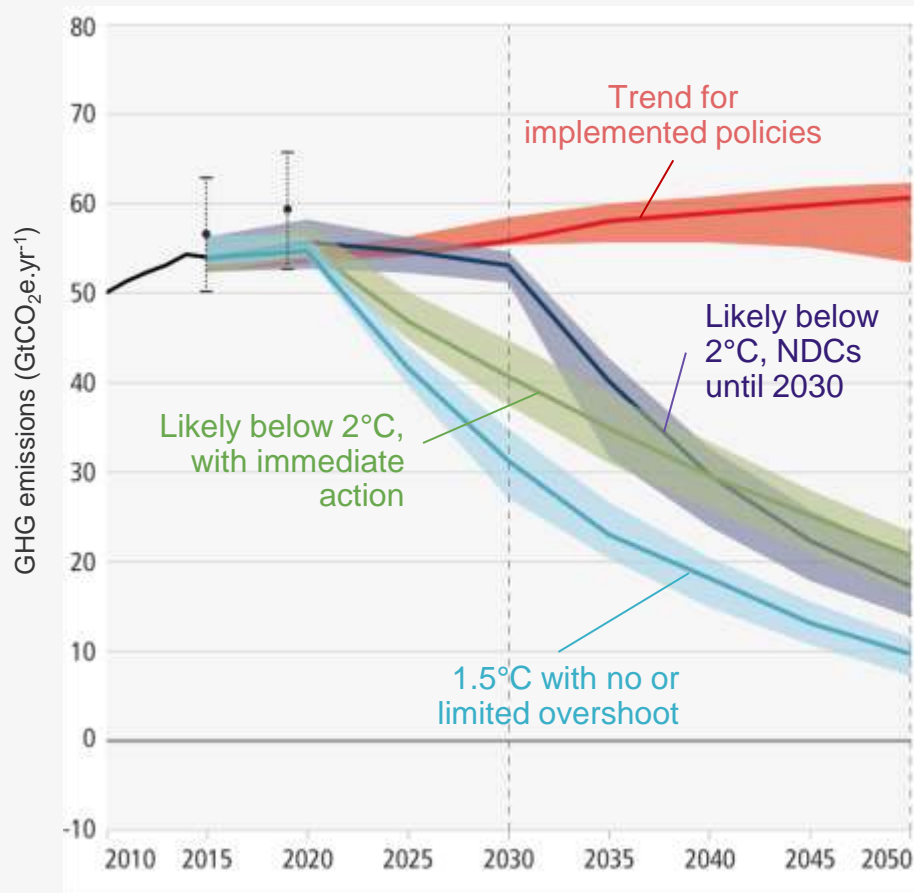


Climate Change 2022

National and Regional Pathways for Climate Action in Latin America and the Caribbean - Insights from IPCC WG III

