# **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: MOROCCO**

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

CLIMAIE CHANGE

2010 **1.1%**<sub>GDP</sub> 2030 **2.5%**<sub>GDB</sub>

CARBON INTENSIVENESS LOSSES PER YEAR

2010 **NIL** 2030 NIL



### **HUMAN NATIONAL LOSS TOTALS: MOROCCO**

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

ADDITIONAL MORTALITY-YEARLY AVERAGE

CLIMATE +CARBON

2010 10,000

2030 15,000

👀 CLIMATE

🕽 CARBON

ADDITIONAL PERSONS AFFECTED-YEARLY AVERAGE

2010 2,300,000 2030 3,600,000

2010 **150,000** 

2030 200,000

## **FULL COUNTRY ASSESSMENT: MOROCCO**

			VULNERABILITY LEVEL	ADDITIONAL Y ECONOMIC COSTS (MILLION USD PPP)		ADDITIONAL MORTALITY		ADDITIONAL AFFECTED POPULATION (1000s)		OTHER VALUE 1*		OTHER VALUE 2*					
			2010 2030	2010	2030	2010	2030	2010	2030	2010	2030	2010	2030				
CLIMATE		ENVIRONMENTAL DISASTERS												VULNERABIL	VULNERABILITY LEVELS:		
	<b>(4)</b>	DROUGHT	+ +	40	300									+ Acute+	+ High-		
		FLOODS AND LANDSLIDES		5	30	1	1	15	20					- Acute-	- High-		
		STORMS												+ Severe+	Mode	rato	
		WILDFIRES												_		ide	
	!	TOTAL		45	330	1	1	15	20					- Severe-	Low		
		HABITAT CHANGE															
		BIODIVERSITY		300	2,000					-10,000	-20,000	30	100	+ = Upper tier			
	_	DESERTIFICATION	- +	30	200			85	200	1,250	2,500		4 ==0	- = Lower tier	of vulnerabilit	y level	
		HEATING AND COOLING		-200	-1,000					-1,750	-2,500	-1,250	-1,750				
		LABOUR PRODUCTIVITY PERMAFROST		65	450					21	14			Environme	ental disasters		
		SEA-LEVEL RISE		250	1,750			1	1	15	30			Habitat ch			
		WATER		10	70			'		15	0			_			
		TOTAL		455	3,470			86	201		0			Health imp	oact		
		HEALTH IMPACT		100	0, 17 0			00	201					🐪 Industry st	tress		
		DIARRHEAL INFECTIONS				150	250	0									
		HEAT AND COLD ILLNESSES				100	150							CLIMATE =	Impact/Vulne	abilitu	
		HUNGER				500	600	0	0						to Climate Cha		
	<b>%</b>	MALARIA AND VECTOR-BORNE						0	0					CARBON =	Imnact/Vulner	ahilitu	
		MENINGITIS				40	55	0	0						to Carbon Inter		
		TOTAL				790	1,055	1	0								
		INDUSTRY STRESS													OTHER	OTHER	
		AGRICULTURE	+ +	400	3,000 7,250									_	VALUE 1	VALUE 2	
		FISHERIES FORESTRY	- +	650 5	7,250										Contraction	Decline in	
		HYDRO ENERGY		-1	-5									BIODIVERSITY	of biological zones (km²)	biological	
		TOURISM		-1	-3										(cumulative)	richness	
		TRANSPORT												DESERTI-	Additional land		
	1	TOTAL		1,055	10,320									FICATION	degraded (km²) (cumulative)		
		CLIMATE TOTAL		1,554	14,120	791	1,056	102	222					HEATING &			
		ENVIRONMENTAL DICACTERS												COOLING	Change in ener load (GWh)	99	
CARBON		ENVIRONMENTAL DISASTERS OIL SANDS													Share of		
		OIL SANDS												LABOUR	workforce		
		TOTAL		0	0									PRODUCTIVITY	particularly		
	•	HABITAT CHANGE		*											affected (%) Net loss of		
		BIODIVERSITY		35	250					5	15			SEA-LEVEL	land (km²)		
		CORROSION	-	1	5									RISE	(cumulative)		
		WATER												WATER	Loss in water runoff 2030		
	•	TOTAL		35.75	255									WATER	(km <sup>3</sup> )		
		HEALTH IMPACT				0.500									Tonnes toxic		
		AIR POLLUTION INDOOR SMOKE	+ -			6,500 3,500	9,000 3,750	65 65	100 70					OIL SANDS	waste (1000s)		
		OCCUPATIONAL HAZARDS				50	70	6	10								
		SKIN CANCER				15	40	0	0					OIL SPILLS	Gallons oil spill (1000s)		
		TOTAL				10065	12860	136	180						эри (1000э)		
		INDUSTRY STRESS												BIODIVERSITY	Decline in		
	<b>%</b>	AGRICULTURE		-15	-900									DIODIVERSITY	biological richn	ess	
		FISHERIES		1	5									Valume of			
		FORESTRY		30	150									WATER	water to treat (millions m³)		
	,	TOTAL		15.5	-745	40.00	40.000	400	400						g.:magrig-111 /		
		CARBON TOTAL		50	-490	10,065	12,860	136	180								