The BATTLE on CLIMATE CHANGE:
GLIMPSES FROM THE FRONTS

26th Pacific Islands Environment Conference

Saipan, CNMI

Saipan World Resort

22 – 25 June, 2009

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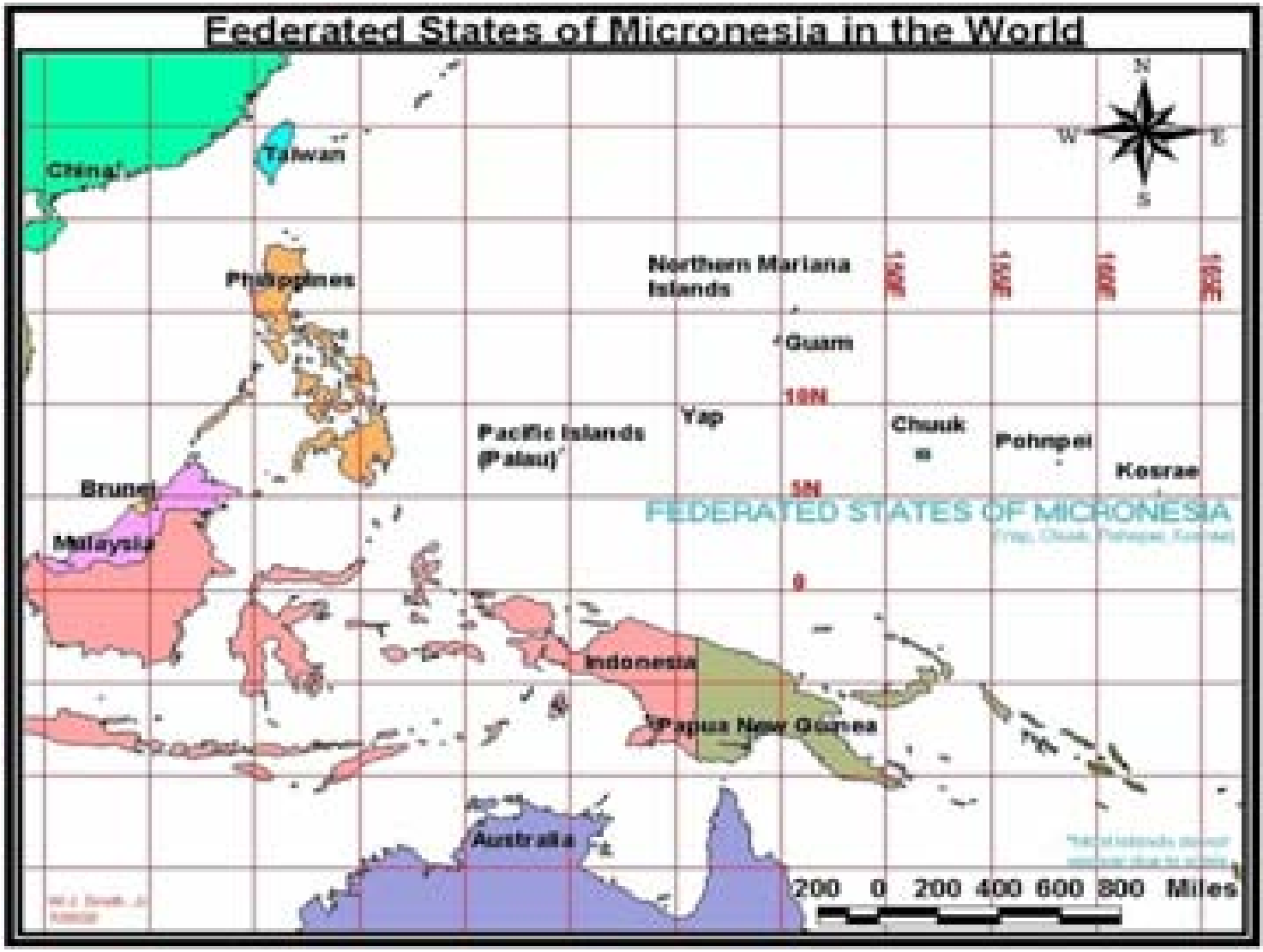
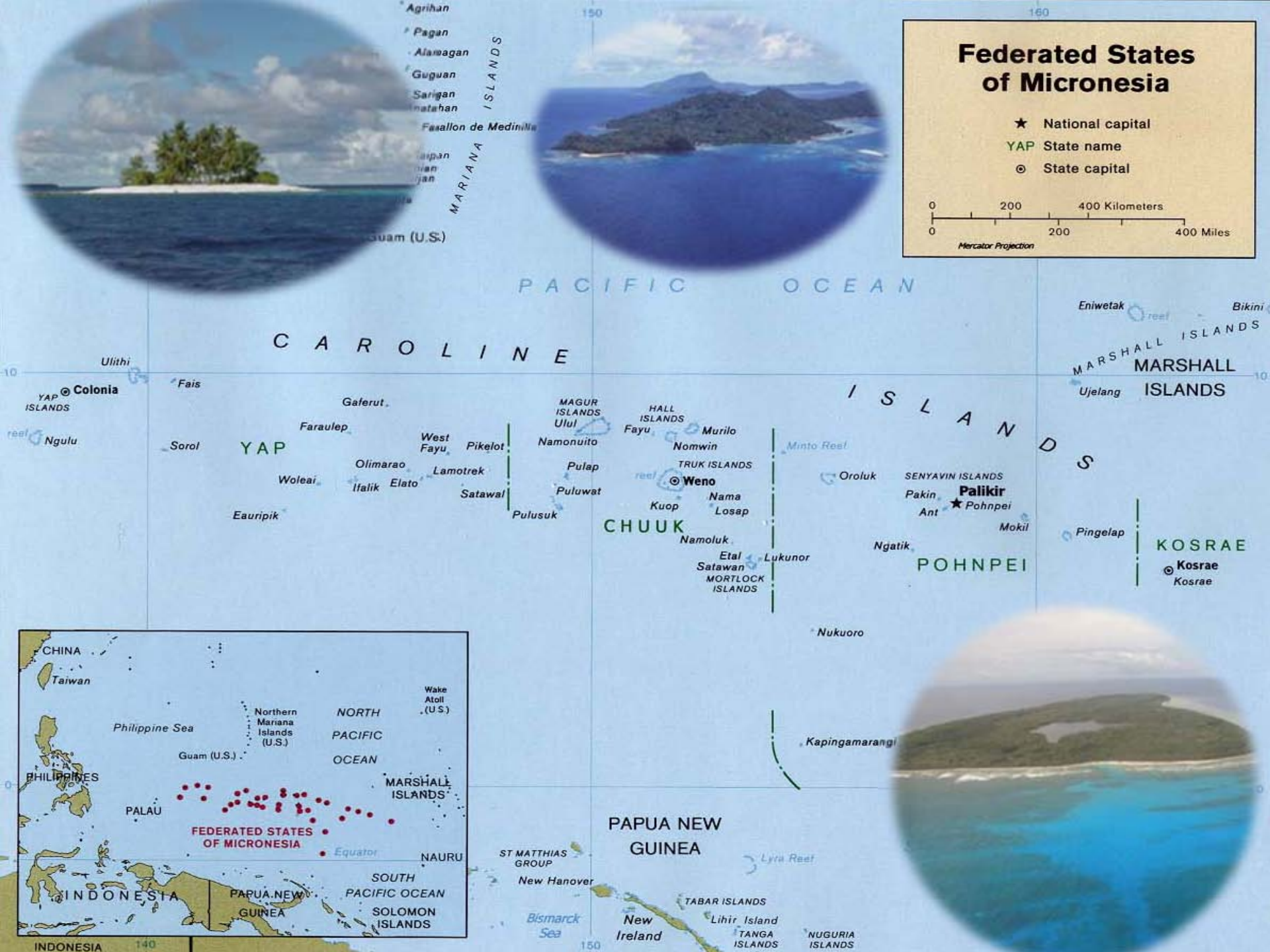
OUTLINE

