CLIMATE VULNERABILITY MONITOR

DARA

Climate Vulnerable Forum

COUNTRY PROFILE

PAPUA NEW GUINEA

CLIMATE: **ACUTE** 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: PAPUA NEW GUINEA

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

CLIMATE CHANGE IMPACT

LOSSES PER YEAR

2010 **6.6%GDP**

2030 **12.1%GDP**

CARBON INTENSIVENESS IMPACT

LOSSES PER YEAR

2010 **11.5%GDP**

2030 **21.8%GDP**

HUMAN NATIONAL LOSS TOTALS: PAPUA NEW GUINEA

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

CLIMATE +CARBON COMBINED

ADDITIONAL MORTALITY-YEARLY AVERAGE

2010 **3,500**

2030 **5,000**

CLIMATE

ADDITIONAL PERSONS AFFECTED-YEARLY AVERAGE

2010 **300,000**

2030 **450,000**

CARBON

2010 **100,000**

2030 **150,000**

FULL COUNTRY ASSESSMENT: PAPUA NEW GUINEA

		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	-	+	1	1								
	FLOODS AND LANDSLIDES	-	+	1	5	1	5	30	40				
	STORMS												
	WILDFIRES												
	TOTAL			1	6	1	5	30	40				
	HABITAT CHANGE												
	BIODIVERSITY	+	+	65	500					-1,250	-2,500	50	150
	DESERTIFICATION												
	HEATING AND COOLING	+	+	20	350					200	900	85	350
	LABOUR PRODUCTIVITY	-	+	300	2,250					33	23		
	PERMAFROST												
	SEA-LEVEL RISE	-	-	550	3,250			0	0	550	1,500		
	WATER			-100	-850					-5	-5		
	TOTAL			835	5,500			0	0				
	HEALTH IMPACT												
	DIARRHEAL INFECTIONS					30	0	0					
	HEAT AND COLD ILLNESSES	-	+			60	80						
	HUNGER	-	-			95	200	0	0				
	MALARIA AND VECTOR-BORNE	+	+			400	850	100	250				
	MENINGITIS												
	TOTAL					585	1,130	100	250				
	INDUSTRY STRESS												
	AGRICULTURE	+	-	45	350								
	FISHERIES	+	+	95	1,250								
	FORESTRY												
	HYDRO ENERGY												
	TOURISM			1	25								
	TRANSPORT												
	TOTAL			141	1,625								
	CLIMATE TOTAL			**977**	**7,131**	**586**	**1,135**	**130**	**291**				
CARBON	**ENVIRONMENTAL DISASTERS**												
	OIL SANDS												
	OIL SPILLS												
	TOTAL			0	0								
	HABITAT CHANGE												
	BIODIVERSITY	+	+	1,500	15,000					1,250	3,500		
	CORROSION												
	WATER												
	TOTAL			1500	15000								
	HEALTH IMPACT												
	AIR POLLUTION					150	250	7	20				
	INDOOR SMOKE	+	+			2,750	3,250	100	150				
	OCCUPATIONAL HAZARDS					5	5	0	1				
	SKIN CANCER	-	+			75	200	0	0				
	TOTAL					2980	3705	107	171				
	INDUSTRY STRESS												
	AGRICULTURE			-5	-200								
	FISHERIES												
	FORESTRY												
	TOTAL			-5	-200								
	CARBON TOTAL			**1,495**	**14,800**	**2,980**	**3,705**	**107**	**171**				

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)	