

DaLA examples:

Hurricanes Eta and Iota (2020)

Tropical storm Julia (2022)

Hurricane Earl (2016)

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Outline

- 1) Disasters in Honduras and Guatemala
- 2) Hurricanes Eta and Iota
- 3) Tropical storm Julia (Honduras)
- 4) Hurricane Earl (Belize)

Disasters: Honduras

	Disasters	Death	Affected	Damage
70s	7	10821	962500	19596745
80s	9	159	66637	928920
90s	17	15265	2879420	13369968
00s	27	203	1213586	804411
10s	20	437	3268066	164254
20s	8	146	5388444	0
Total	88	27031	13778653	34864297

Source: EMDAT

Damage expressed in 2022 USD

Major disasters: Honduras

	Year	Deaths	Affected population	Damage (000)
Hurricane Fifi	1974	8,000	600,000	19,022,372
Hurricane Mitch	1998	14,600	2,112,000	12,227,659
Total		22,600	2,712,000	31,250,031
Proportion		0.84	0.20	0.90

Source: EMDAT

Damage expressed in 2022 USD

Disasters: Guatemala

	Disasters	Death	Affected	Damage
70s	3	23005	4996040	26554599
80s	13	719	124856	919722
90s	18	1130	181826	2454789
00s	29	1894	3423784	2258305
10s	43	1241	7601688	2741730
20s	11	224	6277394	697552
Total	117	28213	22605588	35626697

Source: EMDAT

Damage expressed in 2022 USD

Major disasters: Guatemala

	Year	Deaths	Affected population	Damage (000)
February 4 Earthquake	1976	23000	4993000	26445987
Hurricane Mitch	1998	384	105700	2410979
Hurricane Stan	2005	1513	475314	2219386
Proportion		0.88	0.25	0.87

Source: EMDAT

Damage expressed in 2022 USD

Hurricanes Eta and Iota



Hurricanes Eta and Iota

Context

- **The 2020 Atlantic hurricane season was the most active in history and the fifth in a row to exceed average activity.**
 - There were 30 named tropical storms, of which 13 became hurricanes.
- **Threats do not occur in isolation. Most of the time they do it one after the other or simultaneously.**
 - The disasters caused by Eta and Iota correspond to this trend and context, and also occur in the midst of a pandemic such as that caused by coronavirus disease (COVID-19).

Hurricanes Eta and Iota: Affected population Honduras and Guatemala

	Honduras	Guatemala
Fallecidos	95	60
Injured	24	30
Missing	10	100
Evacuated	437 212	311 245
Sheltered	96 649	12 081
Date of the report	November 25, 2020 (COPECO)	December 11, 2020 (CONREP)

- **In Honduras, 88% of the evacuated people were in the departments of Cortés, Gracias a Dios, Yoro, Santa Bárbara and Colón. For its part, Cortés concentrated 54% of the sheltered population.**
- **In Guatemala, the missing people were concentrated mainly in the department of Alta Verapaz. By December 4, 30,602 people were registered in shelters, concentrated mainly in Alta Verapaz and Izabal.**

Hurricanes Eta and Iota: Affected population Honduras and Guatemala

- **In Honduras, with the exception of Cortés and Atlántida, the affected departments are characterized by having a higher percentage of people in rural areas with high levels of poverty.**
 - Santa Bárbara and Yoro have 64% and 57% of their population living in poverty by 2019.
 - The Gracias a Dios department is considered an indigenous area. Particularly, the Mosquitia region is a multi-ethnic territory, where 4 indigenous and Afro-descendant peoples coexist (Miskitus, Pech, Tawahkas, Garífunas) in addition to the mestizo population.
- **In Guatemala, the 8 affected departments account for 35.1% of the Guatemalan population in 2018. This population lives mainly in rural areas, belongs to indigenous communities and lives in conditions of poverty.**
 - Alta Verapaz (92.9%), Quiché (89.2%) and Huehuetenango (65%), have high percentages of Mayan population.
 - Alta Verapaz and Chiquimula were among the departments with the highest percentage of poverty in the rural area during 2011 (46.6% and 37% respectively in extreme poverty), since a little more than 90% of the poor people in these departments live in rural areas (INE, 2013).

Hurricanes Eta and Iota: Effects and impacts in Honduras and Guatemala

At the end of 2020, ECLAC, the IDB, the World Bank, the UN System, together with the Governments of those countries, carried out an assessment of the disasters caused by these events.

