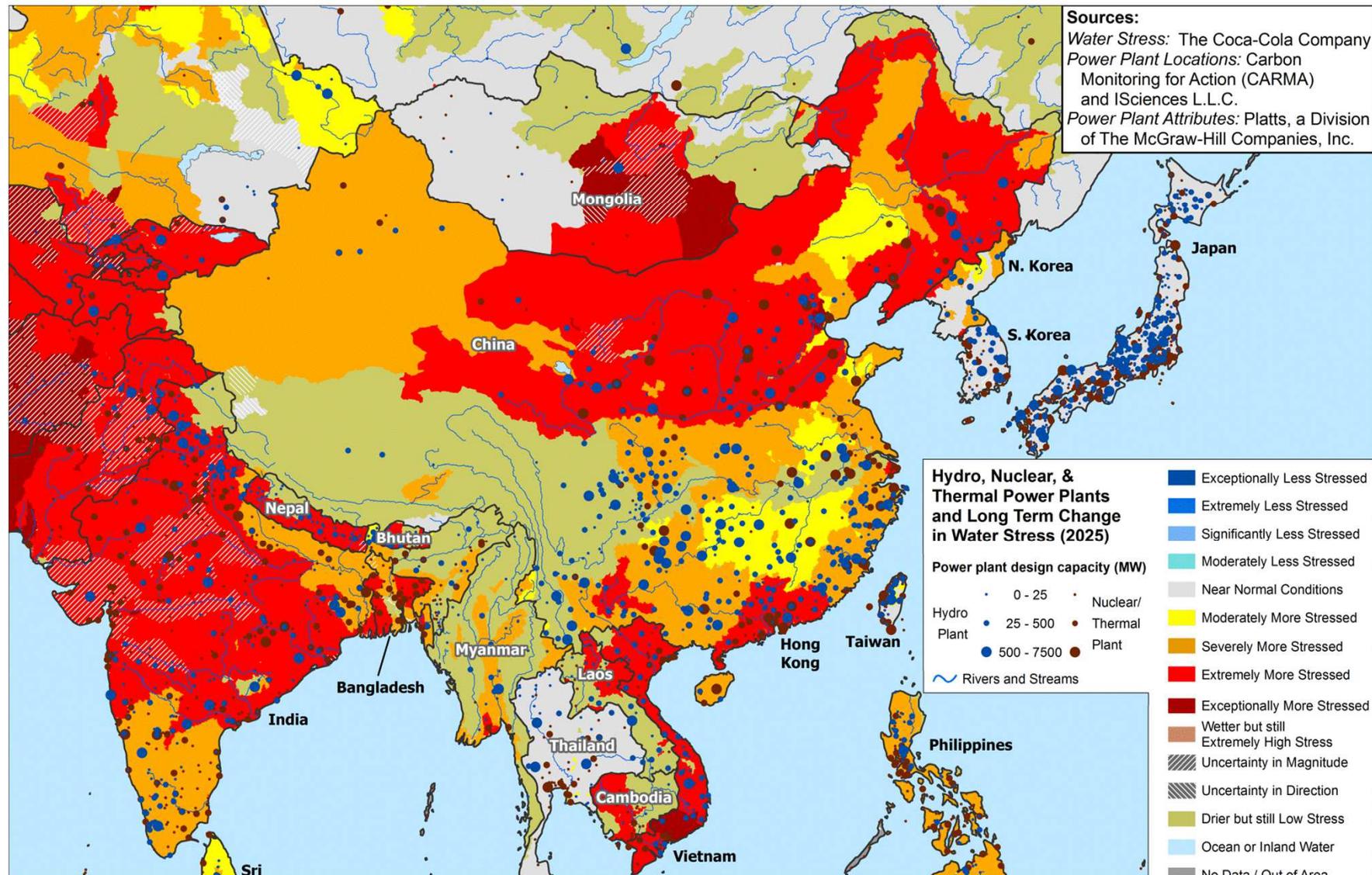
19% of power plant design capacity in this region is located in areas of water stress concern

Baseline Water Stress and Power Plants

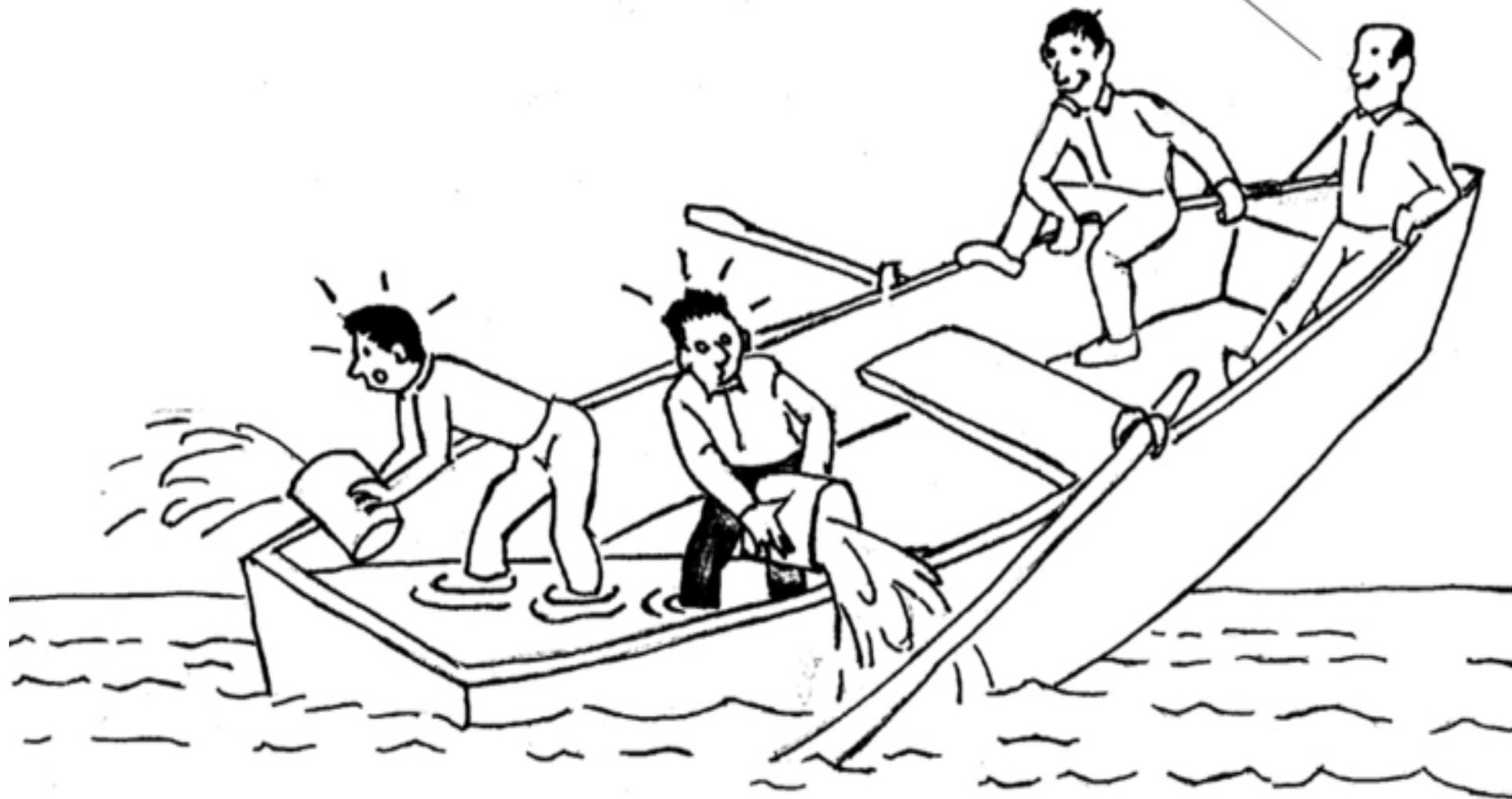


55% of current power plant design capacity in this region would see water stress grow 2 to 8 times worse by 2025

Change in Water Stress by 2025 and Power Plants (IPCC Scenario A1B)



Sure glad the hole isn't at our end.



