

## COUNTRY PROFILE

### TONGA

CLIMATE: **ACUTE** CARBON: **LOW**

### 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](http://www.daraint.org/cvm2) - [cvm@daraint.org](mailto:cvm@daraint.org) - +34 915310372

### ECONOMIC NATIONAL LOSS TOTALS: TONGA

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



### HUMAN NATIONAL LOSS TOTALS: TONGA

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



### FULL COUNTRY ASSESSMENT: TONGA

	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
<b>ENVIRONMENTAL DISASTERS</b>												
DROUGHT	-	+										
FLOODS AND LANDSLIDES												
STORMS		+				1	-3	20				
WILDFIRES												
TOTAL			0	0	0	1	-3	20				
<b>HABITAT CHANGE</b>												
BIODIVERSITY												
DESERTIFICATION												
HEATING AND COOLING		+		5					1	10	1	5
LABOUR PRODUCTIVITY	-	+	15	100					33	23		
PERMAFROST												
SEA-LEVEL RISE	+	-	20	100								
WATER		-	1	5								
TOTAL			36	210								
<b>HEALTH IMPACT</b>												
DIARRHEAL INFECTIONS					0	0	0					
HEAT AND COLD ILLNESSES	-	+			1	1						
HUNGER					1	1	0	0				
MALARIA AND VECTOR-BORNE							1	0				
MENINGITIS												
TOTAL					2	3	0	0				
<b>INDUSTRY STRESS</b>												
AGRICULTURE	-	+	5	25								
FISHERIES		+	1	10								
FORESTRY												
HYDRO ENERGY												
TOURISM	-	+	1	5								
TRANSPORT												
TOTAL			7	40								
<b>CLIMATE TOTAL</b>			41	250	1	2	-3	20				
<b>ENVIRONMENTAL DISASTERS</b>												
OIL SANDS												
OIL SPILLS												
TOTAL			0	0								
<b>HABITAT CHANGE</b>												
BIODIVERSITY												
CORROSION												
WATER												
TOTAL			0	0								
<b>HEALTH IMPACT</b>												
AIR POLLUTION							0	0				
INDOOR SMOKE	-	+			30	35	1	1				
OCCUPATIONAL HAZARDS	+	+	1	1	1	1	0	0				
SKIN CANCER	-	-					1	0				
TOTAL					30.5	36.25	1	2				
<b>INDUSTRY STRESS</b>												
AGRICULTURE			-1	-10								
FISHERIES												
FORESTRY												
TOTAL			-0.5	-10								
<b>CARBON TOTAL</b>			0	-10	30	36	1	2				

**VULNERABILITY LEVELS:**

- Acute+ (Red +)
- Acute- (Red -)
- Severe+ (Orange +)
- Severe- (Orange -)
- High+ (Yellow +)
- High- (Yellow -)
- Moderate (Green)
- Low (Dark Green)

+ = 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 <sup>2</sup> ) (cumulative)	Decline in biological richness
DESERTIFICATION	Additional land degraded (km <sup>2</sup> ) (cumulative)	
HEATING & COOLING	Change in energy load (GWh)	
LABOUR PRODUCTIVITY	Share of workforce particularly affected (%)	
SEA-LEVEL RISE	Net loss of land (km <sup>2</sup> ) (cumulative)	
WATER	Loss in water runoff 2030 (km <sup>3</sup> )	
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 <sup>3</sup> )	