HONDURAS (2022 USD, million)

	Public	Private	Total
Damage	328	736	1064
Losses	37	1234	1271
Additional costs	60	51	111
Total	425	2021	2446

Source: Government of Honduras, ECLAC, IDB, World Bank, UNRCO Honduras (2021)

GUATEMALA (2022 USD, million)

	Public	Private	Total
Damage	146	309	455
Losses	2	270	273
Additional costs	67	79	146
Total	215	658	873

Source: Government of Guatemala, ECLAC, IDB, World Bank, UNRCO Guatemala (2021)

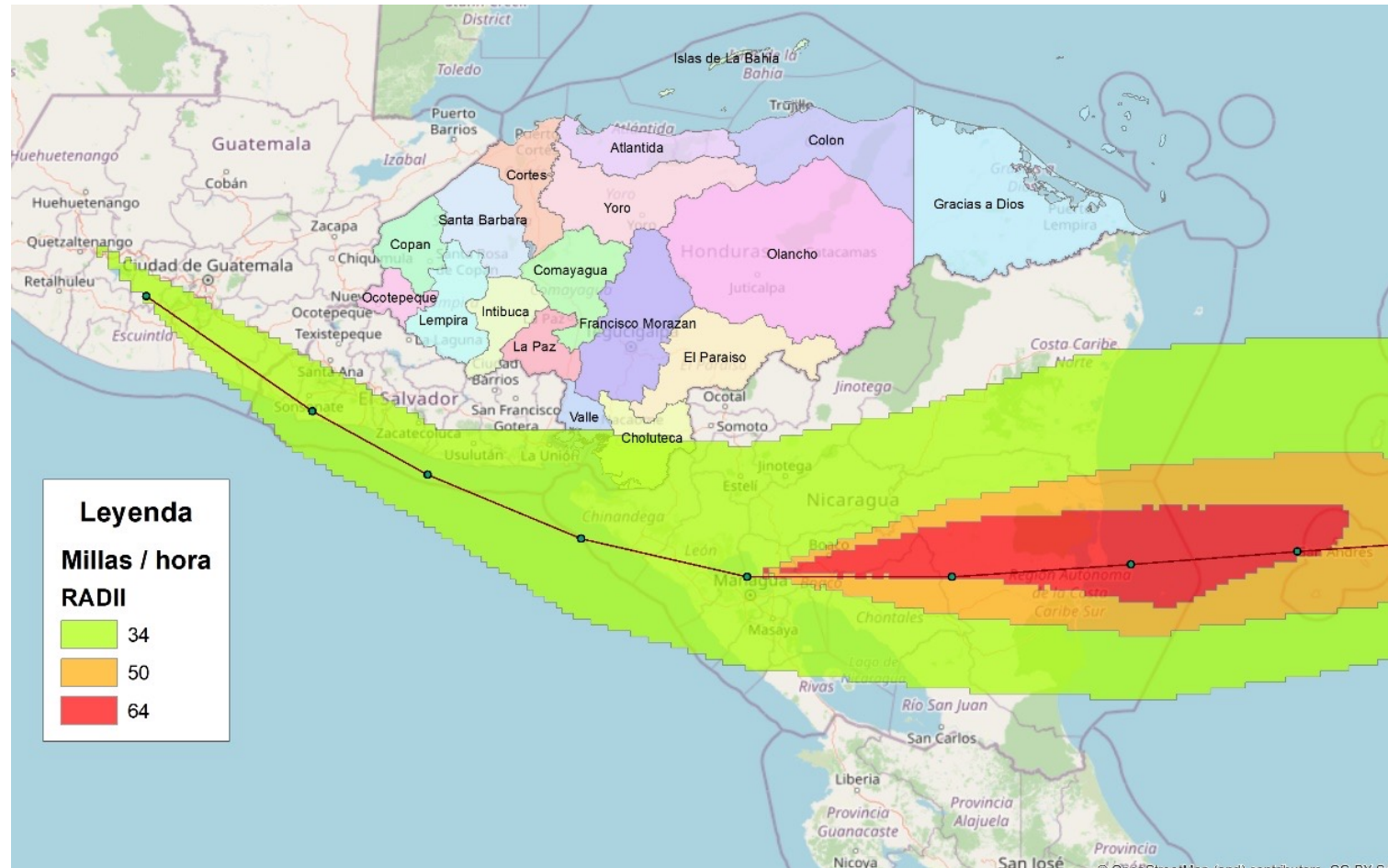
Hurricanes Eta and Iota: Effects and impacts in Honduras and Guatemala

