# **CLIMATE VULNERABILITY MONITOR**







COUNTRY PROFILE







#### THE MONITOR ASSESSMENT

The Climate Vulnerability Monitor provides a comprehensive national-level assessment of vulnerabilities and impact specifically related to contemporary climate change and carbon intensiveness. This 2012 Monitor assessment was commissioned by the Climate Vulnerable Forum and has been independently developed by DARA. It is grounded in leading and up-to-date scientific studies, research and data assimilated on the basis of an externally reviewed methodology. The assessment spans 34 indicators of impact/vulnerability: 22 for climate change ("Climate") and 12 for carbon intensiveness ("Carbon"). Estimates in human, economic and environmental terms are for 2010 and 2030. Vulnerability at country-level and by indicator is comparative to the 184 countries included in the assessment.

→ For the full report, data & additional info: www.daraint.org/cvm2 - cvm@daraint.org - +34 915310372



### **ECONOMIC NATIONAL LOSS TOTALS: BRAZIL**

ADDITIONAL ECONOMIC COSTS (NEGATIVE NUMBERS SHOW POSITIVE EFFECTS) - YEARLY AVERAGE



LOSSES PER YEAR

2010 **0.7%**<sub>GDP</sub>
2030 **1.4%**<sub>GDP</sub>



LOSSES PER YEAR

2010 **1.9%** GDP 2030 **3.6%** GDP



# **HUMAN NATIONAL LOSS TOTALS: BRAZIL**

ADDITIONAL HUMAN IMPACTS (NEGATIVE NUMBERS SHOW POSITIVE EFFECTS) - YEARLY AVERAGE

ADDITIONAL MORTALITY-YEARLY AVERAGE

CLIMATE +CARBON COMBINED

2010 **55,000** 

2030 70,000

**CLIMATE** 

**CARBON** 

ADDITIONAL

ADDITIONAL PERSONS AFFECTED-YEARLY AVERAGE

2010 7,450,000 2030 9,250,000

2010 1,350,000 2030 2,000,000

# **FULL COUNTRY ASSESSMENT: BRAZIL**

			VULNERABILITY ECONOMIC COSTS ADDITION LEVEL (MILLION USD PPP) MORTALI				CTED ON (1000s)	OTHER VALUE 1*		OTHER VALUE 2*		_					
			2010 2030	2010	2030	2010	2030	2010	2030	2010	2030	2010	2030				
CLIMATE		<b>ENVIRONMENTAL DISASTERS</b>	MENTAL DISASTERS										VULNERABILITY LEVELS:				
		DROUGHT	- +	95	550									+ Acute+	+ High+		
		FLOODS AND LANDSLIDES		20	200	5	10	30	30					- Acute-	- High-		
		STORMS												+ Severe+	Mode	rato	
		WILDFIRES												_		idle	
		TOTAL		115	750	5	10	30	30					- Severe-	Low		
	•	HABITAT CHANGE															
		BIODIVERSITY		3,500	30,000					-200,000	-450,000	150	500	+ = Upper tier	+ = Upper tier of vulnerability level		
		DESERTIFICATION		70	550			50	100	2,250	4,500			<ul><li>= Lower tier</li></ul>	of vulnerability	j level	
		HEATING AND COOLING	-	250	5,000					1,500	7,500	70	400				
		LABOUR PRODUCTIVITY	-	6,000	45,000					43	34			A Environme	notal disastors		
		PERMAFROST												~			
		SEA-LEVEL RISE		3,250	20,000			6	8	850	2,500			(habitat ch	ange		
		WATER		-1,250	-10,000					-5	-10			Health imp	pact		
	1	TOTAL		11,820	90,550			56	108					(V) Industru st			
	•	HEALTH IMPACT												y industry st	ress		
		DIARRHEAL INFECTIONS				0	0	0									
		HEAT AND COLD ILLNESSES				1,750	2,000							CLIMATE =			
		HUNGER				1,250	2,500	3	5						o Climate Cha	nge	
		MALARIA AND VECTOR-BORNE				100 200	250 300	55 0	100					CARBON =			
		MENINGITIS						-	106						o Carbon Inter	siveness	
	<b>%</b>	TOTAL				3,300	5,050	58	106								
		INDUSTRY STRESS AGRICULTURE		900	6.750										OTHER	OTHER	
		FISHERIES		55	500										VALUE 1	VALUE 2	
		FORESTRY	- +	2,500	20,000										Contraction	Decline in	
		HYDRO ENERGY	- +	-150	-750									BIODIVERSITY	of biological zones (km²)	biological	
		TOURISM		-130	-750										(cumulative)	richness	
		TRANSPORT												DESERTI-	Additional land		
		TOTAL		3,305	26,500									FICATION	degraded (km²)		
		CLIMATE TOTAL		15.240	117.800	3.305	5,060	145	244						(cumulative)		
				,	,	-,,,,,,	-,							HEATING & COOLING	Change in energy load (GWh)		
CARBON		ENVIRONMENTAL DISASTERS												COOLINO			
		OIL SANDS												LABOUR	Share of		
	₩	OIL SPILLS		5	20					50	55			PRODUCTIVITY	workforce particularly		
	1	TOTAL		5	20										affected (%)		
		HABITAT CHANGE								. ===	=			SEA-LEVEL	Net loss of		
	<b>(%)</b>	BIODIVERSITY		35,000	300,000					1,750	5,000			RISE	land (km²) (cumulative)		
		CORROSION WATER		5 90	15 400					0.750	7.750				Loss in water		
		TOTAL	-	35095	300415					6,750	7,750			WATER	runoff 2030		
	l i	HEALTH IMPACT		35095	300415										(km³)		
	•	AIR POLLUTION				25,000	30,000	300	450						Tonnes toxic		
		INDOOR SMOKE	+ -			25,000	30,000	1.000	1,500					OILSANDS	waste (1000s)		
		OCCUPATIONAL HAZARDS				500	600	55	65								
		SKIN CANCER				600	1,500	1	2					OIL SPILLS	Gallons oil spill (1000s)		
		TOTAL				51100	62100	1356	2017						Spill (1000S)		
		INDUSTRY STRESS				31100	02100	1330	2017					DIODILIEDOITII	Decline in		
		AGRICULTURE		250	-3,000									BIODIVERSITY	biological richn	ess	
	(3/2)	FISHERIES		5	30									Volume of			
	2	FORESTRY	- +	650	3.250									WATER water to treat			
		TOTAL		905	280										(millions m³)		
		CARBON TOTAL		36,005	300,715	51,100	62,100	1,356	2,017								
									•					•			