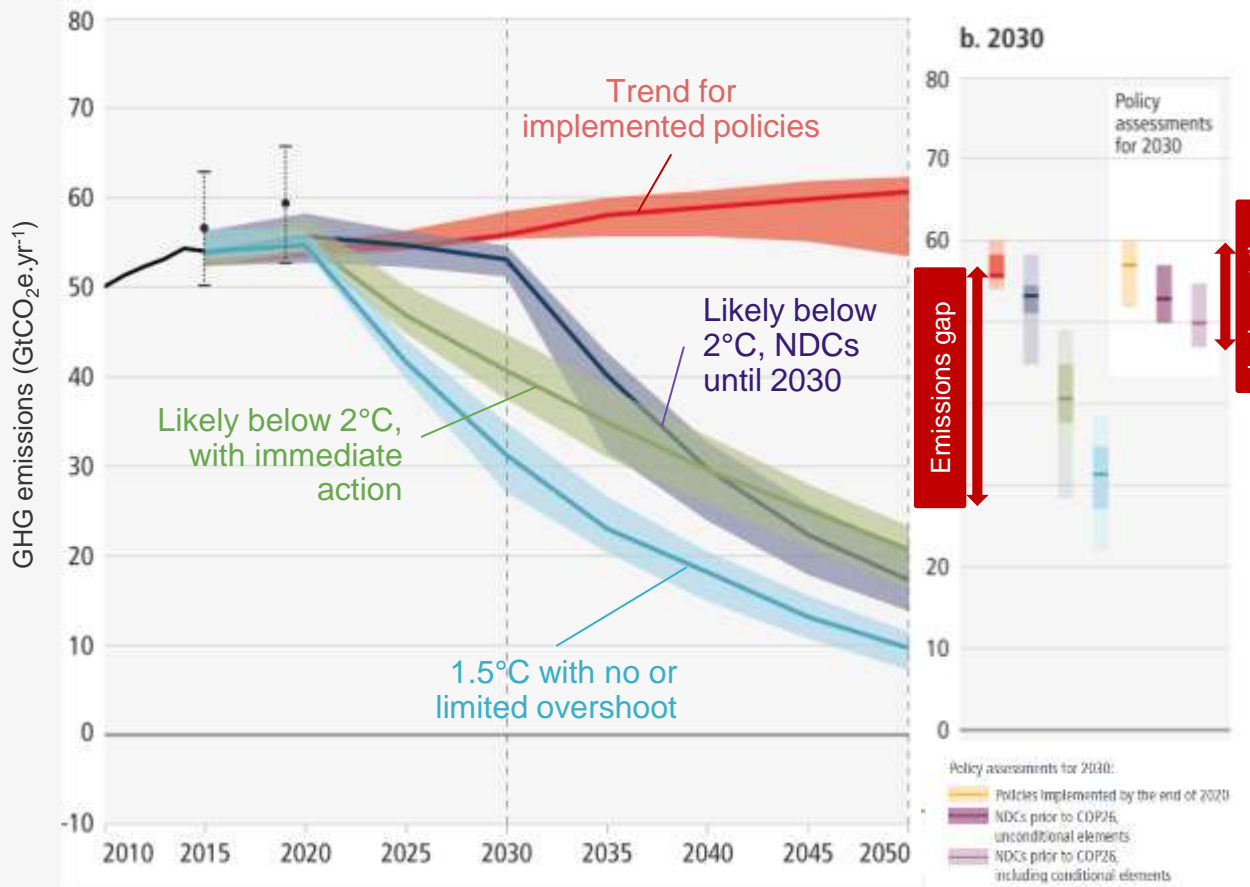
Joana Portugal Pereira (COPPE/UFRJ)

Chapter 4 (lead author) and Annex III (coordinating lead author)



Long-term global climate pathways are useful, but actions must start now at national and regional levels

- Under the current NDC pledges,
- 1.5°C will likely be exceeded in this decade.
- Reaching 2°C becomes challenging under current NDC pledges.



Limiting warming to 1.5 °C

- Global GHG emissions peak before 2025, reduced by 43% by 2030.
- Methane reduced by 34% by 2030.