- **The total costs of the event fell largely on the private sector. In Honduras, 83% of the cost was private, and in Guatemala, 75% was borne by that sector.**
- **In terms of damages, in both countries, the most affected sector was the Social sector, specifically the Housing subsector. In terms of losses, in both countries, the most affected sector was the Productive sector, specifically the agriculture, commerce and industry subsectors.**
 - These results allow us to configure a profile of the human dimension of the event: the families' sources of income and the place where they live were affected..
- **Macroeconomic impacts were moderate. In Honduras, for 2020, the impact in terms of growth is 0.8 points of GDP, while in Guatemala it is 0.1 points of GDP.**

Hurricanes Eta and Iota: Final remarks

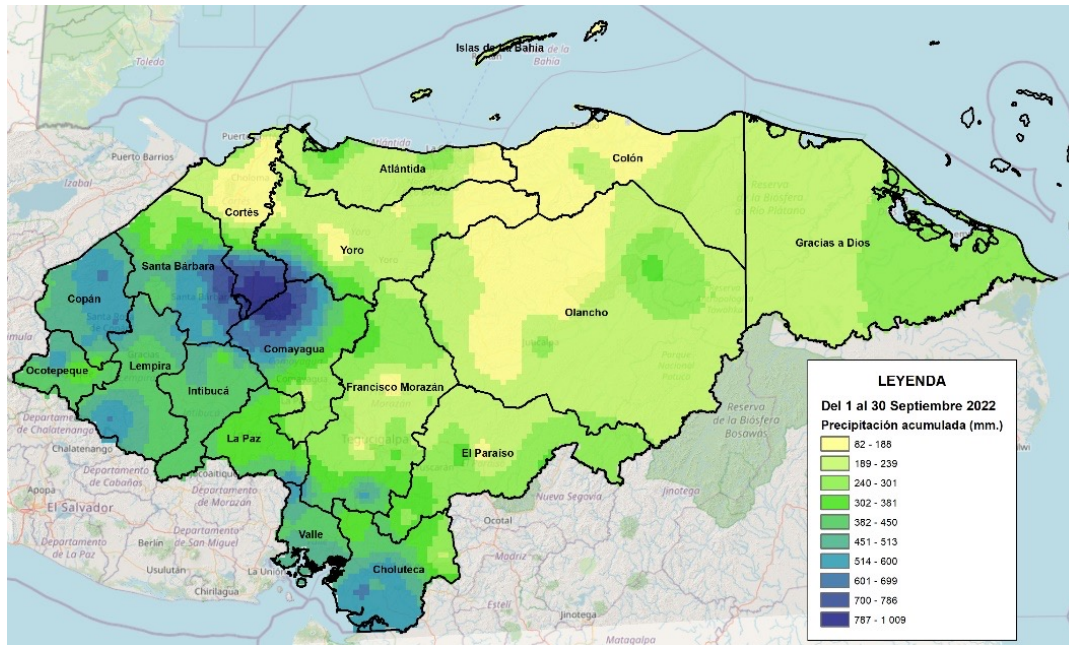
- **The systemic nature of risk, including climate change, requires methods of analysis that transcend traditional compartmentalized and sectorized approaches to disaster risk reduction.**
- **A reconstruction plan must be an inclusive national policy, the product of an effort by multiple sectors and multiple actors, in order to avoid fragmented responses to systemic problems.**
- **Hurricanes Eta and Iota caused disasters in three countries: Guatemala, Honduras and Nicaragua. ECLAC coordinated the evaluations in Guatemala and Honduras.**
 - These climate and regional disasters should lead the international community to reflect on its role and offer solutions to the countries of Central America that include funds available to implement climate change adaptation policies and contingent financial instruments for disasters, among others.