1. OVERVIEW of FSM
2. The Battle on the Local Front
3. The Battle at the International Front
4. Challenges:
5. Q&A

Federated States of Micronesia

- 607 Islands
- 30 high, 33 atolls
- Total area about 3 million sq. km.
- Total Land Area= 4,840 sq. km.
- Atolls to 791 meters above sea level
- Population (2000) =107,000

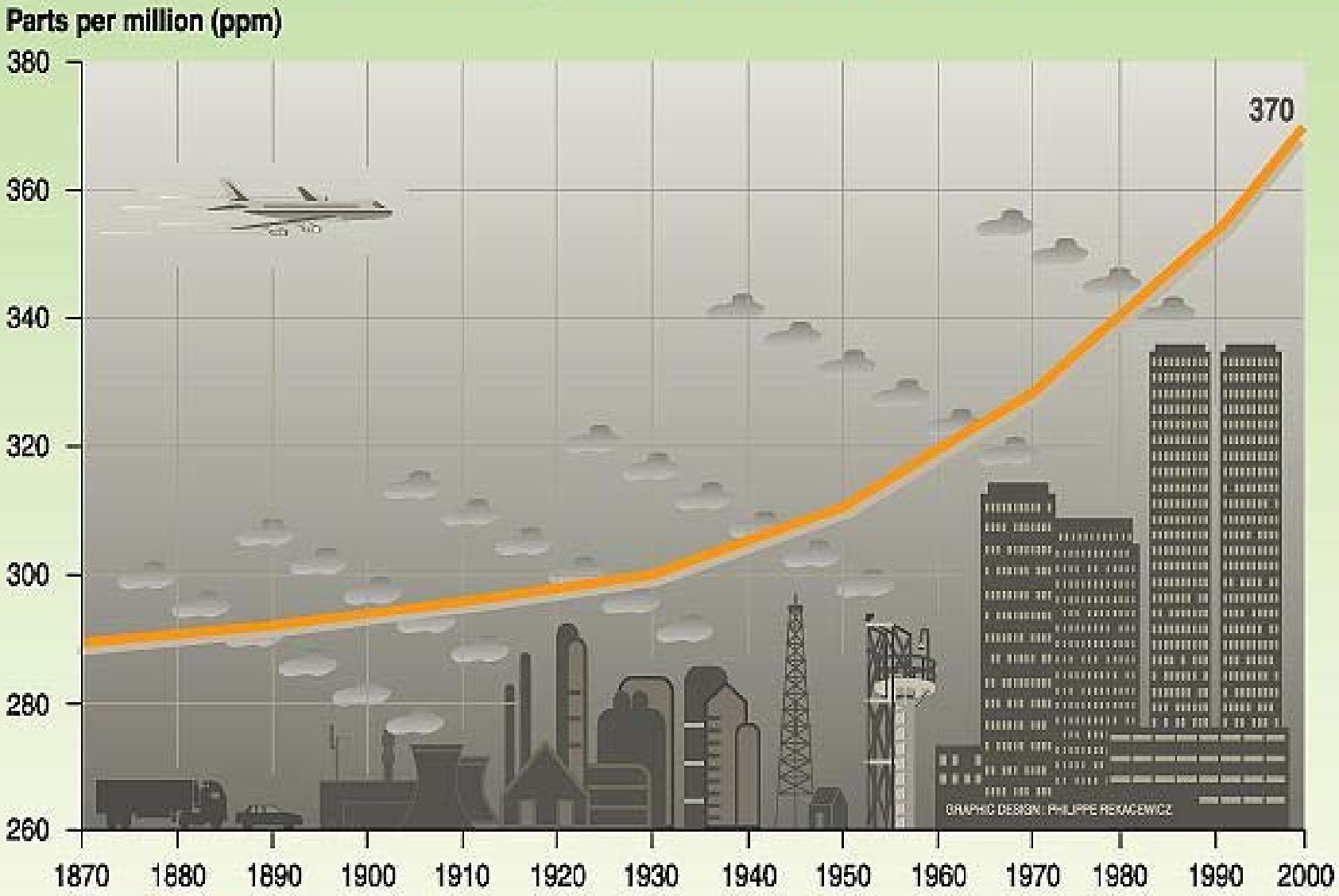



Federated States of Micronesia
National capital
YAP State name
State capital
0 200 400 Kilometers
0 200 400 Miles
Mercator Projection
PACIFIC OCEAN
CAROLINE ISLANDS
MARSHALL ISLANDS
YAP
CHUUK
POHNPEI
KOSRAE
Colonia
Weno
Palikir
Kosrae
Agrihan
Pagan
Alamagan
Guguan
Sarigan
Fasallon de Medinilla
MARIANA ISLANDS
Guam (U.S.)
Ulithi
Fais
YAP ISLANDS
Ngulu
Sorol
Gaferut
Faraulep
Olimarao
Woleai
Ifalik
Elato
West Fayu
Pikelot
Lamotrek
Satawal
Eauripik
MAGUR ISLANDS
Ulul
Namonuito
Pulap
Puluwat
Pulusuk
HALL ISLANDS
Fayu
Murilo
Nomwin
TRUK ISLANDS
Kuop