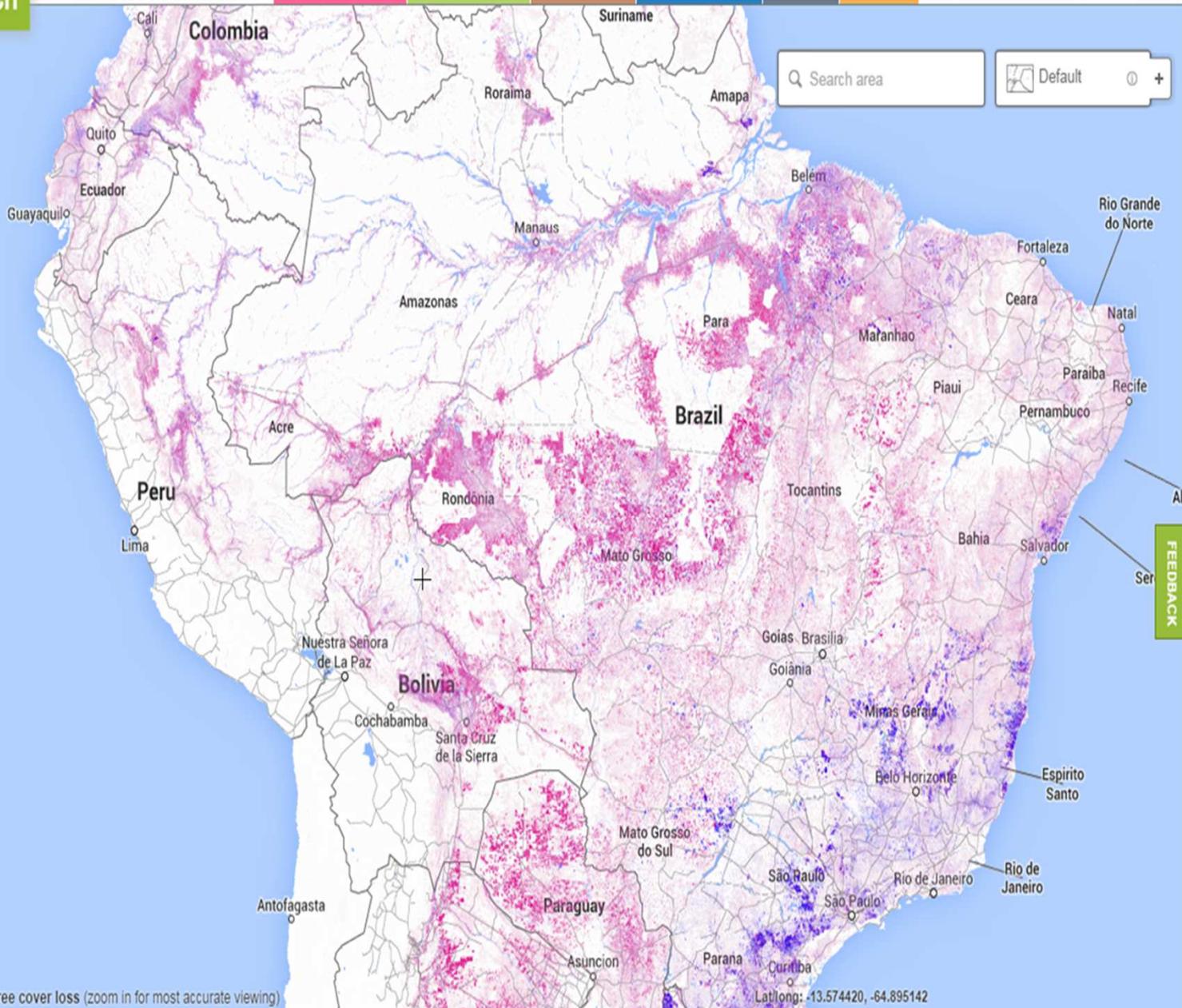


FOREST CHANGE

- UMD/Google tree cover gain
 - UMD/Google tree cover loss
- Displaying loss with > 10% canopy density.

Search area

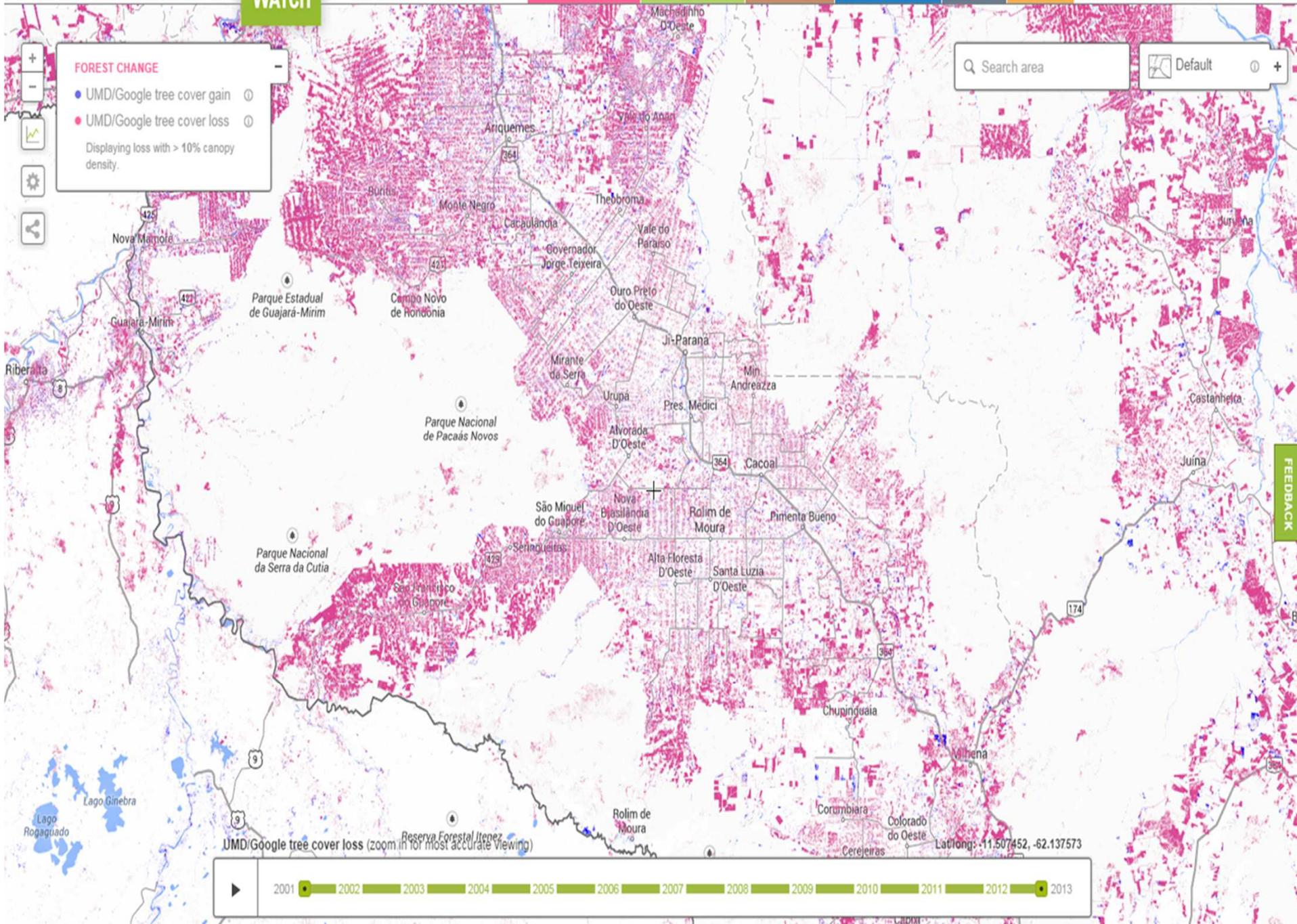
Default



FEEDBACK

UMD/Google tree cover loss (zoom in for most accurate viewing)