Tropical Storm Julia



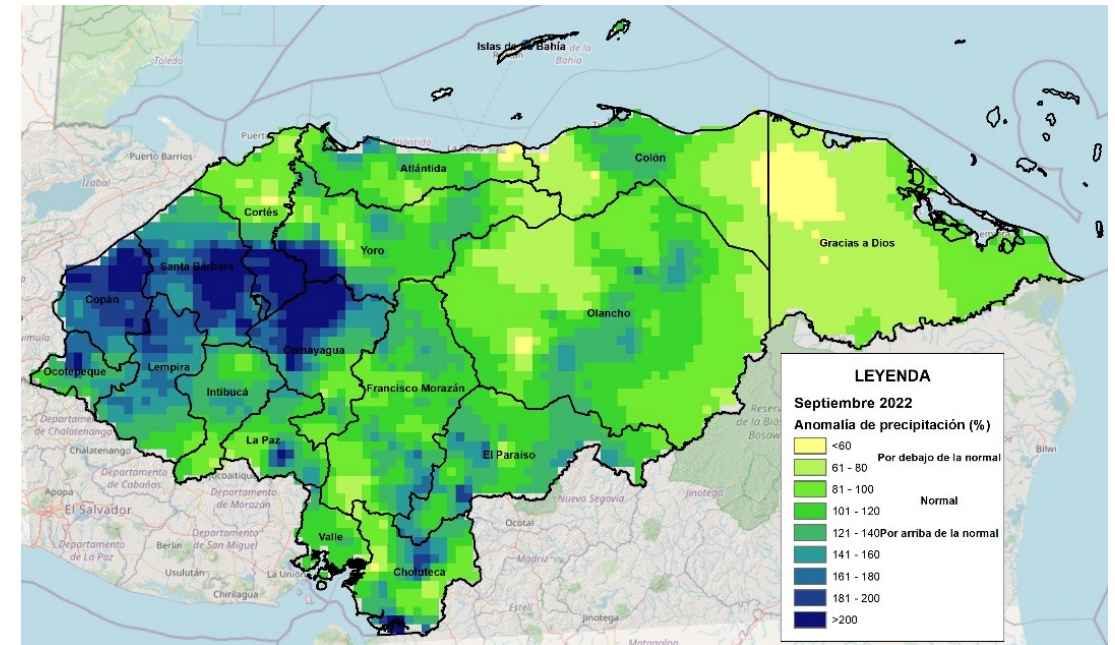
September 2022 rains

Accumulated rain from September 2022 1 to 30 (mm)



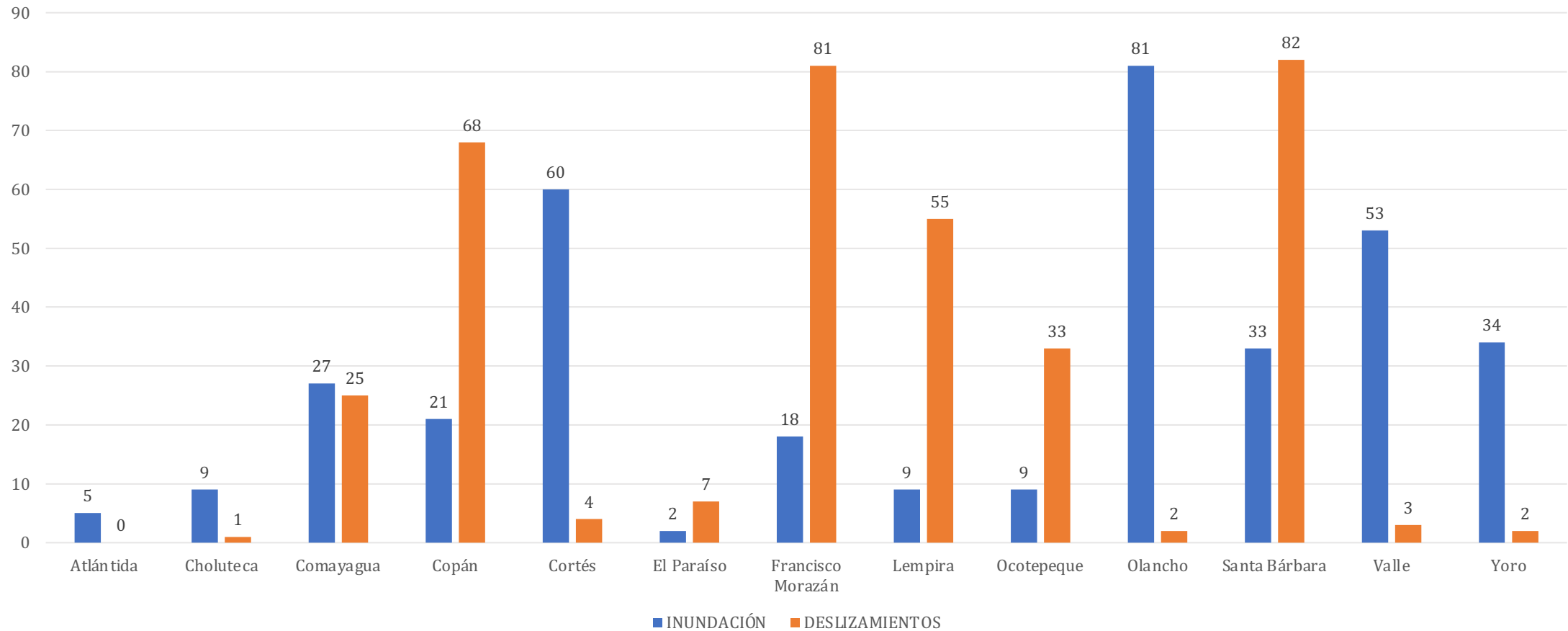
Source: Assessment team using CENAOS – COPECO data, 2022

