

COUNTRY PROFILE

JAPAN ●

CLIMATE: **LOW**

CARBON: **MODERATE**

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: JAPAN

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

CLIMATE CHANGE IMPACT

LOSSES PER YEAR

2010 **NIL**
2030 **NIL**

CARBON INTENSIVENESS IMPACT

LOSSES PER YEAR

2010 **0.2% GDP**
2030 **0.3% GDP**

HUMAN NATIONAL LOSS TOTALS: JAPAN

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

CLIMATE + CARBON COMBINED

ADDITIONAL MORTALITY-YEARLY AVERAGE

2010 **35,000**
2030 **40,000**

CLIMATE

ADDITIONAL PERSONS AFFECTED-YEARLY AVERAGE

2010 **6,400,000** 2030 **6,850,000**

CARBON

2010 **700,000** 2030 **950,000**

FULL COUNTRY ASSESSMENT: JAPAN

	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												
DROUGHT			90	150								
FLOODS AND LANDSLIDES			150	400	5	5	20	35				
STORMS	-	+	4,000	10,000	-10	-20	-10	-30				
WILDFIRES												
TOTAL			4,240	10,550	-5	-15	10	5				
HABITAT CHANGE												
BIODIVERSITY			900	2,500					-4,500	-9,250	100	350
DESERTIFICATION			40	100			150	300	500	950		
HEATING AND COOLING			250	750					1,250	2,500	550	1,000
LABOUR PRODUCTIVITY			400	1,000					6	6		
PERMAFROST												
SEA-LEVEL RISE			950	2,000			6	6	50	80		
WATER			-4,250	-10,000					-1	-5		
TOTAL			-1,710	-3,650			156	306				
HEALTH IMPACT												
DIARRHEAL INFECTIONS					0	0	0	0				
HEAT AND COLD ILLNESSES					-850	-1,750						
HUNGER												
MALARIA AND VECTOR-BORNE							0	0				
MENINGITIS					25	25	0	0				
TOTAL					-825	-1,725	0	0				
INDUSTRY STRESS												
AGRICULTURE			450	1,000								
FISHERIES			200	600								
FORESTRY			-10	-30								
HYDRO ENERGY			-80	-150								
TOURISM			-55	-5								
TRANSPORT												
TOTAL			505	1,415								
CLIMATE TOTAL			3,035	8,315	-830	-1,740	166	311				
ENVIRONMENTAL DISASTERS												
OIL SANDS												
OIL SPILLS			60	90					300	300		
TOTAL			60	90								
HABITAT CHANGE												
BIODIVERSITY			5,250	15,000					650	2,000		
CORROSION	+	-	150	150								
WATER			10	10					300	250		
TOTAL			5410	15160								
HEALTH IMPACT												
AIR POLLUTION	-	+			20,000	25,000	400	600				
INDOOR SMOKE					10,000	15,000	150	150				
OCCUPATIONAL HAZARDS	+	-	450	650	450	650	150	200				
SKIN CANCER	-	+	400	750	1	3	1	3				
TOTAL					30850	41400	701	953				
INDUSTRY STRESS												
AGRICULTURE			-200	-2,750								
FISHERIES			65	200								
FORESTRY	-	-	950	1,000								
TOTAL			815	-1550								
CARBON TOTAL			6,285	13,700	30,850	41,400	701	953				

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
DESERTIFICATION	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 ('000s)	
OIL SPILLS	Gallons oil spill ('000s)	
BIODIVERSITY	Decline in biological richness	
WATER	Volume of water to treat (millions m ³)	