Limiting warming to around 2°C

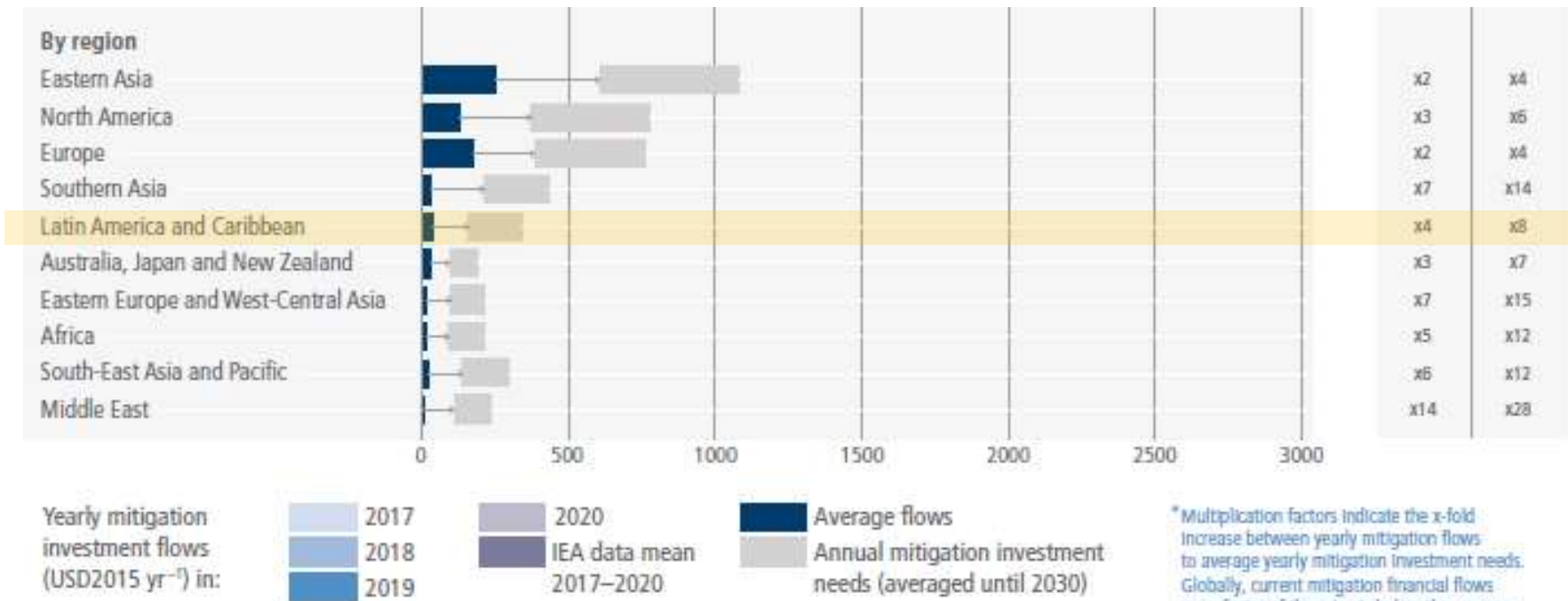
- Global GHG emissions peak before 2025, reduced by 27% by 2030.



Investment gaps: in the LAC region mitigation investment must be scaled up by 4-8x

Actual yearly flows compared to average annual needs (billion USD 2015.yr⁻¹)

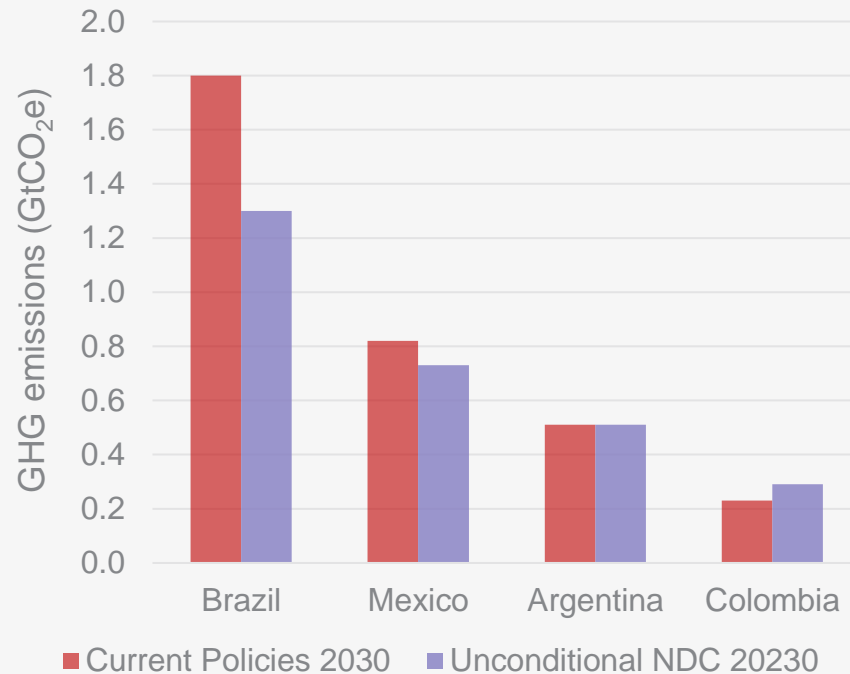
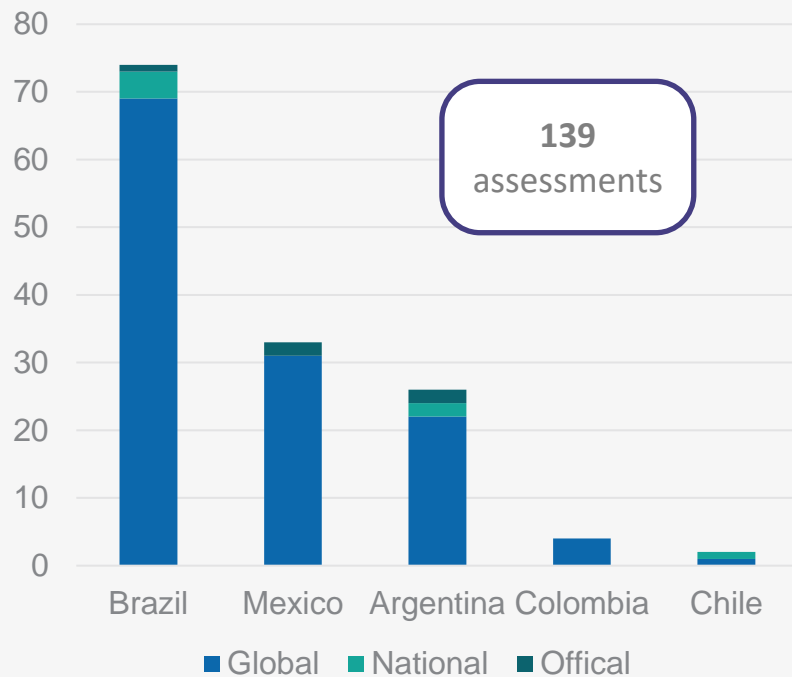
Multiplication factors*



