

# OUR ENVIRONMENT OUR HERITAGE

## Adapting to Climate Change in Samoa: Time to Get Practical

Three questions that people always ask:

1. *Is climate change really happening?*
2. *Isn't it just a natural process?*
3. *So it's getting warmer: who cares?*

### Is Climate Change real?

#### Global trends (IPCC 2007):

- 11 of the last 12 years were the hottest on record
- Global mean temperature increased by 0.76 °C between 1850 - 2005
- Sea levels rose at an average rate of 1.8mm per year between 1961 to 2003. Between 1993 to 2003 it rose at 3.1mm per year.
- "More intense and longer droughts have been observed...particularly in the tropics..."
- Heavy rainfall events have become more common
- Cyclones becoming more intense and potentially more frequent (more research required)

#### Samoa's Climate Trends:

- 0.59oC increase in mean temperature (1890-2000)
- Observed sea level rise: 3.8mm/yr (1993-2005)
- Increase in extreme sea levels (e.g. storm surge)
- Heavy rainfall events becoming more frequent
- No significant long term trends in annual rainfall

### Isn't it just a natural process?

#### Latest findings from IPCC (2007):

- Concentrations of CO<sub>2</sub> are higher than at any time over the last 500,000 years
- CO<sub>2</sub> has increased at an "exceptionally fast rate"
- Current global temperatures are warmer than they have been during the past 500 years
- Current warming is "extremely unusual in geological terms"
- Global warming is "very likely" to have been caused by humans

### ADAPTATION IN SAMOA

#### Definition of Adaptation:

In simple terms:

**"Learning to live with the new climatic conditions"**

### Why should we adapt?

- Climate change is already happening
- Climate change is projected to worsen over the coming decades
- Limited global commitment to mitigation

#### % of Global emissions (approximate)

Samoa	0.0002%
PNG	0.002%
Australia	1.4%
China	12%
United States	24%

### Adaptation Priorities for Samoa

- Water
- Health
- Agriculture
- Fisheries
- Infrastructure
- Biodiversity

### Scales of Adaptation

- National
- Village
- Individual/ Household

### National Level Actions

- Planning and urban management
- Disaster preparedness
- Watershed management
- Health & Sanitation Programs
- Research and development
- Agriculture and food security planning
- Etc

### Village Level Adaptation

- Protecting and replanting mangroves
- Replanting trees in water catchments
- Build in smart locations
- Protect coral reefs
- Management of local fisheries
- Don't develop coastal swamps (flood protection)
- Re-location?

### National Adaptation Strategies

- Address non-climate stresses
- Enforce fish catch and fish size restrictions
- Protect Samoa's Exclusive Economic Zone from illegal fishing
- Prevent marine pollution

- Improved seasonal forecasting
- Marine conservation areas
- Research and development:
  - New technology?
  - Alternative fish species?
  - Fish farming?

### Village Adaptation Strategies

- Prevent non-climate stresses:
  - Over fishing
  - Dynamite fishing
  - Pollution
  - Sediment run-off
  - Etc
- Improve resilience of the resource:
  - Mangrove conservation & rehabilitation
  - Coral gardening
  - Reconnect coastal wetlands with lagoon
  - Marine conservation areas

### Individual / Household Adaptation Strategies

- Fishing when weather is good
- Non-fish food sources
- Climate tolerant fish species?
- Alternative income sources



To find out more about this important issue, contact our Meteorology Section at Mulinuu, on 20855.

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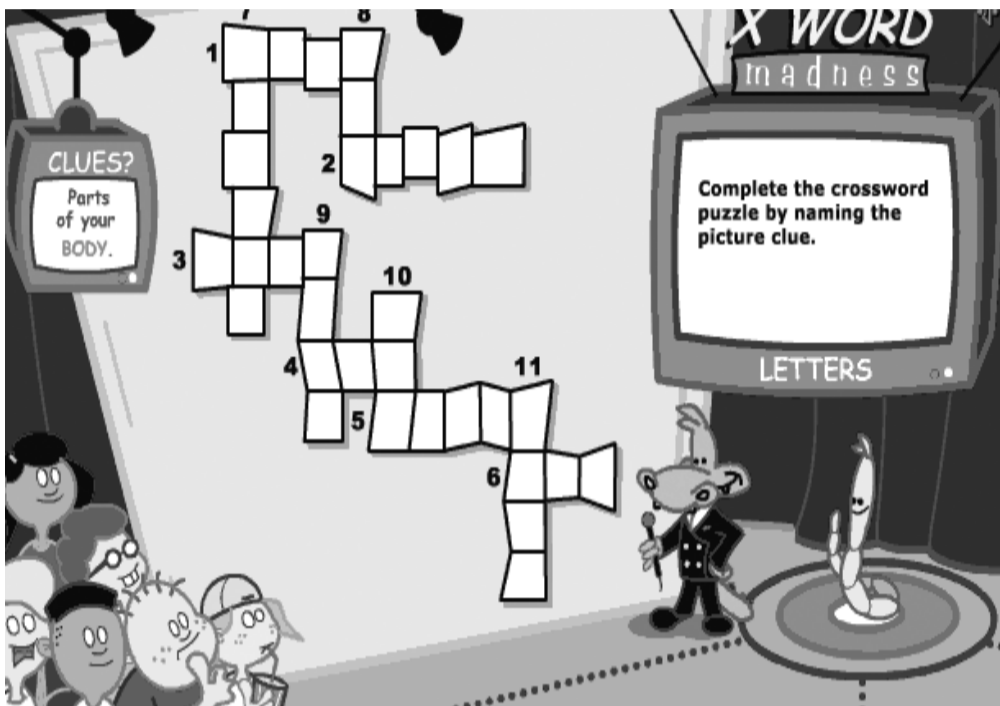