FEEDBACK

FOREST CHANGE

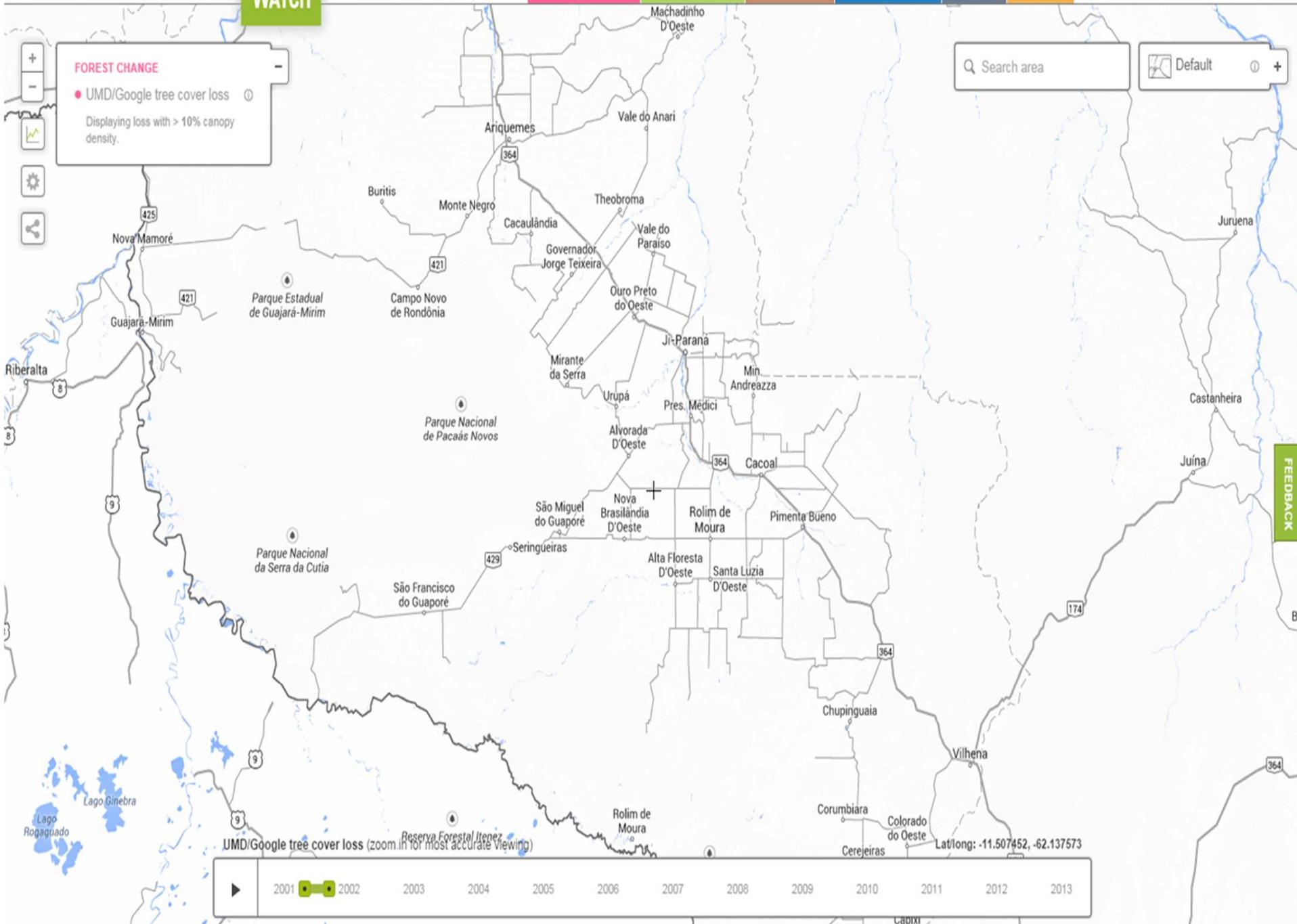
- UMD/Google tree cover loss ⓘ

Displaying loss with > 10% canopy density.

Map navigation controls: zoom in (+), zoom out (-), pan, and a settings gear icon.

Search area

Default ⓘ +

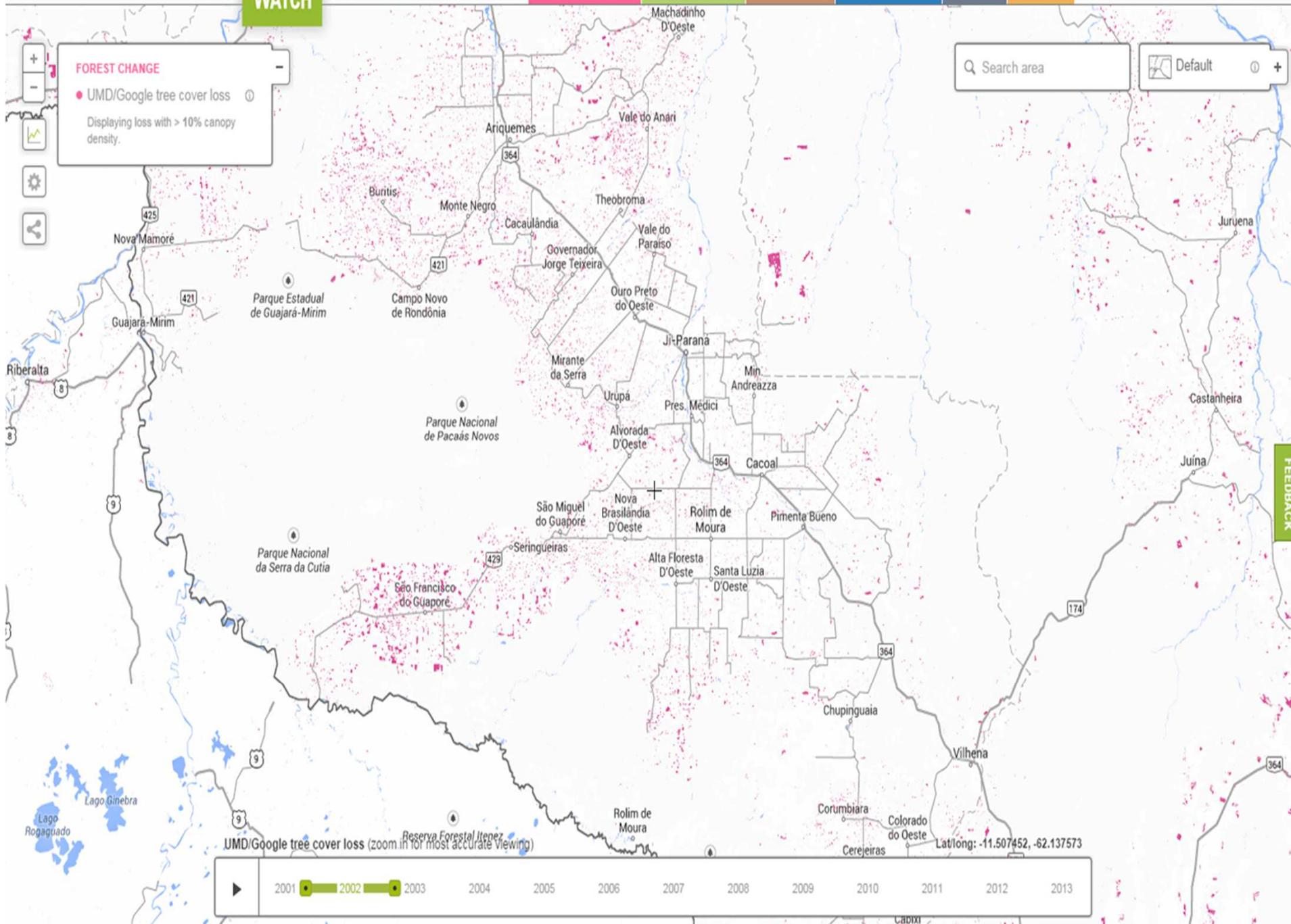


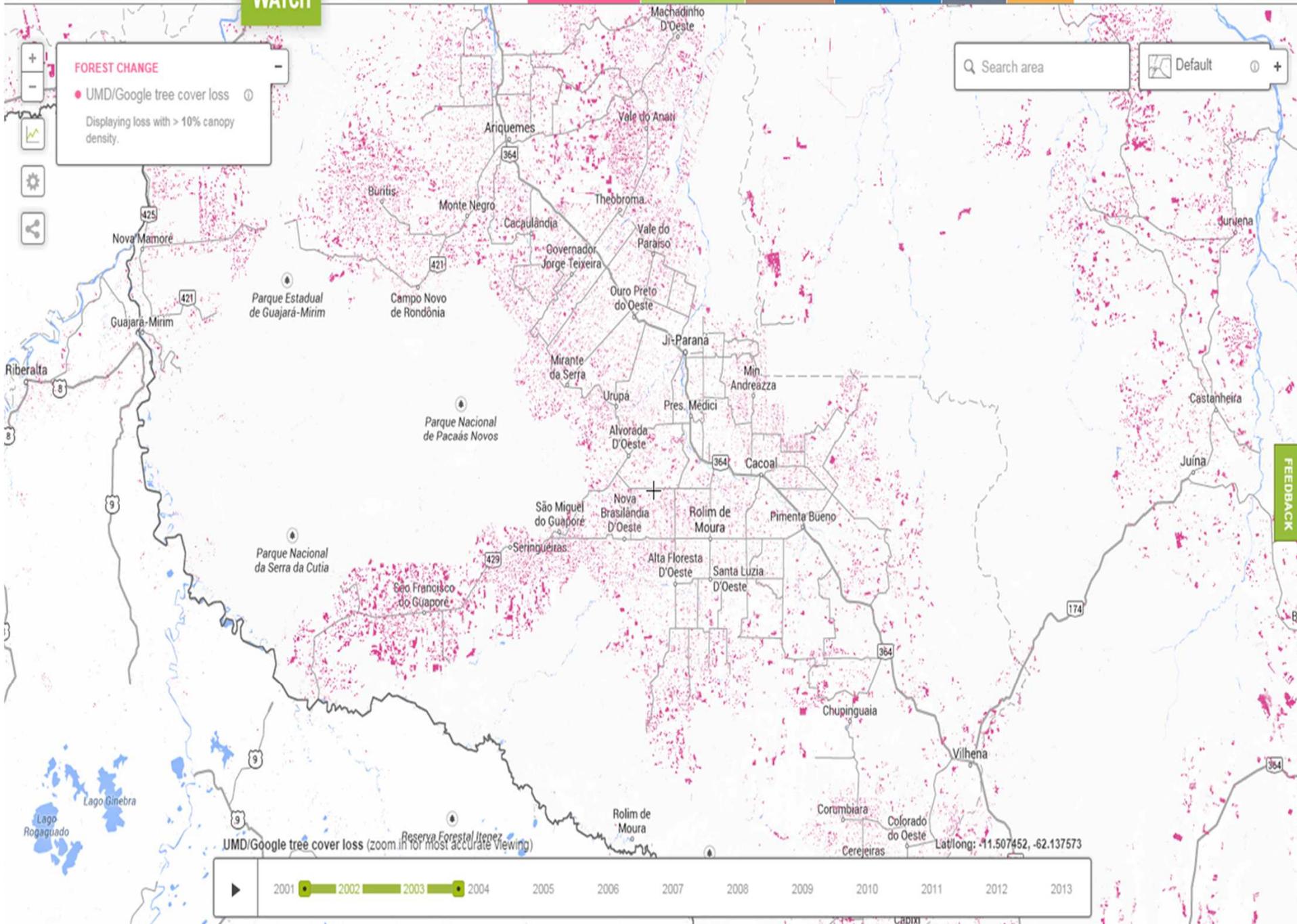
UMD/Google tree cover loss (zoom in for most accurate viewing)

