



for a living planet

# 2°C - Too High!

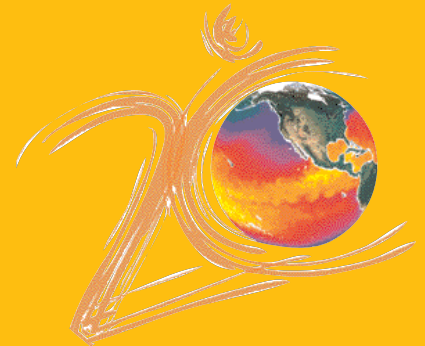
Preventing Dangerous Climate Change

Island lost after a cyclone in Tuvalu. How many more of these would disappear?

Ian Fry, 2003

*"...if nothing is done as a matter of urgency, Kiribati like other small island states and low lying coastal areas and other eco-systems will continue to suffer in silence the ongoing and increasingly unbearable adverse impacts of climate change and sea level rise..."*

GOVERNMENT OF KIRIBATI STATEMENT, AT UNFCCC COP 6, DEN HAGUE, 2000.



Climate change is already happening and the Pacific is experiencing its devastating impacts. The 1998 El Nino caused a loss of FJD104m in Fiji's sugar industry and a 9% decline in Palau's tourism earnings.

Scientists warn that action must be taken, before the year 2050, to prevent climate change reaching dangerous levels, by limiting global temperature increase to well below 2° Celsius.

2050 is not far away, it is within our life spans.

***We must act  
NOW  
to prevent  
dangerous  
climate  
change!***



WWF South Pacific Program 1993-2004

Rising seas are eroding important cultural sites in the Pacific.



**A community vulnerable to storm surges in the Cook Islands.** PICCAP, Cook Islands, 2000

### What is Dangerous Climate Change?

Research, based on computer models show that if global temperatures rise by 2°C above pre-industrial levels, the following could happen<sup>1</sup>:

- Agriculture based economies, like many in the Pacific, will suffer very large losses in GDP. Increased occurrence of droughts, heavy rain, inundation by rising seas and growth in pests that like warmer temperatures will result in severe crop losses.
- Tourism revenues will fall as rising seas erode beaches and coastal tourist resorts, and as warmer seas damage coral reefs.
- The intensity of cyclones will increase by between 10-20%, causing more damage to already fragile Pacific economies and ecosystems.
- The frequency of El Nino events will increase, causing more frequent droughts in countries like the Federated States of Micronesia (FSM) and the Republic of the Marshall Islands (RMI).
- Sea levels will rise by up to a metre, leading to Tongatapu losing 10.3km<sup>2</sup> of land on Tongatapu, and some of the Yap islands losing between 9m-96m of the length of their shorelines.



**Sea water coming through the ground during a spring tide, Funafuti, Tuvalu.**

Jan Fry, 2005

# La Conférence Nations Unies sur les changements climatiques



- Mean rainfall intensity will increase by 20-30% over tropical oceans, causing increased flood damage.
- Sugar farm output will decrease by 20-40%, while sucrose content will decrease by up to 50%.

We need to do all we can to limit global warming to well below 2°C, to protect our economies and businesses from dangerous climate change.

### How Hot is it Now?

Global temperatures, on average are 0.7°C above the pre-industrial level. At this level, the Pacific has experienced the following:

- More than four “category 5” cyclones hit the Cook Islands in the 2004-2005 cyclone season.
- The Eastern coast of New Guinea experienced king tides that destroyed farms, more than a hundred homes and drowned one person, in 2005.
- The 1982-83 El Nino caused rainfall to decrease by 70- 90% in the western Pacific countries, leading to severe droughts.<sup>2</sup>
- The 1998 El Nino caused severe droughts in Papua New Guinea (PNG), RMI, FSM, American Samoa, Samoa and Fiji.

# The United Nations Climate Change Conference



Montréal 2005



WWF South Pacific Programme, 2005.

- Malaria, which previously occurred only in western and central Pacific countries, now occurs as far east as Fiji.
- El Ninos in the Pacific have caused tuna stocks to relocate by hundreds of kilometers from normal areas of aggregation, causing huge losses in otherwise robust tuna economies.
- Rising seas are eroding unique cultural and

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Coral death caused by high sea temperatures, predicted to worsen with climate change.

spiritual sites in FSM, Tuvalu, RMI, Niue and Kiribati.

- Polar caps and glaciers are melting at an alarming rate, causing sea levels to rise.

Such change has occurred at only 0.7°C of warming. One can only imagine how catastrophic climate change will be at 2°C of warming above pre-industrial levels.

1 & 2 Source: McCarthy, J.J., Canziani, O.F., Leary, N.A., Dokken, D.J. and White, K.S. (Eds.). 2001. Climate Change 2001: Impacts, Adaptation, and Vulnerability, contribution of Working Group II to the Third Assessment Report of the IPCC. Cambridge University Press, Cambridge. Pg. 843-876.

## *We cannot afford higher temperatures!*

### How can we STOP Dangerous Climate Change?

Climate change is caused by the ever increasing presence of climate changing gases in the atmosphere, like carbon dioxide. These gases are released from burning fossil fuels like coal and oil in the transport and energy sectors. Climate changing gases trap heat in the atmosphere, causing impacts like sea level rise and changing weather patterns.



Replanting mangroves to prevent shoreline erosion, a form of adaptation to climate change.

WWF South Pacific Programme, 2005.

Pacific Islands, together contribute less than 1% of global climate change causing gases. They are, however, among the most vulnerable to the impacts of climate change.

Global emissions of these gases must be reduced by 60-80% of 1990 levels by the year 2050 to prevent dangerous climate change.

To do this, developed countries must immediately stop using fossil fuels, and switch to clean, renewable sources of energy, like solar and wind power. Rising fuel prices worldwide, as well as the need to prevent dangerous climate change should



Wind turbines, New Caledonia.

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drive us to use more renewable energy. If renewable energies are not seriously implemented, climate change will become dangerous in the next 40 years.

#### What can YOU do to Prevent Dangerous Climate Change?

Governments have the following roles in preventing dangerous climate change:

- Through their participation, ensure that international climate policy negotiations use the Kyoto Protocol as a basis for ALL countries to commit, by 2012, to reduce global emissions of climate changing gases by 60-80% of 1990 levels by 2050.
- Advocate a limit to global warming that is **well below 2°C** which should be reflected in the Forum Communiques.
- Support the Montreal Action Plan, a plan of action for deeper emissions reductions.

Businesses also have a role in preventing dangerous climate change. They must:

- Pressure national governments to lobby for deeper emissions reductions at international climate meetings
- Actively increase your businesses use of renewable energy.

#### What is the WWF doing to keep Global Warming below 2°C?

- Globally, WWF is working towards a clean energy,

fossil fuel free future, through its PowerSwitch! campaign.

- In the Pacific, WWF is working with the governments of Tuvalu and the Cook Islands to strengthen their participation in international climate policy meetings to ensure stronger actions and policies to prevent dangerous climate change

*Together, we can prevent dangerous climate change!*



Cook Islands delegates at the United Nations Climate Conference in December 2005.

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