## Children's Corner

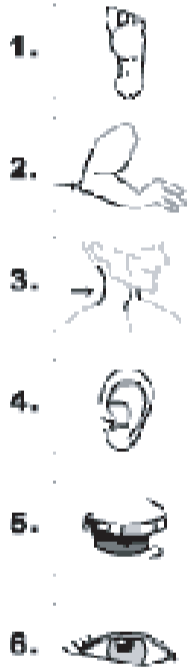


Children aged 9-15 are invited to answer the following corner. The name of 3 students with top scores at the end of every month will be posted under the "Children's Corner" for special prizes. "2008 Young Environmentalist Star Awards" will be given to 10 students with top total scores at the end of the year.

### FUN CROSS-PUZZLE



#### ACROSS



#### DOWN

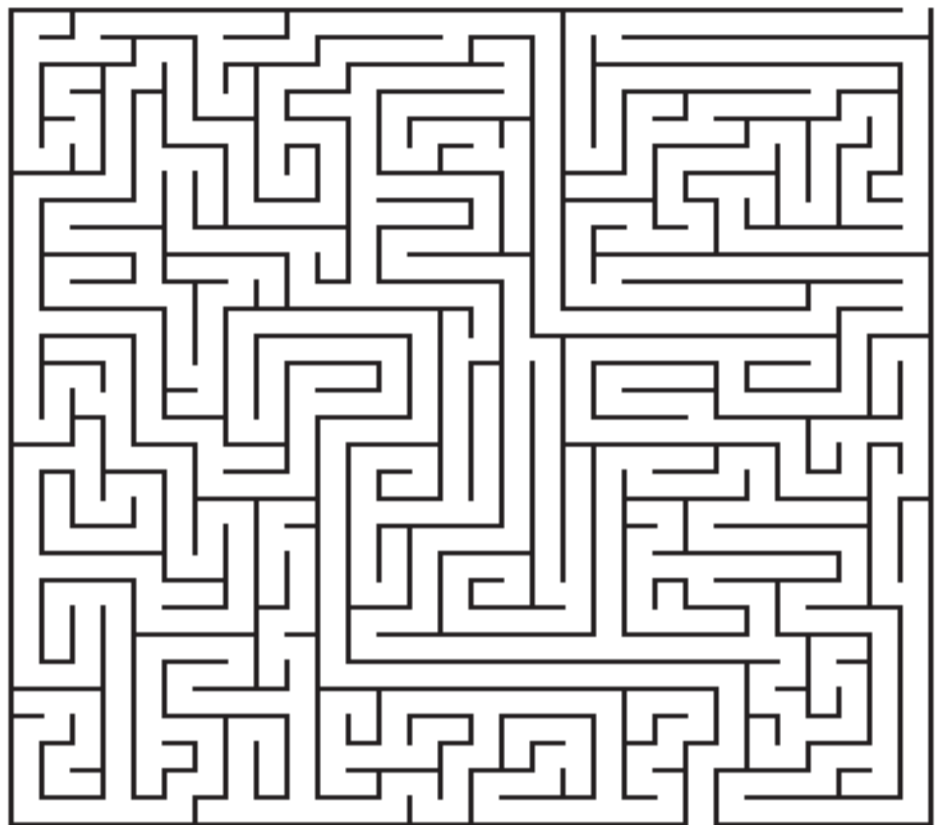


### Puzzle

adapt trend increase rainfall warmer global

a	j	r	l	q	g	g	n	w
d	o	g	l	x		l	g	c
a	q	s	a	v	d	o	a	w
p	y	h	f	o	y	b	e	a
t	r	e	n	d	f	a	g	r
t	s	l	i	l	h	l	z	m
h	z	y	a	f	d	n	a	e
i	n	c	r	e	a	s	e	r

### MAZE



### Unscramble

- Adptaation .....
- Climtae .....
- Naotinal .....
- Cmomuniyt .....
- Glloba .....
- Sceince .....
- Defiitnion .....

## ACKNOWLEDGEMENTS

We wish to acknowledge and thank the following companies for sponsoring our children's corner prizes

● STRICKLAND BROS

● DIGICEL



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