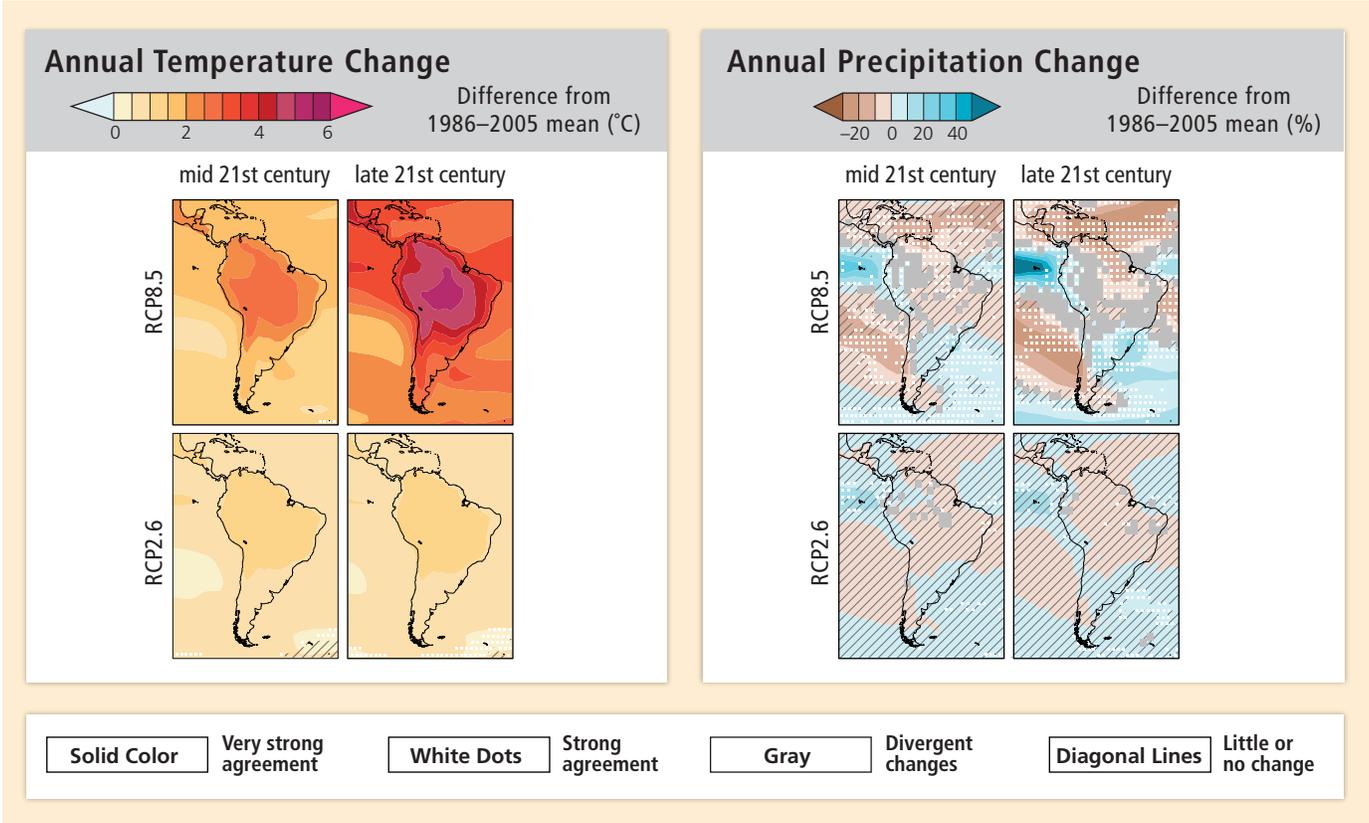


CLIMATE CHANGE 2014

Impacts, Adaptation, and Vulnerability

Climate Change and Key Risks in Central and South America
From the Working Group II Fifth Assessment Report



Projected changes in annual average temperature (left) and precipitation (right) for 2046–2065 and 2081–2100 under RCP2.6 and 8.5, relative to 1986–2005. [WGII AR5 Figure 27-2]

Key regional risks from climate change in Central and South America and the potential for reducing risk through mitigation and adaptation. Key risks result from high hazard, high vulnerability, and/or high exposure. They are identified based on assessment of the literature and expert judgments. Risk levels are estimated through the 21st century for the current state of adaptation and for a hypothetical highly adapted state. [WGII AR5 Table 27-8]

