CLIMATE VULNERABILITY MONITOR

DARA

Climate Vulnerable Forum

COUNTRY PROFILE

AUSTRALIA

CLIMATE: LOW CARBON: HIGH

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: AUSTRALIA

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

CLIMATE CHANGE IMPACT

LOSSES PER YEAR

2010 **0.5%GDP**
2030 **0.8%GDP**

CARBON INTENSIVENESS IMPACT

LOSSES PER YEAR

2010 **1.1%GDP**
2030 **2.1%GDP**

HUMAN NATIONAL LOSS TOTALS: AUSTRALIA

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

CLIMATE +CARBON COMBINED

ADDITIONAL MORTALITY-YEARLY AVERAGE

2010 **4,000**
2030 **6,500**

CLIMATE

ADDITIONAL PERSONS AFFECTED-YEARLY AVERAGE

2010 **2,250,000** 2030 **2,300,000**

CARBON

2010 **100,000** 2030 **200,000**

FULL COUNTRY ASSESSMENT: AUSTRALIA

		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
CLIMATE	**ENVIRONMENTAL DISASTERS**												
	DROUGHT	+	-	45	100								
	FLOODS AND LANDSLIDES		-	65	200	1	1	2	5				
	STORMS			-1	-1	1	1	100	150				
	WILDFIRES	+	+	0	1								
	TOTAL			110	300	2	2	102	155				
	HABITAT CHANGE												
	BIODIVERSITY	-	-	1,250	2,250					-50,000	-100,000	100	350
	DESERTIFICATION	+	+	500	1,500			20	45	7,000	15,000		
	HEATING AND COOLING			150	550					1,750	4,000	1,500	3,750
	LABOUR PRODUCTIVITY			45	100					6	6		
	PERMAFROST												
	SEA-LEVEL RISE			800	1,500			2	2	2,500	7,250		
	WATER		-	750	2,000					1	1		
	TOTAL			3,495	7,900			22	47				
	HEALTH IMPACT												
	DIARRHEAL INFECTIONS					0	0	0					
	HEAT AND COLD ILLNESSES	-	-			100	250						
	HUNGER												
	MALARIA AND VECTOR-BORNE												
	MENINGITIS												
	TOTAL					100	250	0	0				
	INDUSTRY STRESS												
	AGRICULTURE			450	1,000								
	FISHERIES			-10	-25								
	FORESTRY		-	100	300								
	HYDRO ENERGY			5	15								
	TOURISM			150	400								
	TRANSPORT												
	TOTAL			695	1,690								
	CLIMATE TOTAL			**4,299**	**9,889**	**101**	**252**	**124**	**202**				
CARBON	**ENVIRONMENTAL DISASTERS**												
	OIL SANDS												
	OIL SPILLS			100	200					550	600		
	TOTAL			100	200								
	HABITAT CHANGE												
	BIODIVERSITY	-	+	8,500	25,000					800	3,750		
	CORROSION			1	1								
	WATER			10	10					250	200		
	TOTAL			8511	25011								
	HEALTH IMPACT												
	AIR POLLUTION	-	-			1,500	2,250	45	95				
	INDOOR SMOKE					1,500	2,250	15	25				
	OCCUPATIONAL HAZARDS	+	+			350	550	45	65				
	SKIN CANCER	+	+			500	1,250	2	6				
	TOTAL					3850	6300	107	191				
	INDUSTRY STRESS												
	AGRICULTURE			80	85								
	FISHERIES			10	30								
	FORESTRY	+	-	750	800								
	TOTAL			840	915								
	CARBON TOTAL			**9,451**	**26,126**	**3,850**	**6,300**	**107**	**191**				

VULNERABILITY LEVELS:

+ Acute+	+ High+
- Acute-	- High-
+ Severe+	Moderate
- Severe-	Low

+ = Upper tier of vulnerability level
- = Lower tier of vulnerability level

- Environmental disasters
- Habitat change
- Health impact
- Industry stress

CLIMATE = Impact/Vulnerability to Climate Change

CARBON = Impact/Vulnerability to Carbon Intensiveness

	OTHER VALUE 1	OTHER VALUE 2
BIODIVERSITY	Contraction of biological zones (km^2) (cumulative)	Decline in biological richness
DESERTI-FICATION	Additional land degraded (km^2) (cumulative)	
HEATING & COOLING	Change in energy load (GWh)	
LABOUR PRODUCTIVITY	Share of workforce particularly affected (%)	
SEA-LEVEL RISE	Net loss of land (km^2) (cumulative)	
WATER	Loss in water runoff 2030 (km^3)	
OIL SANDS	Tonnes toxic waste (1000s)	
OIL SPILLS	Gallons oil spill (1000s)	
BIODIVERSITY	Decline in biological richness	
WATER	Volume of water to treat (millions m^3)	