Nama
Losap
Namoluk
Etal
Satawan
MORTLOCK ISLANDS
Lukunor
Minto Reef
Oroluk
SENYAVIN ISLANDS
Pakin
Ant
Pohnpei
Mokil
Ngatik
Pingelap
Nukuoro
Kapingamarangi
Eniwetak
Bikini
Ujelang
CHINA
Taiwan
Philippine Sea
Northern Mariana Islands (U.S.)
NORTH PACIFIC OCEAN
Wake Atoll (U.S.)
PHILIPPINES
MARSHALL ISLANDS
PALAU
FEDERATED STATES OF MICRONESIA
Equator
NAURU
INDONESIA
PAPUA NEW GUINEA
SOUTH PACIFIC OCEAN
SOLOMON ISLANDS
PAPUA NEW GUINEA
ST MATTHIAS GROUP
New Hanover
Bismarck Sea
New Ireland
TABAR ISLANDS
Lihir Island
TANGA ISLANDS
NUGURIA ISLANDS
Lyra Reef
INDONESIA

PARADISE, NEXT TO HEAVEN……

…..then why worry?

Global atmospheric concentration of CO_2



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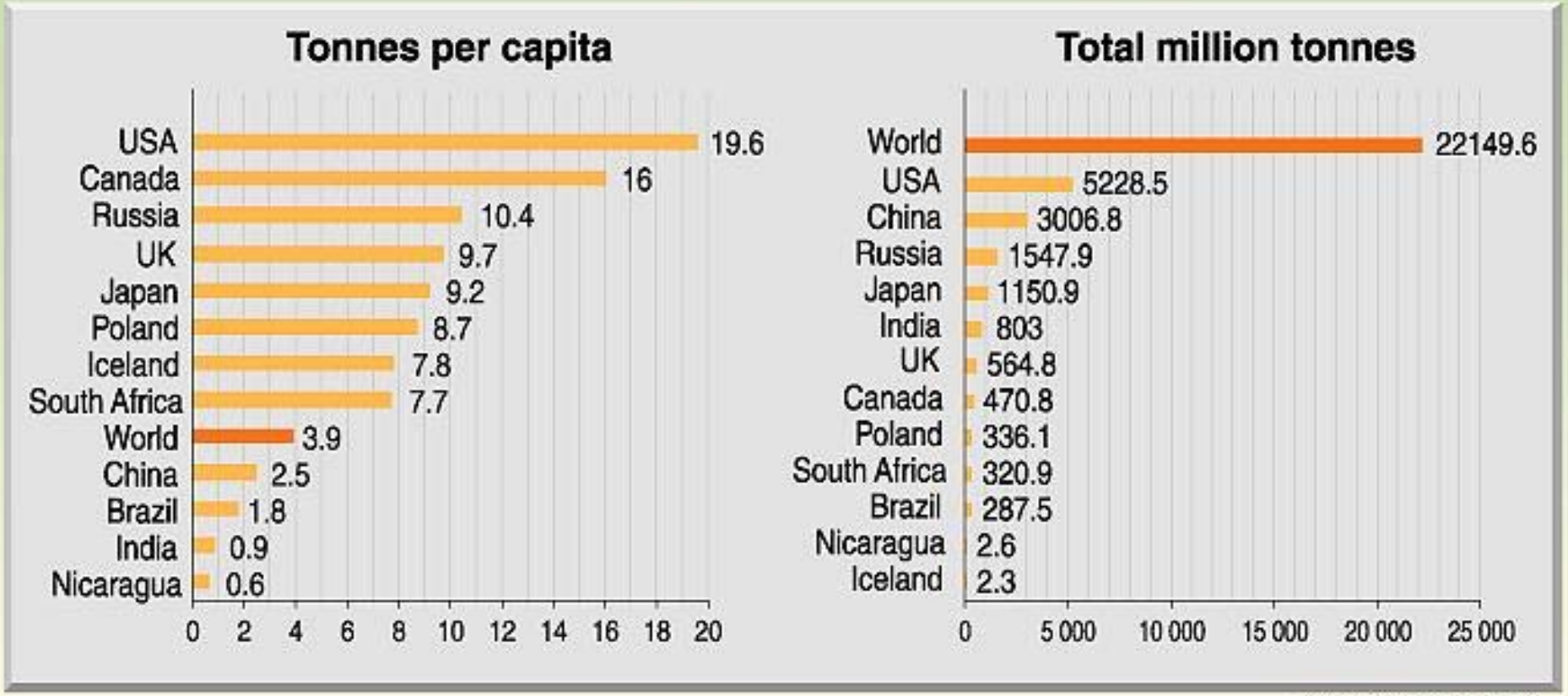
Sources: TP Whorf Scripps, Mauna Loa Observatory, Hawaii, institution of oceanography (SIO), university of California La Jolla, California, United States, 1999