* Multiplication factors indicate the x-fold increase between yearly mitigation flows to average yearly mitigation investment needs. Globally, current mitigation financial flows are a factor of three to six below the average levels up to 2030.



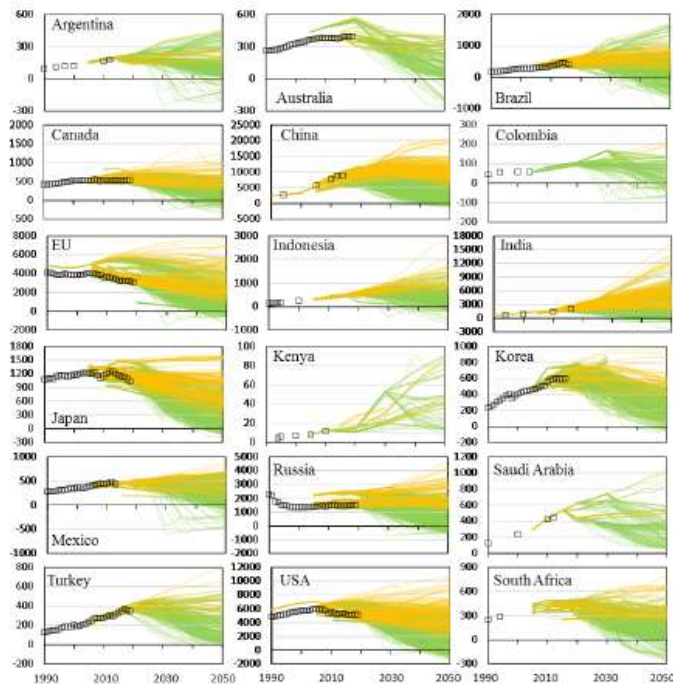
Individual country near-term assessments in the LAC region



Source: Own elaboration based on Table 4.1



3 Countries in the LAC region have submitted long-term low-GHG emission development strategies (as of 25/08/21)



Note: Unit: MtCO₂e

- Historical emissions from Greenhouse Gas Inventory Data of UNFCCC
- Emissions of Baseline and current policy
- Emissions of mitigation scenarios including NDC

Country	Date submitted	GHG reduction target
USA	Nov. 16, 2016	80% reduction of GHG in 2050 compared to 2005 level
Mexico	Nov. 16, 2016	50% reduction of GHG in 2050 compared to 2000 level
Canada	Nov. 17, 2016	80% reduction of GHG in 2050 compared to 2005 level
Germany	Nov. 17, 2016 Feb. Apr. 26, 2017 Feb. May 6, 2017	GHG neutrality by 2050 2050 target: 80–95% reduction of GHG in 2050 compared to 1990 level

Table 4.6 | Countries with a national net zero CO₂ or GHG target by 2050 (as of 25 August 2021).