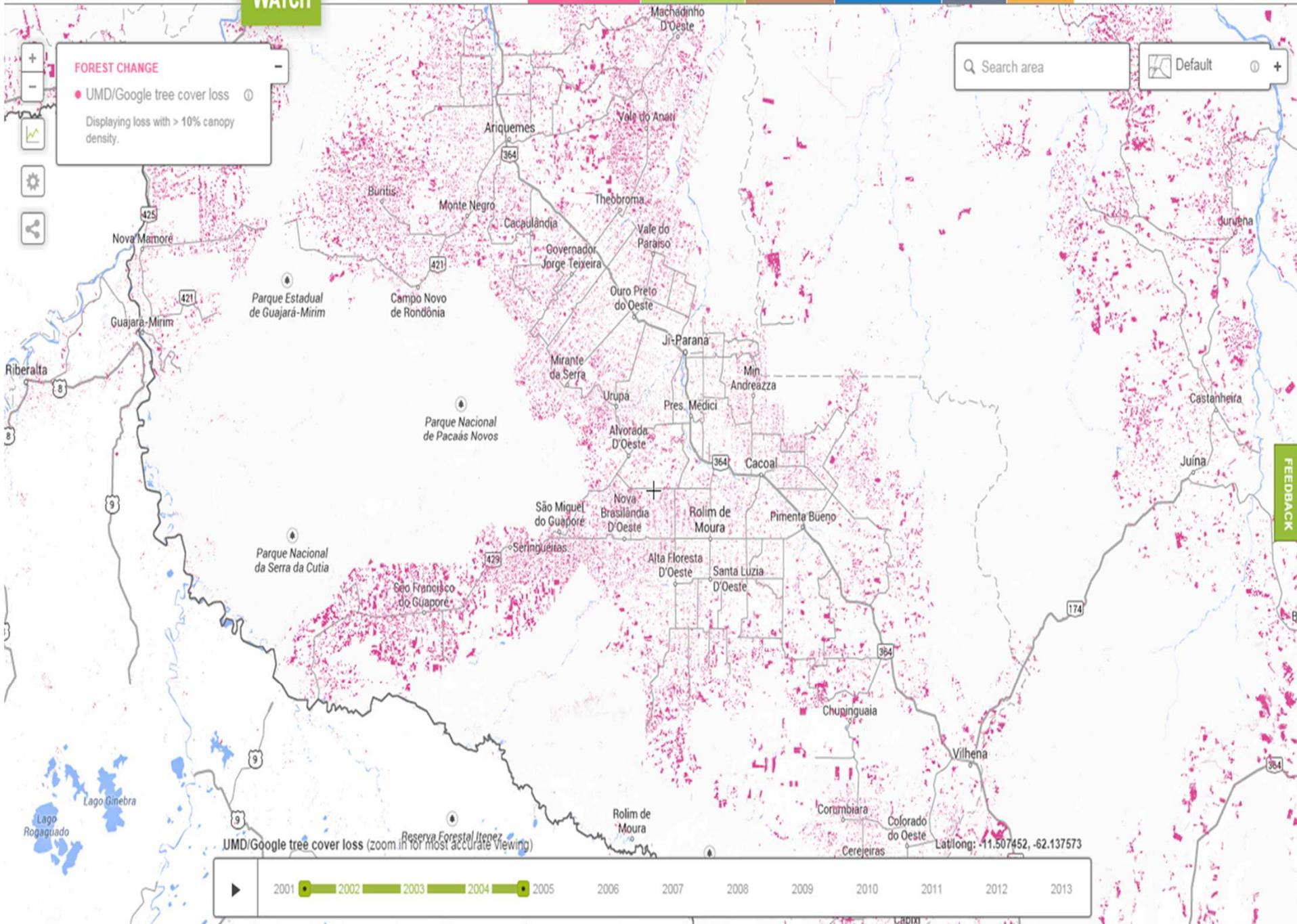
2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013