Emissions of CO_2 - selected countries (1995)



GRAPHIC DESIGN : PHILIPPE REKACEWICZ

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Source : International Energy Agency, 1998.

Projections

- GHGs will continue to increase
- GHGs already in atmosphere will continue to impact climate system (even if stopped now)
- SLR will continue to rise (IPCC AR4) and later projections (up to 2 meters)
- Extreme events: more frequent/intense
- Rainfall may decrease in yearly total but more intense
- Increase ocean acidification

KOSRAE STATE
FLOODING HOME IN TAFUNSAK

KOSRAE STATE
MAIN ROAD FLOODING

YAP

YAP

POHNPEI

YAP

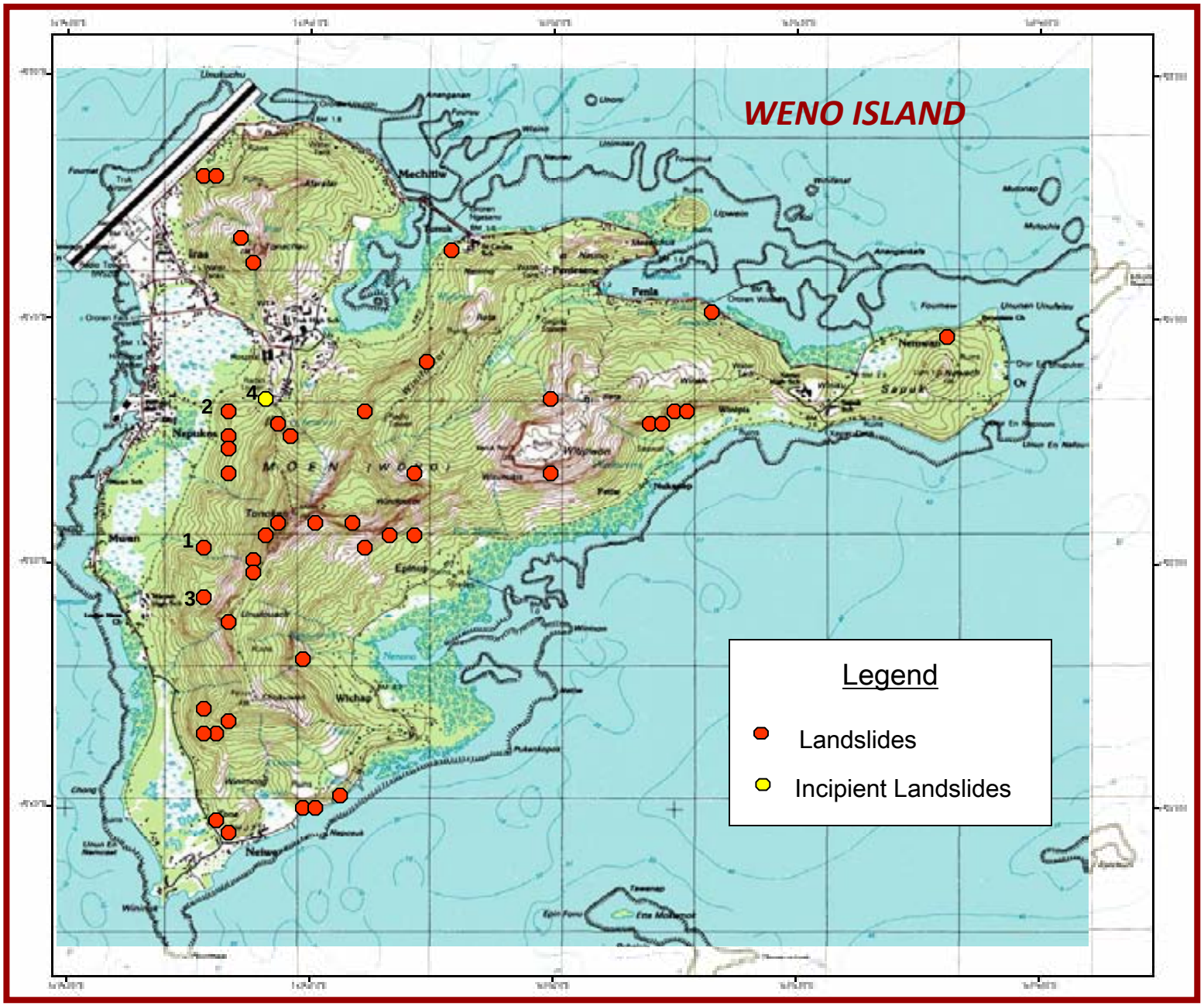
SAMPLE ROTTEN TARO

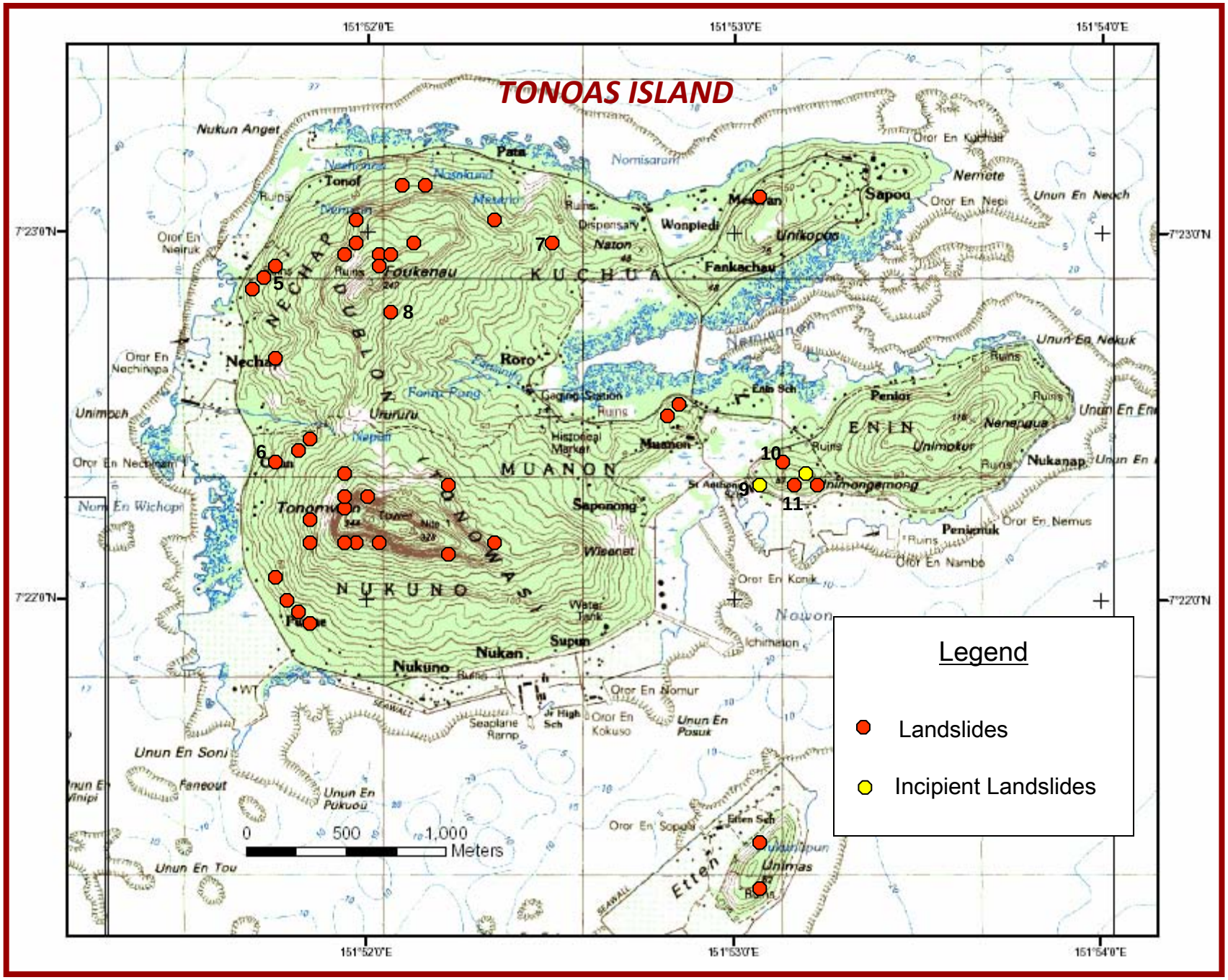
ETTAL, MORTLOCKS REGION & FANANU, NORTHWEST REGION