Country	Target year	Target status	Source
Suriname		Achieved	Suriname INDC
Bhutan		Achieved	Royal Government of Bhutan National Environment Commission
Germany	2045	In Law	KSG
Sweden	2045	In Law	Climate Policy Framework
European Union	2050	In Law	European Climate Law
Japan	2050	In Law	Japan enshrines PM Suga's 2050 carbon neutrality promise into law
United Kingdom	2050	In Law	The Climate Change Act
France	2050	In Law	Energy and Climate Law
Canada	2050	In Law	Canadian Net Zero Emissions Accountability Act
Spain	2050	In Law	New Law
Denmark	2050	In Law	The Climate Act
New Zealand	2050	In Law	Zero Carbon Act

Source: Tables 4.5 and 4.6

National and regional mitigation pathways evaluated in the IPCC WG III AR6.

Country/region ^a	Model	CP	NDC	Other	Total
ARG	IMACLIM-ARG		1	2	3
AUS	TIMES-Australia	1		7	8
BRA	BLUES-Brazil	2	2	15	19
BRA	COPPE_MSB-Brazil			8	8
BRA	IMACLIM-BRA			5	5
CHE	STEM-Switzerland	1		11	12
CHN	AIM/Hub-China	1	1	7	9
CHN	C3IAM		3	11	14
CHN	DREAM-China			1	1
CHN	GENeSYS-MOD-CHN			3	3
CHN	IPAC-AIM/technology-China	1	1	11	13
CHN	PECE-China			2	2
CHN	TIMES-Australia		1		1
CHN	TIMES-China	1	2	8	11
ECU	ELENA-Ecuador			2	2

Country/region ^a	Model	CP	NDC	Other	Total
ETH	TIAM-ECN-ETH	1		1	2
EU	E4SMA-EU-TIMES	1			1
EU	eTIMES-EU			23	23
EU	JRC-EU-TIMES			8	8
EU	PRIMES	2	2	9	13
EU	REMIND_EU			9	9
FRA	TIMES-France			8	8
GBR	7see			11	11
IDN	AIM/Hub-Indonesia			2	2
IDN	DDPP Energy			4	4
IND	AIM/Enduse-India	1	1	5	7
IND	AIM/Hub-India	1	1	7	9
IND	MARKAL-INDIA	2	3	13	18
JPN	AIM/CGE-Enduse-Japan			6	6
JPN	AIM/Enduse-Japan	3	3	69	75

Country/region ^a	Model	CP	NDC	Other	Total
JPN	AIM/Hub-Japan	1	2	42	45
JPN	DNEZ1-Japan		1	30	31
JPN	DNEZ1+ V.14 (national)	1	1	4	6
JPN	IEEJ-Japan		1	34	35
KEN	TIAM-ECN-KEN	1	1	2	4
KOR	AIM/CGE-Korea	1	1	6	8
KOR	AIM/Hub-Korea	1	1	7	9
MDG	TIAM-ECN-MDG	1	2		3
MEX	GENeSYS-MOD-MEX			4	4

Country/region ^a	Model	CP	NDC	Other	Total
PRT	TIMES-Portugal		1	3	4
RUS	RU-TIMES	1	1	4	6
SWE	TIMES-Sweden			4	4
THA	AIM/Hub-Thailand	1	2	19	22
USA	GCAM-USA	2	2	9	13
USA	RIO-USA			12	12
VNM	AIM/Hub-Vietnam	1	2	14	17
ZAF	TIAM-ECN-AFR			4	4
	Total	29	39	466	534



Obrigada!

joana.portugal@ppe.ufrj.br

[@joanna_portugal](https://www.instagram.com/joanna_portugal)

www.cenergiablab.coppe.ufrj.br