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: IRAN

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



LOSSES PER YEAR

2010 **0.7%**_{GDP} 2030 **1.5%**_{GDP}



LOSSES PER YEAR

2010 **O.3%**_{GDP} 2030 **O.4%**_{GDP}



HUMAN NATIONAL LOSS TOTALS: IRAN

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

ADDITIONAL MORTALITY-YEARLY AVERAGE



2010 **25,000**

2030 **50,000**

CLIMATE

CARBON

ΔΠΠΙΤΙΠΝΔΙ

ADDITIONAL PERSONS AFFECTED-YEARLY AVERAGE

2010 900,000

2030 **450,000**

2010 **450,000** 2030 **1,050,000**

FULL COUNTRY ASSESSMENT: IRAN

		VULNERABILITY LEVEL	ADDITIONAL 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				
	ENVIRONMENTAL DISASTERS												VULNERABIL	ITY LEVELS:		
_	DROUGHT	+ +	200	1,500									+ Acute+	+ High-	+	
	FLOODS AND LANDSLIDES	+ +	200	1,750	10	10	40	50					- Acute-	- High-		
₩ ₩	STURINS		250	1,750									- Severe+	Mode	rate	
	WILDFIRES												_		1000	
	TOTAL		650	5,000	10	10	40	50					- Severe-	Low		
	HABITAT CHANGE															
	BIODIVERSITY	- +	3,250	25,000					-10,000	-20,000	30	100	+ = Upper tier	+ = Upper tier of vulnerability level- = Lower tier of vulnerability level		
	DESERTIFICATION		1	20			1	4	35	70			= Lower tier			
	HEATING AND COOLING		-100	-350					-2,000	-2,000	-1,250	-1,250				
	LABOUR PRODUCTIVITY		400	2,750					19	13			Environmental disasters			
	PERMAFROST												<u> </u>			
	SEA-LEVEL RISE		350	2,000			0	0	200	400			♠ Habitat change			
اسب	WATER		300	2,250					1	1			Health impact			
CLIMATE	TOTAL		4,201	31,670			1	4					(N) Industru stress			
\equiv	HEALTH IMPACT				400								W Industry stress			
	DIARRHEAL INFECTIONS				100	0	0						•			
	HEAT AND COLD ILLNESSES				250	300	0	4					CLIMATE =			
					200	400	0	1					_	o Climate Cha		
	MALARIA AND VECTOR-BORNE				CE	90	0	0					CARBON =			
	MENINGITIS TOTAL				65 615	790	1	2					· t	o Carbon Inte	nsiveness	
	INDUSTRY STRESS				619	790		2								
	AGRICULTURE		1.250	8.750										OTHER	OTHER	
	FISHERIES		450	5,000										VALUE 1	VALUE 2	
(AS)	FORESTRY		430	5,000										Contraction	Decline in	
X	HYDRO ENERGY		25	150									BIODIVERSITY	of biological zones (km²)	biological	
	TOURISM		25	130										(cumulative)	richness	
	TRANSPORT												DESERTI-	Additional land		
	TOTAL		1,725	13,900									FICATION	degraded (km²		
	CLIMATE TOTAL		6,576	50,570	625	800	43	56						(cumulative)		
													HEATING & Change in energy		gy .	
	ENVIRONMENTAL DISASTERS															
													HEATING & COOLING	load (GWh)		
	OIL SANDS												COOLING	load (GWh) Share of		
	OIL SANDS OIL SPILLS												LABOUR	load (GWh) Share of workforce		
	OIL SANDS OIL SPILLS TOTAL		0	0									COOLING	load (GWh) Share of		
	OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE												LABOUR PRODUCTIVITY	Share of workforce particularly		
	OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY		550	4,250					5	20			LABOUR PRODUCTIVITY SEA-LEVEL	Share of workforce particularly affected (%) Net loss of land (km²)		
	OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY CORROSION								5	20			LABOUR PRODUCTIVITY	Share of workforce particularly affected (%) Net loss of land (km²) (cumulative)		
•	OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY CORROSION WATER		550 10	4,250 40					5	20			LABOUR PRODUCTIVITY SEA-LEVEL RISE	load (GWh) Share of workforce particularly affected (%) Net loss of land (km²) (cumulative) Loss in water		
•	OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY CORROSION WATER TOTAL		550	4,250					5	20			LABOUR PRODUCTIVITY SEA-LEVEL	Share of workforce particularly affected (%) Net loss of land (km²) (cumulative)		
•	OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY CORROSION WATER TOTAL HEALTH IMPACT		550 10	4,250 40	00.000	40.000	959	200	5	20			LABOUR PRODUCTIVITY SEA-LEVEL RISE WATER	load (GWh) Share of workforce particularly affected (%) Net loss of land (km²) (cumulative) Loss in water runoff 2030 (km²)		