Lat/long: -11.507452, -62.137573

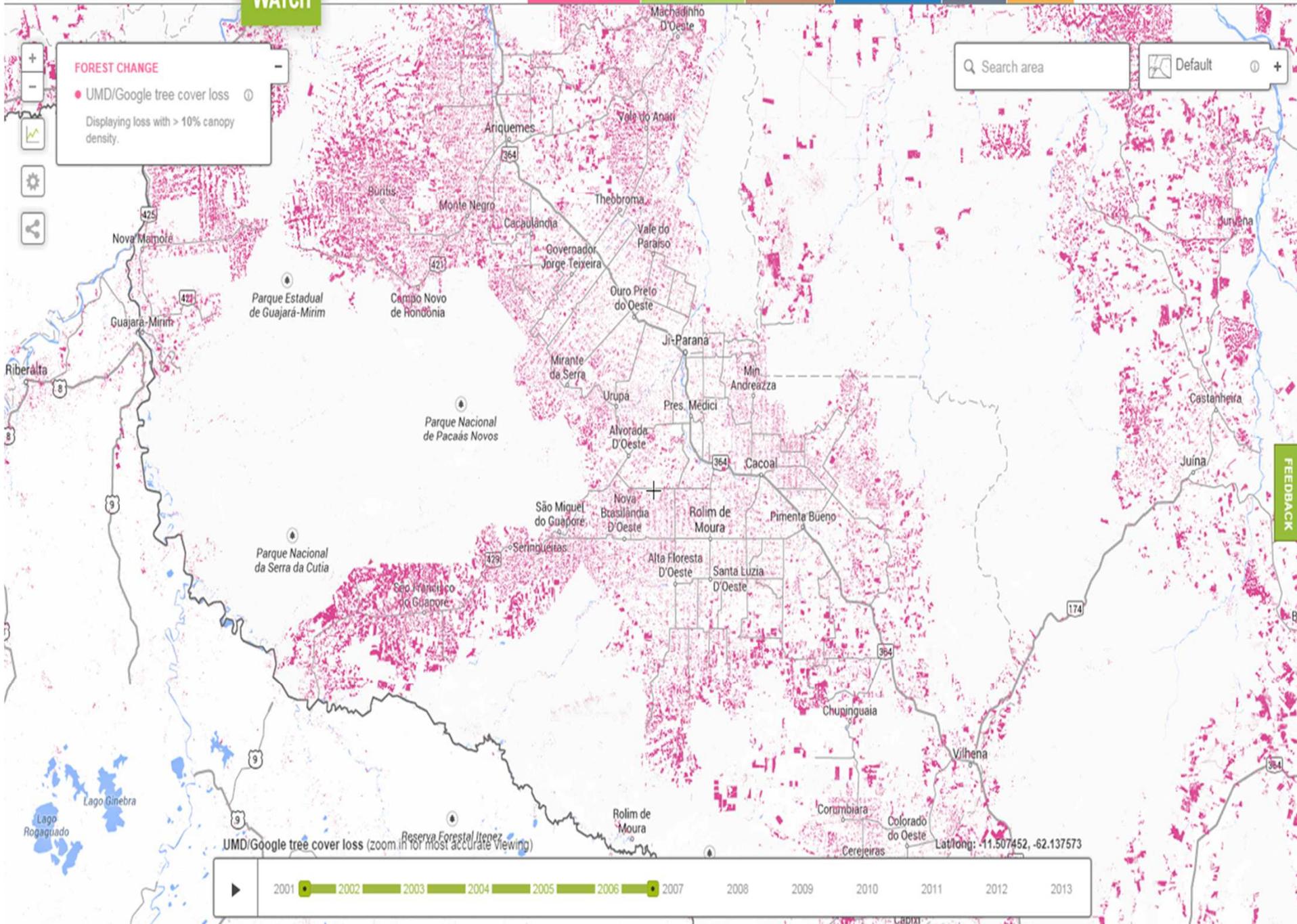
FEEDBACK

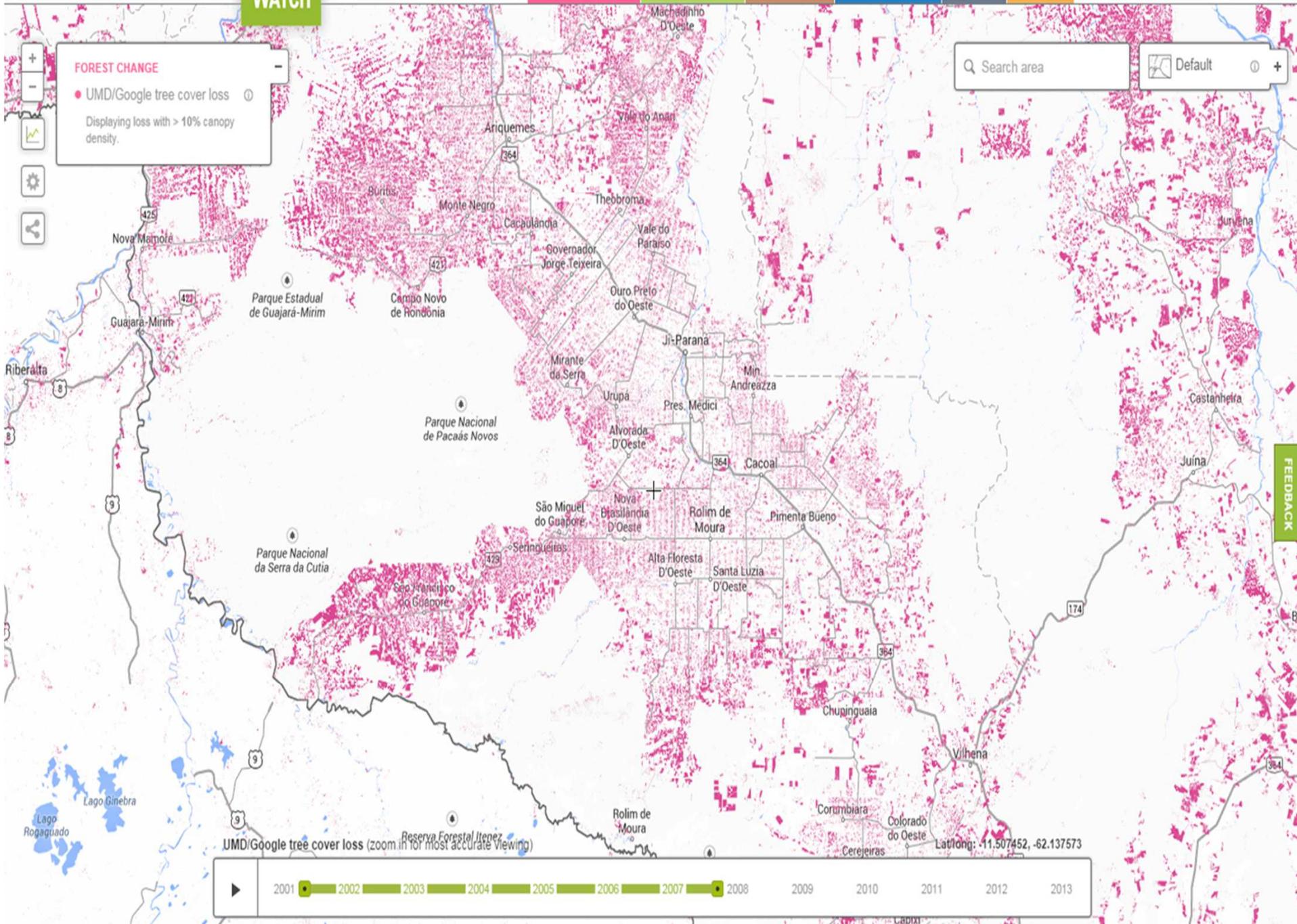