Climate-related drivers of impacts								Level of risk & potential for adaptation																																								
Warming trend	Extreme temperature	Drying trend	Extreme precipitation	Precipitation	Snow cover	Ocean acidification	Carbon dioxide fertilization																																									
Key risk	Adaptation issues & prospects			Climatic drivers	Timeframe	Risk & potential for adaptation																																										
<p>Water availability in semi-arid and glacier-melt-dependent regions and Central America; flooding and landslides in urban and rural areas due to extreme precipitation (<i>high confidence</i>)</p> <p>[27.3]</p>	<ul style="list-style-type: none"> • Integrated water resource management • Urban and rural flood management (including infrastructure), early warning systems, better weather and runoff forecasts, and infectious disease control 				<table border="1"> <tr> <td></td> <td>Very low</td> <td>Medium</td> <td>Very high</td> </tr> <tr> <td>Present</td> <td colspan="3"></td> </tr> <tr> <td>Near term (2030–2040)</td> <td colspan="3"></td> </tr> <tr> <td>Long term 2°C (2080–2100)</td> <td colspan="3"></td> </tr> <tr> <td>4°C</td> <td colspan="3"></td> </tr> </table>		Very low	Medium	Very high	Present				Near term (2030–2040)				Long term 2°C (2080–2100)				4°C				<table border="1"> <tr> <td></td> <td>Very low</td> <td>Medium</td> <td>Very high</td> </tr> <tr> <td>Present</td> <td colspan="3"></td> </tr> <tr> <td>Near term (2030–2040)</td> <td colspan="3"></td> </tr> <tr> <td>Long term 2°C (2080–2100)</td> <td colspan="3"></td> </tr> <tr> <td>4°C</td> <td colspan="3"></td> </tr> </table>				Very low	Medium	Very high	Present				Near term (2030–2040)				Long term 2°C (2080–2100)				4°C			
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<p>CA coral reef bleaching (<i>high confidence</i>)</p> <p>[27.3.3]</p>	<p>Limited evidence for autonomous genetic adaptation of corals; other adaptation options are limited to reducing other stresses, mainly enhancing water quality and limiting pressures from tourism and fishing.</p>				<table border="1"> <tr> <td></td> <td>Very low</td> <td>Medium</td> <td>Very high</td> </tr> <tr> <td>Present</td> <td colspan="3"></td> </tr> <tr> <td>Near term (2030–2040)</td> <td colspan="3"></td> </tr> <tr> <td>Long term 2°C (2080–2100)</td> <td colspan="3"></td> </tr> <tr> <td>4°C</td> <td colspan="3"></td> </tr> </table>		Very low	Medium	Very high	Present				Near term (2030–2040)				Long term 2°C (2080–2100)				4°C				<table border="1"> <tr> <td></td> <td>Very low</td> <td>Medium</td> <td>Very high</td> </tr> <tr> <td>Present</td> <td colspan="3"></td> </tr> <tr> <td>Near term (2030–2040)</td> <td colspan="3"></td> </tr> <tr> <td>Long term 2°C (2080–2100)</td> <td colspan="3"></td> </tr> <tr> <td>4°C</td> <td colspan="3"></td> </tr> </table>				Very low	Medium	Very high	Present				Near term (2030–2040)				Long term 2°C (2080–2100)				4°C			
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<p>Decreased food production and food quality (<i>medium confidence</i>)</p> <p>[27.3]</p>	<ul style="list-style-type: none"> • Development of new crop varieties more adapted to climate change (temperature and drought) • Offsetting of human and animal health impacts of reduced food quality • Offsetting of economic impacts of land-use change • Strengthening traditional indigenous knowledge systems and practices 				<table border="1"> <tr> <td></td> <td>Very low</td> <td>Medium</td> <td>Very high</td> </tr> <tr> <td>Present</td> <td colspan="3"></td> </tr> <tr> <td>Near term (2030–2040)</td> <td colspan="3"></td> </tr> <tr> <td>Long term 2°C (2080–2100)</td> <td colspan="3"></td> </tr> <tr> <td>4°C</td> <td colspan="3"></td> </tr> </table>		Very low	Medium	Very high	Present				Near term (2030–2040)				Long term 2°C (2080–2100)				4°C				<table border="1"> <tr> <td></td> <td>Very low</td> <td>Medium</td> <td>Very high</td> </tr> <tr> <td>Present</td> <td colspan="3"></td> </tr> <tr> <td>Near term (2030–2040)</td> <td colspan="3"></td> </tr> <tr> <td>Long term 2°C (2080–2100)</td> <td colspan="3"></td> </tr> <tr> <td>4°C</td> <td colspan="3"></td> </tr> </table>				Very low	Medium	Very high	Present				Near term (2030–2040)				Long term 2°C (2080–2100)				4°C			
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<p>Spread of vector-borne diseases in altitude and latitude (<i>high confidence</i>)</p> <p>[27.3]</p>	<ul style="list-style-type: none"> • Development of early warning systems for disease control and mitigation based on climatic and other relevant inputs. Many factors augment vulnerability. • Establishing programs to extend basic public health services 				<table border="1"> <tr> <td></td> <td>Very low</td> <td>Medium</td> <td>Very high</td> </tr> <tr> <td>Present</td> <td colspan="3"></td> </tr> <tr> <td>Near term (2030–2040)</td> <td colspan="3"></td> </tr> <tr> <td>Long term 2°C (2080–2100)</td> <td colspan="3">not available</td> </tr> <tr> <td>4°C</td> <td colspan="3">not available</td> </tr> </table>		Very low	Medium	Very high	Present				Near term (2030–2040)				Long term 2°C (2080–2100)	not available			4°C	not available			<table border="1"> <tr> <td></td> <td>Very low</td> <td>Medium</td> <td>Very high</td> </tr> <tr> <td>Present</td> <td colspan="3"></td> </tr> <tr> <td>Near term (2030–2040)</td> <td colspan="3"></td> </tr> <tr> <td>Long term 2°C (2080–2100)</td> <td colspan="3">not available</td> </tr> <tr> <td>4°C</td> <td colspan="3">not available</td> </tr> </table>				Very low	Medium	Very high	Present				Near term (2030–2040)				Long term 2°C (2080–2100)	not available			4°C	not available		
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