# **CLIMATE VULNERABILITY MONITOR**







COUNTRY PROFILE

## **PAKISTAN**







#### 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: PAKISTAN**

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

CLIMAIE CHANGE

2010 **2.3%**<sub>GDP</sub>

2030 **4.4%**<sub>GDB</sub>

CARBON INTENSIVENESS

2010 **1.0%**<sub>GDP</sub> 2030 **1.0%** GDP



## **HUMAN NATIONAL LOSS TOTALS: PAKISTAN**

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

ADDITIONAL MORTALITY-YEARLY AVERAGE

CLIMATE +CARBON

2010 150,000 2030 250,000 🕼 CLIMATE

CARBON

ADDITIONAL PERSONS AFFECTED-YEARLY AVERAGE

2010 7,300,000 2030 15,300,000

2010 4,500,000 2030 6,100,000

### **FULL COUNTRY ASSESSMENT: PAKISTAN**

			VULNERABILITY LEVEL	ECONOM	TONAL IIC COSTS USD PPP)	ADDIT MORT		ADDITIONAL AFFECTED POPULATION (1000		OTHER VALUE 1*		OTHER VALUE 2*						
			2010 2030	2010	2030	2010	2030	2010	2030	2010	2030	2010	2030	_				
		<b>ENVIRONMENTAL DISASTERS</b>												VULNERABIL	VULNERABILITY LEVELS:			
		DROUGHT	- +	35	200									+ Acute+	+ High	+		
		FLOODS AND LANDSLIDES	+ +	350	3,250	30	45	300	450					- Acute-	- High-			
CLIMATE		STORMS	-	250	2,250	5	5	4	8					Severe+	Mode	erate		
		WILDFIRES		005	F 700	05	50	004	450					Severe-	Low			
	i	TOTAL HABITAT CHANGE		635	5,700	35	50	304	458					001010	2011			
		BIODIVERSITY		300	2,250					-2,000	-4,000	350	1,000	+ - Upper lies	of will possibility	u level		
		DESERTIFICATION		70	400			350	1,000	1.500	3,250	330	1,000	<ul> <li>+ = Upper tier of vulnerability level</li> <li>- = Lower tier of vulnerability level</li> </ul>				
		HEATING AND COOLING		-65	-75			000	1,000	-1,500	-400	-700	-200	Lower der	or votrier abiti	.g tevet		
	<b>(%)</b>	LABOUR PRODUCTIVITY	+ -	6,500	50,000					33	25			<b>A</b> -				
		PERMAFROST		400	2,000			350	750					Environme	ental disasters			
		SEA-LEVEL RISE		500	2,750			1	1	100	250			Habitat ch	ange			
	•	WATER		-10	-60						-0			Health imp	pact			
		TOTAL		7,695	57,265			701	1,751					M Industry st				
		HEALTH IMPACT				0.050	0.050							y industry st	ress			
		DIARRHEAL INFECTIONS HEAT AND COLD ILLNESSES	+ -			3,250 1,250	9,250 1,750	4						•				
		HUNGER	- +			10,000	25,000	9	20					CLIMATE =				
		MALARIA AND VECTOR-BORNE				100	400	40	100					_	o Climate Cha			
		MENINGITIS				700	1,000	1	1					to Carbon Inter				
	<b>%</b>	TOTAL				15,300	37,400	55	121						.u Carburrinte	isiveriess		
		INDUSTRY STRESS													OTHER	OTHER		
		AGRICULTURE	- +	1,500	15,000										VALUE 1	VALUE 2		
		FISHERIES		100	1,250										Contraction	Barra ta		
		FORESTRY		1	15									BIODIVERSITY	of biological	Decline in biological		
		HYDRO ENERGY TOURISM		-55	-350										zones (km²) (cumulative)	richness		
		TRANSPORT												DECEDII	Additional land	j		
		TOTAL		1,546	15,915									DESERTI- FICATION	degraded (km²			
		CLIMATE TOTAL		9,876	78,880	15,335	37,450	1,060	2,331						(cumulative)			
														HEATING & COOLING	HEATING & Change in energy COOLING load (GWh)			
CARBON		ENVIRONMENTAL DISASTERS OIL SANDS													Share of			
		OIL SANDS OIL SPILLS		25	100					450	500			LABOUR	workforce			
		TOTAL		25	100					100	000			PRODUCTIVITY	particularly			
		HABITAT CHANGE													affected (%)			
		BIODIVERSITY		100	800					150	350			SEA-LEVEL RISE	Net loss of land (km²)			
		CORROSION	- +	10	40									KIDE	(cumulative)			
		WATER		1	15					350	500			WATER	Loss in water runoff 2030			
		TOTAL		111	855									WAILK	(km³)			
		HEALTH IMPACT				45.000	400.000	400	4.000						Tonnes toxic			
	•	AIR POLLUTION INDOOR SMOKE	- +			45,000 100.000	100,000 150.000	400 4,000	1,000 5.000					OIL SANDS	waste (1000s)			
		OCCUPATIONAL HAZARDS				900	1.250	75	100									
		SKIN CANCER				90	250	0	0					OIL SPILLS	Gallons oil spill (1000s)			
		TOTAL				145990	251500	4475	6100						эрк (1000э/			
		INDUSTRY STRESS												BIODIVERSITY	Decline in			
	(1)	AGRICULTURE	- +	250	700										biological richr	iess		
		FISHERIES		1	1									Valume of				
		FORESTRY		10	65									WATER	water to treat (millions m³)			
		TOTAL		260.5 396	766 1,721	4.4F.000	251,500	4,475	6,100									
		CARBON TOTAL		390	1,721	145,990	251,500	4,475	6,100					l				