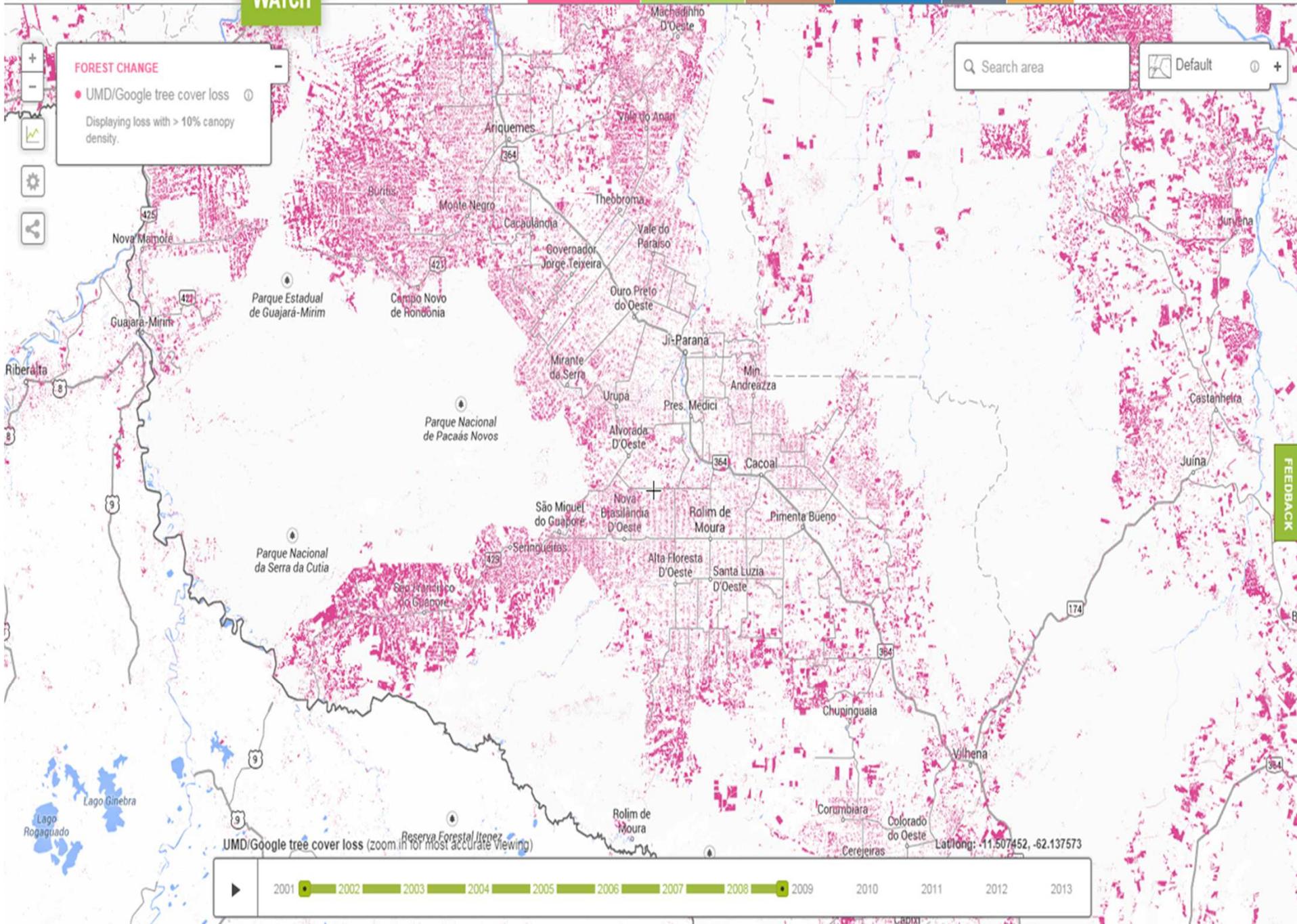


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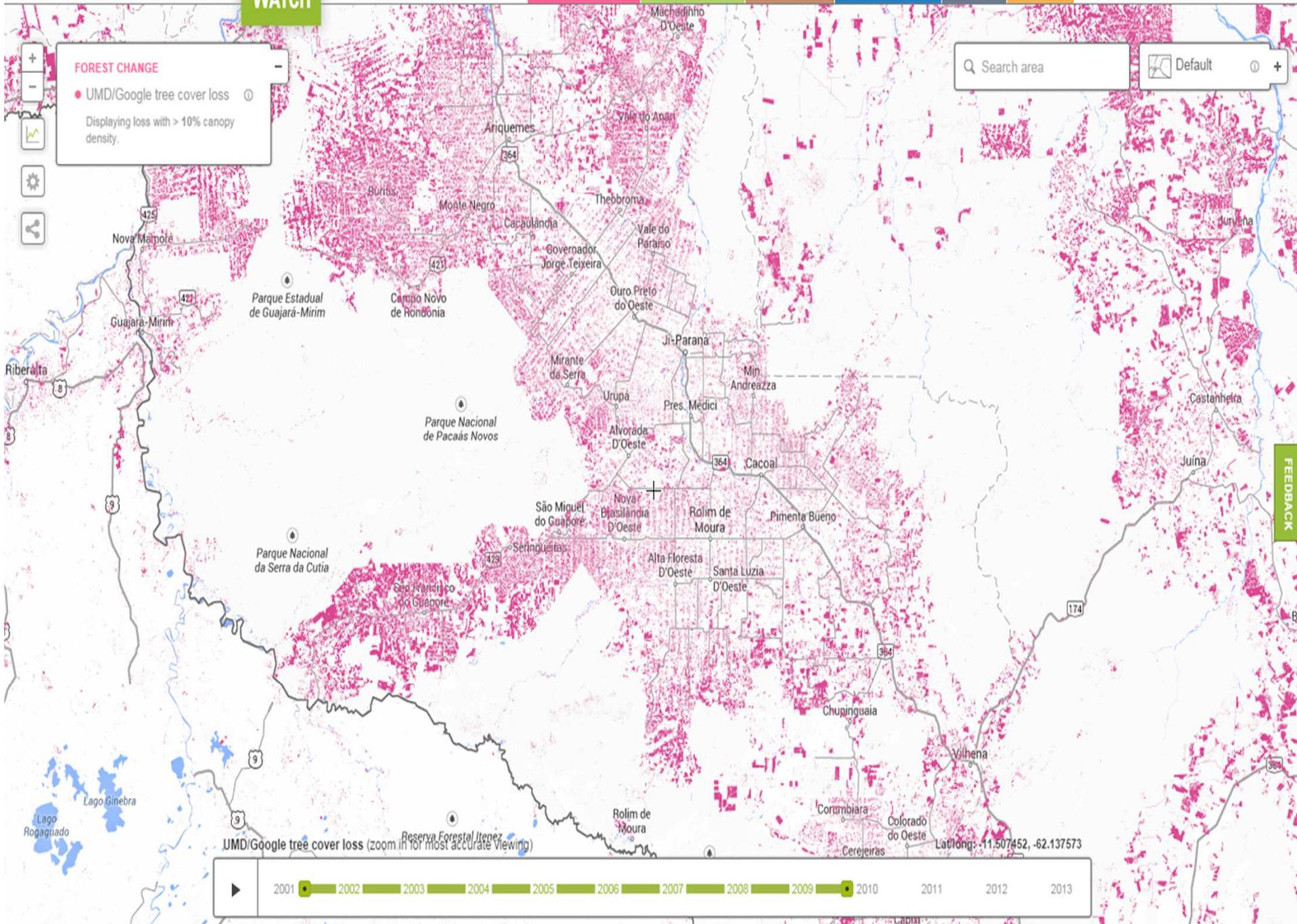