CARBON	OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY CORROSION WATER TOTAL HEALTH IMPACT AIR POLLUTION		550 10	4,250 40	20,000	40,000	250	800	5	20			LABOUR PRODUCTIVITY SEA-LEVEL RISE	load (GWh) Share of workforce particularly affected (%) Net loss of land (km²) (cumulative) Loss in water runoff 2030		
•	OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY CORROSION WATER TOTAL HEALTH IMPACT AIR POLLUTION INDOOR SMOKE		550 10	4,250 40	6,000	6,750	25	30	5	20			LABOUR PRODUCTIVITY SEA-LEVEL RISE WATER	load (GWh) Share of workforce particularly affected (%) Net loss of land (km²) (cumulative) Loss in water runoff 2030 (km²) Tonnes toxic		
CARBON	OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIDDIVERSITY CORROSION WATER TOTAL HEALTH IMPACT AIR POLLUTION INDOOR SMOKE OCCUPATIONAL HAZARDS		550 10	4,250 40	6,000 300	6,750 450	25 150	30 200	5	20			LABOUR PRODUCTIVITY SEA-LEVEL RISE WATER OIL SANDS	load (GWh) Share of workforce particularly affected (%) Net loss of land (km²) (cumulative) Loss in water runoff 2030 (km²) Tonnes toxic waste (1000s) Gallons oil		
CARBON	OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY CORROSION WATER TOTAL HEALTH IMPACT AIR POLLUTION INDOOR SMOKE OCCUPATIONAL HAZARDS SKIN CANCER		550 10	4,250 40	6,000 300 150	6,750 450 350	25 150 0	30 200 0	5	20			LABOUR PRODUCTIVITY SEA-LEVEL RISE WATER	load (GWh) Share of workforce particularly affected (%) Net loss of land (km²) (cumulative) Loss in water runoff 2030 (km²) Tonnes toxic waste (1000s)		
CARBON	OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY CORROSION WATER TOTAL HEALTH IMPACT AIR POLLUTION INDOOR SMOKE OCCUPATIONAL HAZARDS SKIN CANCER TOTAL		550 10	4,250 40	6,000 300	6,750 450	25 150	30 200	5	20			LABOUR PRODUCTIVITY SEA-LEVEL RISE WATER OIL SANDS OIL SPILLS	load (GWh) Share of workforce particularly affected (%) Net loss of land (km²) (cumulative) Loss in water runoff 2030 (km²) Tonnes toxic waste (1000s) Gallons oil spill (1000s)		
CARBON	OIL SANDS OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY CORROSION WATER TOTAL HEALTH IMPACT AIR POLLUTION INDOOR SMOKE OCCUPATIONAL HAZARDS SKIN CANCER TOTAL INDUSTRY STRESS		550 10 560	4,250 40 4290	6,000 300 150	6,750 450 350	25 150 0	30 200 0	5	20			LABOUR PRODUCTIVITY SEA-LEVEL RISE WATER OIL SANDS	load (GWh) Share of workforce particularly affected (%) Net loss of land (km²) (cumulative) Loss in water runoff 2030 (km²) Tonnes toxic waste (1000s) Gallons oil	ess	
CARBON	OIL SANDS OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY CORROSION WATER TOTAL HEALTH IMPACT AIR POLLUTION INDOOR SMOKE OCCUPATIONAL HAZARDS SKIN CANCER TOTAL INDUSTRY STRESS		550 10 560	4,250 40 4290	6,000 300 150	6,750 450 350	25 150 0	30 200 0	5	20			LABOUR PRODUCTIVITY SEA-LEVEL RISE WATER OIL SANDS OIL SPILLS	load (GWh) Share of workforce particularly affected (%) Net loss of land (km²) Loss in water runoff 2030 (km²) Tonnes toxic waste (1000s) Gallons oil spill (1000s) Decline in biological richr	ess	
CARBON	OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY CORROSION WATER TOTAL HEALTH IMPACT AIR POLLUTION INDOOR SMOKE OCCUPATIONAL HAZARDS SKIN CANCER TOTAL INDUSTRY STRESS AGRICULTURE FISHERIES		550 10 560	4,250 40 4290 1,500 15	6,000 300 150	6,750 450 350	25 150 0	30 200 0	5	20			LABOUR PRODUCTIVITY SEA-LEVEL RISE WATER OIL SANDS OIL SPILLS BIODIVERSITY	load (GWh) Share of White Share of White Share of Share	ess	
CARBON	OIL SANDS OIL SANDS OIL SPILLS TOTAL HABITAT CHANGE BIODIVERSITY CORROSION WATER TOTAL HEALTH IMPACT AIR POLLUTION INDOOR SMOKE OCCUPATIONAL HAZARDS SKIN CANCER TOTAL INDUSTRY STRESS		550 10 560	4,250 40 4290	6,000 300 150	6,750 450 350	25 150 0	30 200 0	5	20			LABOUR PRODUCTIVITY SEA-LEVEL RISE WATER OIL SANDS OIL SPILLS	load (GWh) Share of workforce particularly affected (%) Net loss of land (km²) Loss in water runoff 2030 (km²) Tonnes toxic waste (1000s) Gallons oil spill (1000s) Decline in biological richr	ess	