Precipitation anomaly September 2022 (percentage)



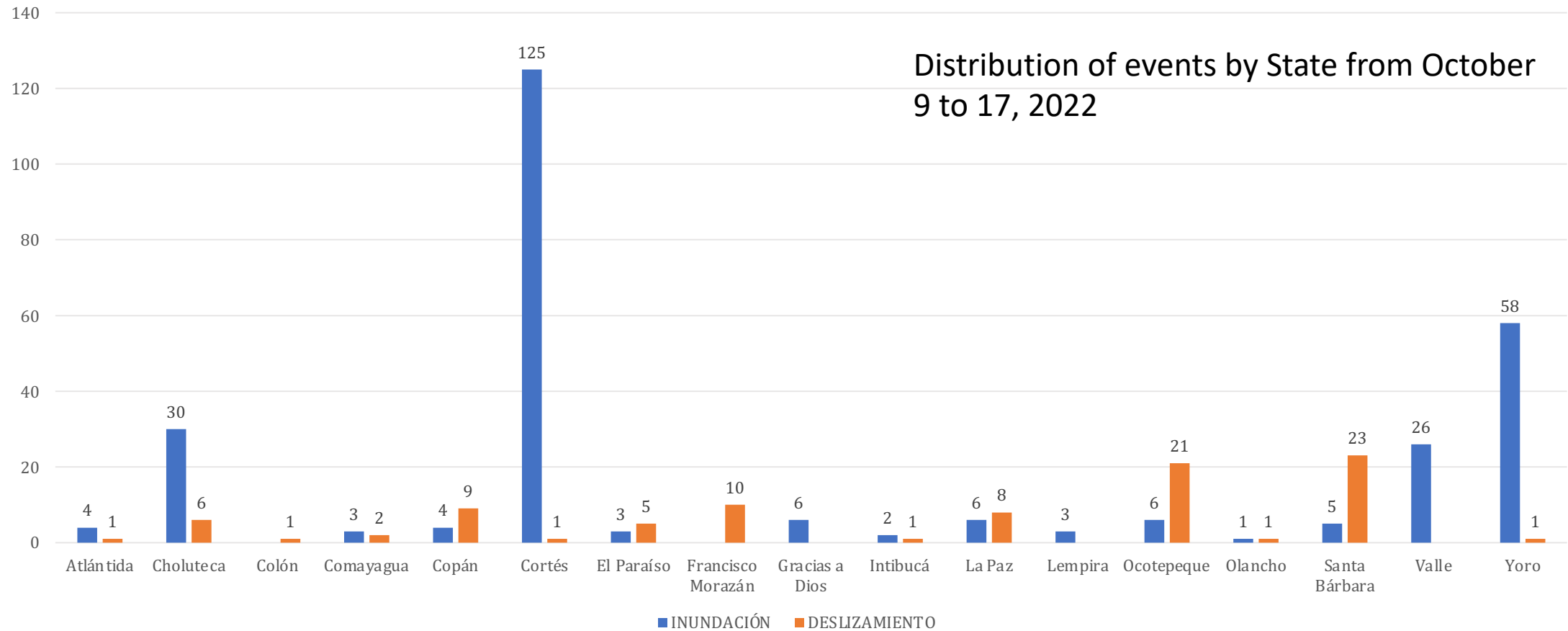
Source: Assessment team using CENAOS – COPECO data, 2022

September 2022 rains



COPECO recorded 361 floods and 363 landslides that affected to varying degrees 742 communities in 161 municipalities in 15 States.

Tropical storm Julia



COPECO recorded a total of 282 floods and 90 landslides that affected 468 communities in 88 municipalities in 17 States.