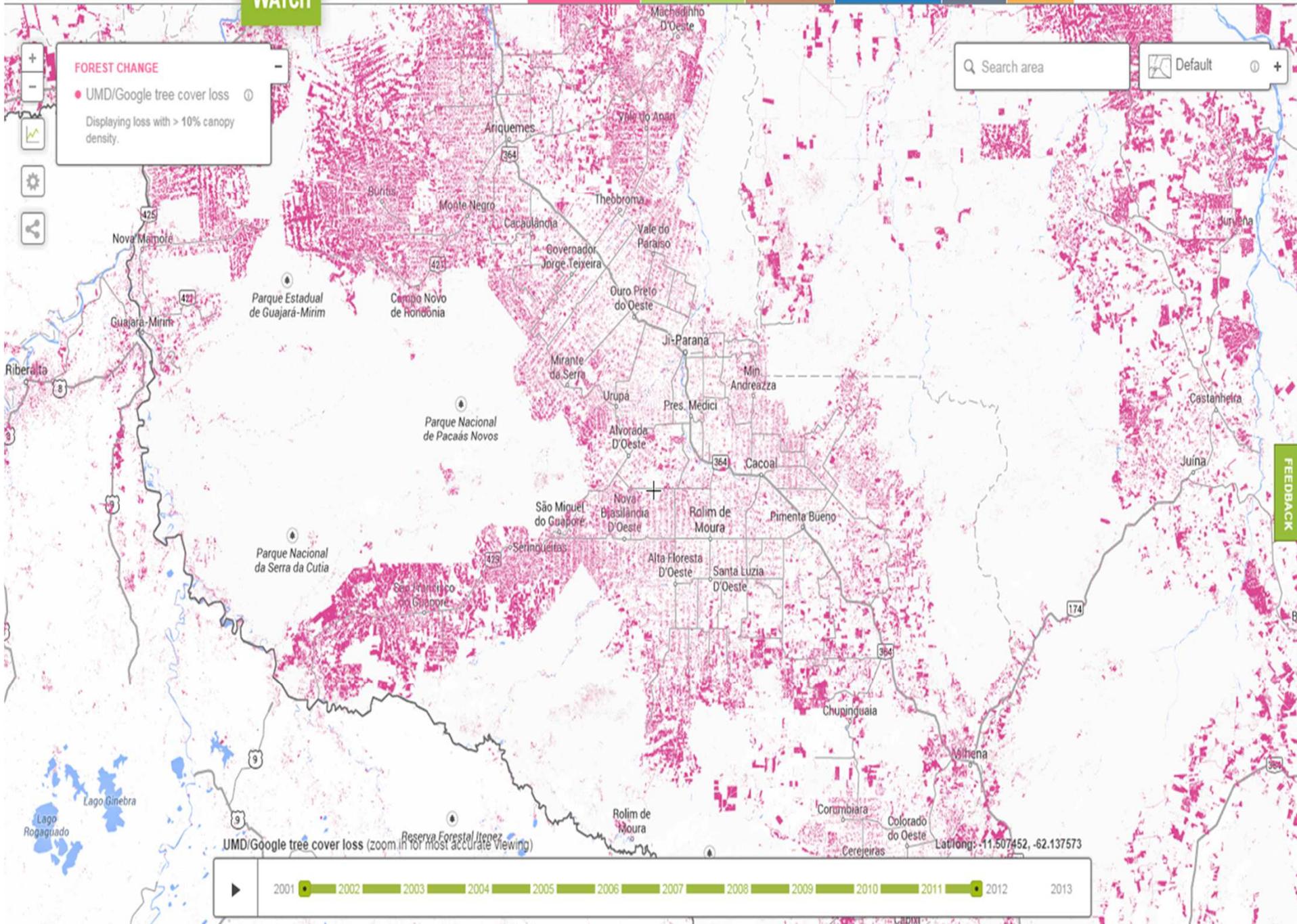
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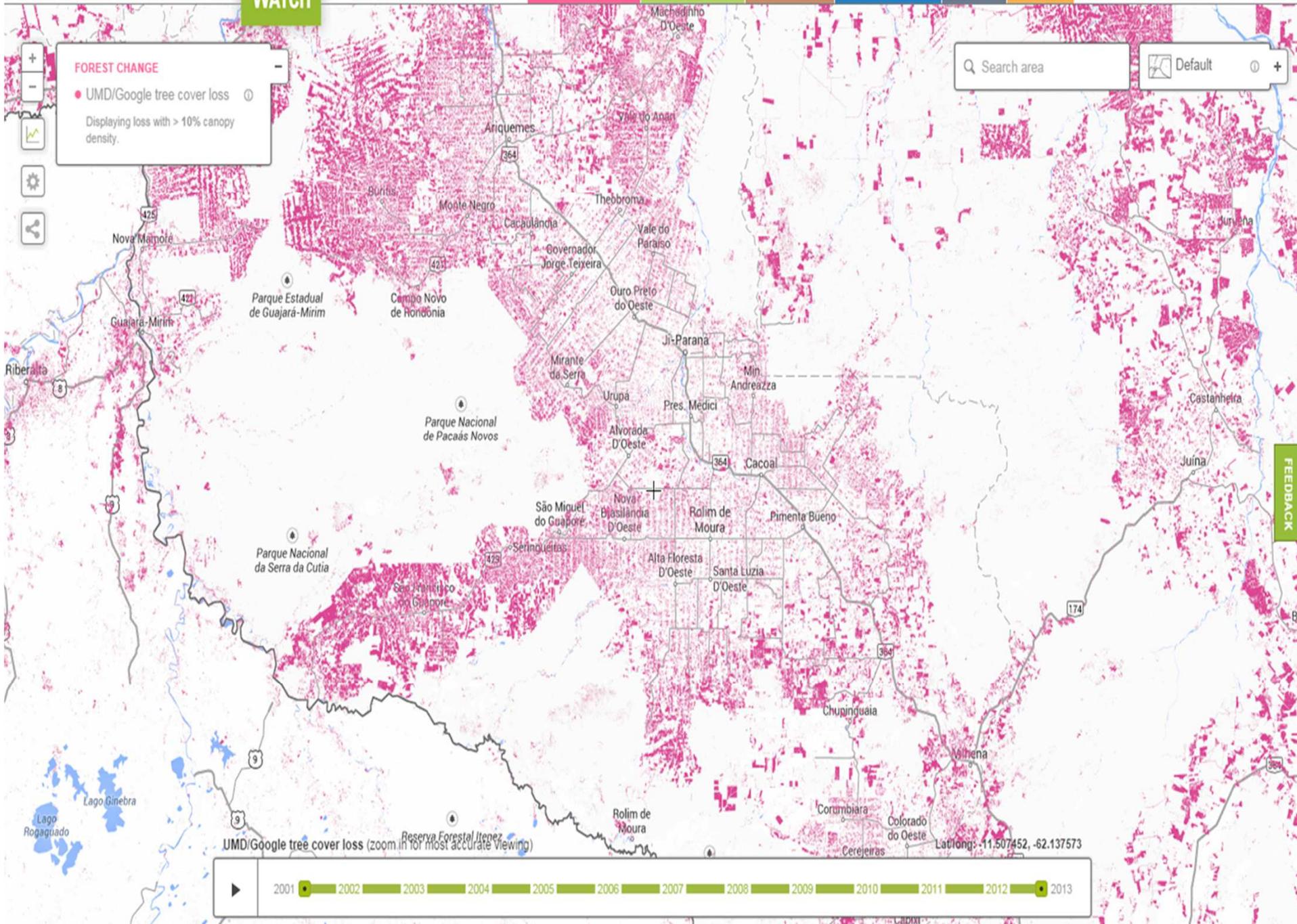
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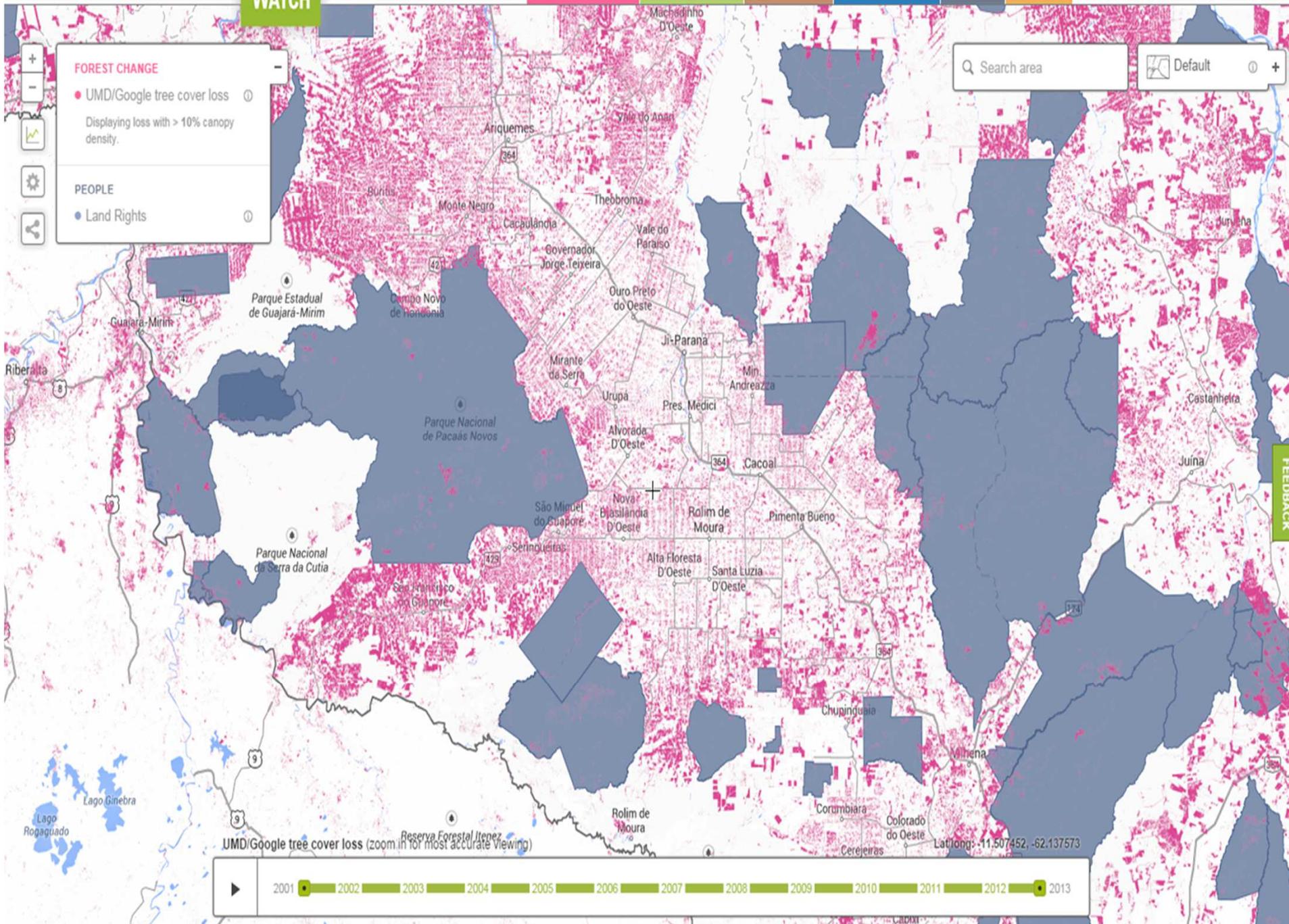
FEEDBACK



