# **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: RWANDA**

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



LOSSES PER YEAR

2010 **2.4%**<sub>GDP</sub>

2030 **4.5%**<sub>GDP</sub>

CARBON INTENSIVENESS IMPACT LOSSES PER YEAR

2010 **3.6%** GDP 2030 **1.6%** GDP



## **HUMAN NATIONAL LOSS TOTALS: RWANDA**

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

ADDITIONAL MORTALITY-YEARLY AVERAGE

CLIMATE +CARBON COMBINED

2010 **20,000** 

2030 15,000

CLIMATE

CARBON CARBON

ΔΠΠΙΤΙΠΝΔΙ

ADDITIONAL PERSONS AFFECTED-YEARLY AVERAGE

2010 **750,000** 

2030 **1,300,000** 

2010 850,000

2030 **750,000** 

## **FULL COUNTRY ASSESSMENT: RWANDA**

		ADDITIONAL  VULNERABILITY ECONOMIC COSTS ADDITIONAL  LEVEL (MILLION USD PPP) MORTALITY		IONAL ALITY	AFFE	IONAL :CTED ON (1000s)	OTHER VALUE 1*		OTHER VALUE 2*		_							
			2010 2030	2010	2030	2010	2030	2010	2030	2010	2030	2010	2030		T			
		<b>ENVIRONMENTAL DISASTERS</b>												VULNERABIL				
	_	DROUGHT	+ +	1	1									+ Acute+	+ High-	-		
		FLOODS AND LANDSLIDES				1	1	15	25					- Acute-	- High-			
		STORMS												Severe+	Mode	rate		
		WILDFIRES												_	_			
		TOTAL		1	1	1	1	15	25					- Severe-	Low			
CLIMATE		HABITAT CHANGE																
		BIODIVERSITY		1	10					-650	-1,250	50	150	+ = Upper tier	+ = Upper tier of vulnerability level			
	_	DESERTIFICATION		-1	-10									- = Lower tier	<ul> <li>= Lower tier of vulnerability level</li> </ul>			
		HEATING AND COOLING		-1	5					-15	10	-5	1					
		LABOUR PRODUCTIVITY	+ +	150	850					68	55			Environm	ental disasters			
		PERMAFROST												Ψ.				
		SEA-LEVEL RISE		_										Mabitat change				
		WATER		-5	-40					-0	-1			Health im	pact			
		TOTAL		144	815			0	0					(N) Industru stress				
		HEALTH IMPACT				050	050	_						Thousand stress				
		DIARRHEAL INFECTIONS	- +			350	650	0						<b>A</b>				
		HEAT AND COLD ILLNESSES	+ +			100 350	150 550	0	0					CLIMATE =				
	lacksquare	HUNGER	+ +			70	65	0 20	20					_	to Climate Cha			
		MALARIA AND VECTOR-BORNE				150	250	0	0					CARBON =				
		MENINGITIS TOTAL				1,020	1,665	20	20						to Carbon Intensivenes			
	i	INDUSTRY STRESS				1,020	1,000	20	20									
		AGRICULTURE		100	750										OTHER	OTHER		
		FISHERIES	+ +	5	55										VALUE 1	VALUE 2		
	Man I	FORESTRY		3	55										Contraction	Decline in		
		HYDRO ENERGY												BIODIVERSITY	of biological zones (km²)	biological		
		TOURISM													(cumulative)	richness		
		TRANSPORT												DESERTI-	Additional land			
		TOTAL		105	805									FICATION	degraded (km²)			
		CLIMATE TOTAL		249	1,621	1,021	1,666	35	45						(cumulative)			
					.,	-,	-,							HEATING & COOLING	Change in energy load (GWh)			
CARBON		ENVIRONMENTAL DISASTERS OIL SANDS													Charact			
		OIL SANDS OIL SPILLS												LABOUR	Share of workforce			
	~	TOTAL		0	0									PRODUCTIVITY	particularly			
	<b></b>	HABITAT CHANGE		U	U										affected (%)			
		BIODIVERSITY		1	15					75	200			SEA-LEVEL	Net loss of			
		CORROSION		'	10					75	200			RISE	land (km²) (cumulative)			
		WATER		1	1					200	250				Loss in water			
		TOTAL		1.5	16					200	230			WATER	runoff 2030			
	1	HEALTH IMPACT		1.0	10										(km³)			
		AIR POLLUTION				350	550	9	30					OIL CANIDO	Tonnes toxic			
		INDOOR SMOKE	+ -			15.000	15.000	850	700					OIL SANDS	waste (1000s)			
		OCCUPATIONAL HAZARDS				10	20	2	4									
		SKIN CANCER				15	45	0	0					OIL SPILLS	Gallons oil spill (1000s)			
		TOTAL				15375	15615	862	734						эрік (1000э)			
		INDUSTRY STRESS												BIODIVERSITY	Decline in			
		AGRICULTURE		-10	-250									PIODIVERSITY	biological richn	ess		
		FISHERIES													Valume of			
	_	FORESTRY												WATER	water to treat			
	l	TOTAL		-10	-250										(millions m³)			
		CARBON TOTAL		-9	-234	15,375	15,615	862	734									
							,											