Affected population

Categoría	Personas
Deaths	42
Unjured	36
Missing	12
Sheltered	15 000

Source: COPECO, 2022

176 official shelters. Of them, 69 were placed in schools

- Male and female students in schools used as shelters 20,503
- 259 school establishments were reported damaged. The student enrollment that usually receives classes in these establishments is 47,534, with 50.4% being female.

Affected population

Eta and Iota

	People	People
Deaths	42	95
Unjured	36	24
Missing	12	10
Sheltered	15 000	96 249

Source: COPECO, 2020 y 2022

Effects: Tropical storm Julia

(2022 USD)

Effects	Public	Private
Damage	54326888	83497923
Losses	2600928	144774166
Additional costs	31036389	13402908
Total	87964205	241674998

Source: Assessment team, 2022

Effects: Tropical storm Julia (2022 USD)

Sector	Damage	Losses	Additional costs
Social	72553705	182878	19779246
Infrastructure	28496420	4462217	14748076
Productive	30349581	20811490	9907911
Envinronment	6425105	0	0
Total	137820747	147375094	44435233

Source: Assessment team, 2022

Effects: Tropical storm Julia (percentage)

Sector	Damage	Losses	Additional costs
Social	53%	0%	45%
Infrastructure	21%	3%	33%
Productive	22%	14%	22%
Envinronment	5%	0%	0%

Source: Assessment team, 2022

Impacts

- The Honduran government estimated that, in 2022, Honduras' GDP would range between 4.0% and 4.5%, with an average point estimate of 4.25%.
- After the rainy season and Tropical Storm Julia, according to the evaluation team's estimates, it is likely that the rate of variation of Honduras' GDP in 2022 will experience a drop of around 0.1 percentage points derived from disasters. , therefore an economic growth of around 4.15% would be expected.

Hurricane Earl



Hurricane Earl (2016): Effects in Belize

In September 2016, ECLAC, the IDB, FAO and PAHO, together with the Government of Belize, carried out an assessment of the disaster caused by this hurricane.

EFFECTS BY INSTITUTIONAL SECTOR

(2022 USD, million)

	Public	Private	Total
Damage	1343319	10365343	11708662
Losses	170961	13791927	13962888
Additional costs	2328900	87628	2416528
Total	3843181	24244897	28088078

Source: Government of Belize, ECLAC, IDB, FAO, PAHO (2016)

EFFECTS BY INSTITUTIONAL SECTOR

(percentage)

	Public	Private
Damage	11%	89%
Losses	1%	99%
Additional costs	96%	4%

Source: Government of Belize, ECLAC, IDB, FAO, PAHO (2016)

Hurricane Earl (2016): Effects in Belize

In September 2016, ECLAC, the IDB, FAO and PAHO, together with the Government of Belize, carried out an assessment of the disaster caused by this hurricane.

EFFECTS BY SECTOR (2022 USD)

	Public	Private	Total
Social	2076811	3357929	5434740
Infrastructure	1166773	1573834	2740608
Productive	7961	17363720	17371680
Environment	591636	1949414	25547028
Total	3843181	24244897	28088078

Source: Government of Belize, ECLAC, IDB, FAO, PAHO (2016)

EFFECTS BY SECTOR (percentage)

	Public	Private
Social	38%	62%
Infrastructure	43%	57%
Productive	0%	100%
Environment	2%	8%

Source: Government of Belize, ECLAC, IDB, FAO, PAHO (2016)

Hurricane Earl (2016): Effects in Belize by subsector (2022 USD)

	Damage	Losses	Additional costs
Education	52698	2468	806
Housing	3170526	185051	357503
Health	198994	2924	287499
Water and Sanitation	125240	16154	77038
Roads, Port, and Airports	1262034	20407	71725
Power	165677	163110	240515
Telecommunications	460979	136135	1594
Tourism	3669751	743060	7961
Fisheries	359433	634296	0
Agriculture	394070	11563109	0
Environment	1849260	496173	195616
Emergency response	0	0	1176272
Total	11708662	13962888	2416528

Hurricane Earl (2016): Effects in Belize by subsector (percentage)

	Damage	Losses	Additional costs
Education	0%	0%	0%
Housing	27%	1%	15%
Health	2%	0%	12%
Water and Sanitation	1%	0%	3%
Roads, Port, and Airports	11%	0%	3%
Power	1%	1%	10%
Telecommunications	4%	1%	0%
Tourism	31%	5%	0%
Fisheries	3%	5%	0%
Agriculture	3%	83%	0%
Environment	16%	4%	8%
Emergency response	0%	0%	49%

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