FEEDBACK



FEEDBACK



3. INVESTIGATING THE ECONOMIC RATIONALE OF INVESTING IN ECOSYSTEMS



Source: FAO 2015; Photo: Alexander Edward/Flickr

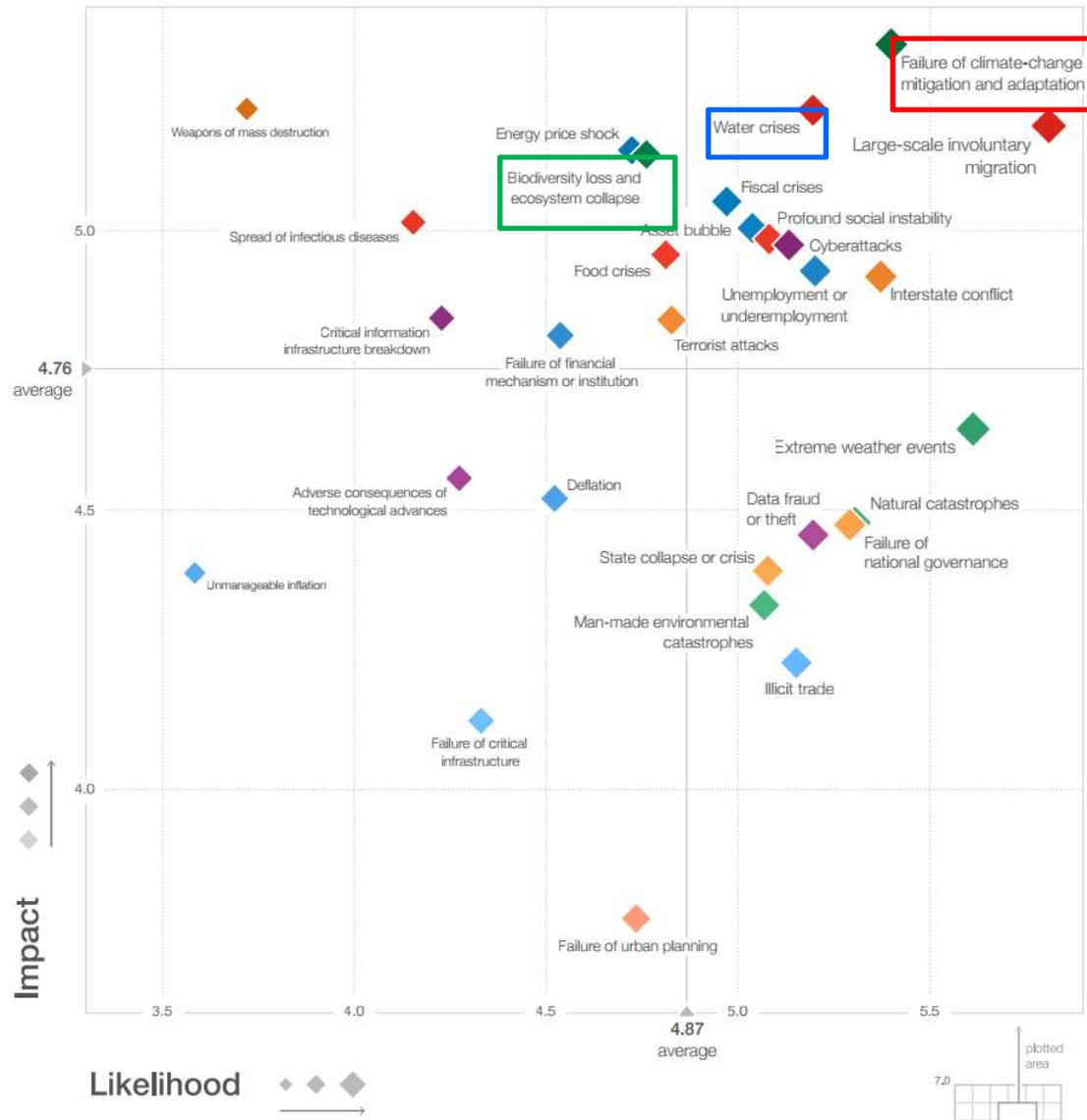
WRI'S RESEARCH STANDARDS GO BEYOND THE USUAL

- Think tank**
- ✓ Robust
 - ✓ Well written & presented
 - ✓ Independent of bias
 - ✓ Value added

- Do tank**
- ✓ Fit for audience
 - ✓ Timely
 - ✓ Institutionally coherent
 - ✓ Actionable



WORLD ECONOMIC FORUM: ECOSYSTEM DEGRADATION IS A GLOBAL RISK

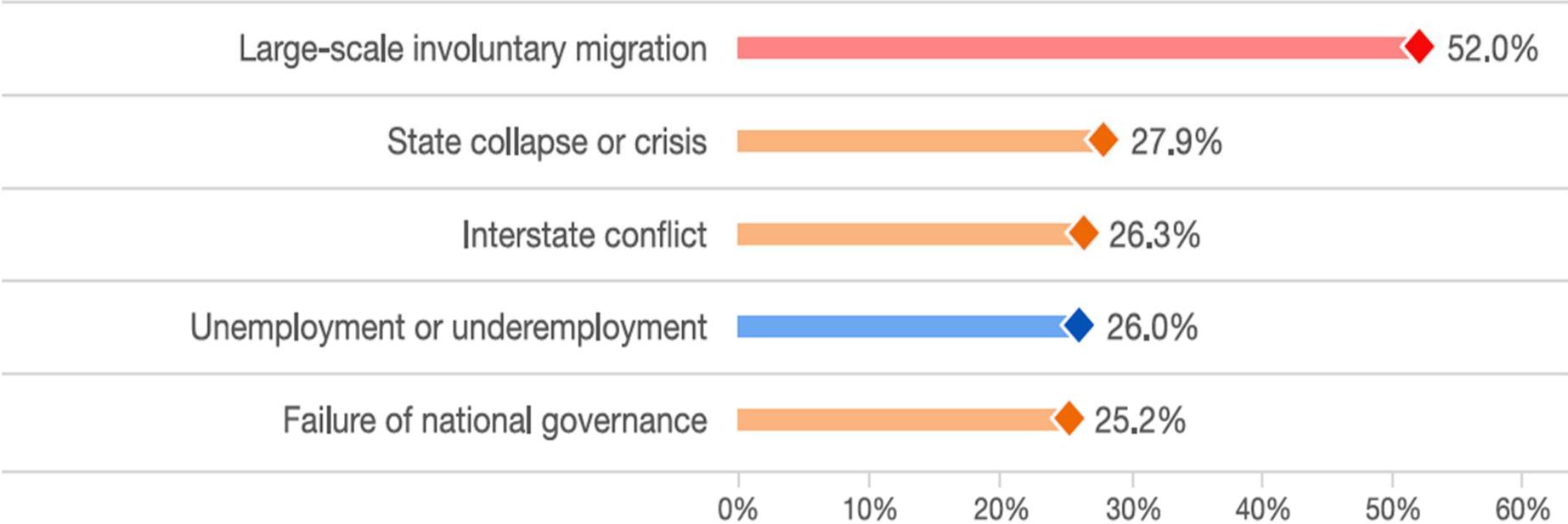


Top 10 risks in terms of
Impact

- 1 Failure of climate-change mitigation and adaptation
- 2 Weapons of mass destruction
- 3 Water crises
- 4 Large-scale involuntary migration
- 5 Energy price shock
- 6 Biodiversity loss and ecosystem collapse
- 7 Fiscal crises
- 8 Spread of infectious diseases
- 9 Asset bubble
- 10 Profound social instability

WHAT WORRIES YOU?

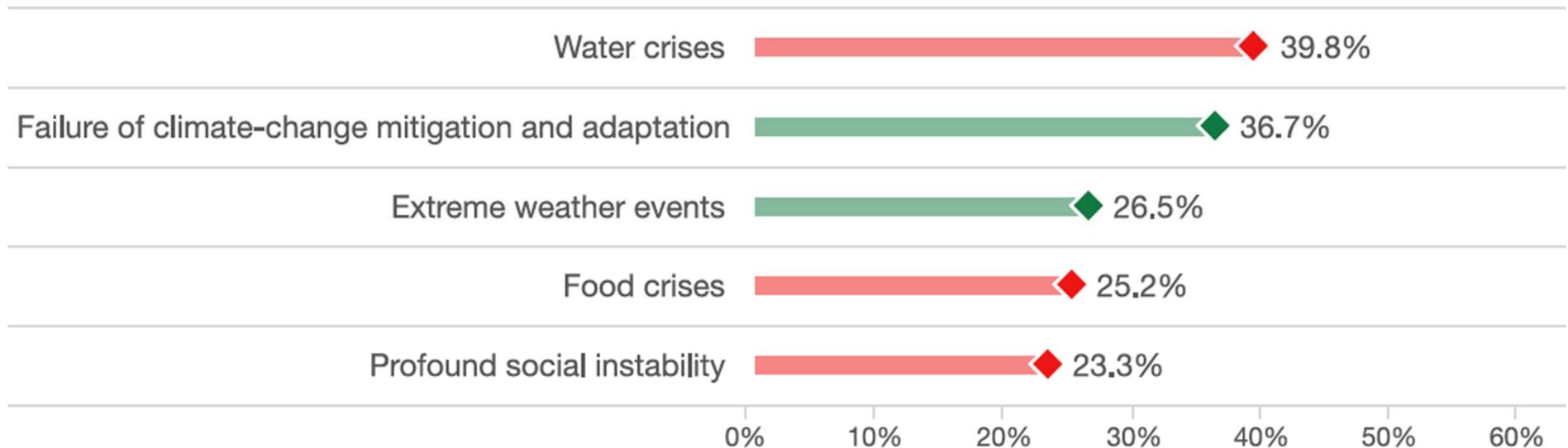
Global Risks of Highest Concern: For the Next 18 Months



Source: "The Global Risks Report 2016." Figure 1.2. World Economic Forum
<http://www3.weforum.org/docs/Media/TheGlobalRisksReport2016.pdf>

WHAT WORRIES YOU?

Global Risks of Highest Concern: For the Next 10 Years



Note: Percent of participants mentioning the respective risk to be of high concern for the time frame of 18 months or 10 years, respectively. Participants could name up to five risks in each time frame. In each category, the risks are sorted by the total sum of mentions.





THE GLOBAL COMMISSION ON THE ECONOMY AND CLIMATE

Better Growth, Better Climate: The New Climate Economy Report

CONCLUSION: RESEARCH HAS MAJOR ROLE TO PLAY



WE ARE ARMED ... ONLY WITH PEER-REVIEWED SCIENCE

BUT IT NEEDS TO BE:

- 1. INTEGRATED**
- 2. UNLOCKING 'BIG DATA' OPPORTUNITIES**
- 3. FOCUSED ON ACCELERATING CHANGE**