COASTAL EROSION CAUSING COCONUT TREES TO FALL & WATER TANK AND HOUSES TO FALL INTO OCEAN

Increased Rainfall Intensity resulted in Landslides in Chuuk & Pohnpei

MWAN LANDSLIDE


WENO ISLAND
Legend
Landslides
Incipient Landslides
1
2
3
4
Mechitiw
Penia
Nepukes
Tonoken
Epinup
Wichap
Neiwa
Nemwan
Sapuk
Iras
Muan


TONOAS ISLAND
151°52'0"E
151°53'0"E
151°54'0"E
7°23'0"N
7°22'0"N
Nukun Anget
Pata
Tonof
Nomisaram
Sapou
Nemete
Unun En Neoch
Wonpiedi
Unikopus
Fankachau
Naton
Foukenau
KUCHUA
NECHAP
DUBLON
Nechap
Roro
Unun En Nekuk
Penior
ENIN
Nenepua
Unimokur
Nukanap
Unimongemong
Penienuk
Muanon
MUANON
Saponong
Wisenat
Tonomwon
NUKUNO
Nukan
Supun
Nukuno
Unun En Soni
Unun En Pukuou
Unun En Tou
Unimas
Etten
Legend
Landslides
Incipient Landslides
0
500
1,000
Meters
5
6
7
8
9
10
11

International Front

1. Rio	UNFCCC (no teeth)
2. Kyoto	Kyoto Protocol (too low)
3. Bali	Bali Roadmap (post KP)
4. Bonn/others (1-6)	Targets & others
5. Copenhagen	45% by 2020, 95% by 2050 (FSM/AOSIS) (350 ppm/1.5 deg. C)
6. Montreal Protocol, CBD and others	

UN Framework Convention Climate Change (UNFCCC)

- **OBJECTIVE** (Art. 2): The ultimate objective of this Convention .. is to achieve.. **Stabilization of GHG concentration** in the atmosphere at a level that would **prevent anthropogenic interference** with the climate system. Such a level should be achieved within a timeframe sufficient to **allow ecosystem to adapt** naturally to climate change, to **ensure that food security production is not threatened** and to **enable economic development to proceed in a sustainable manner.**

UNFCCC

- COMMITMENT (Art 4.8): Parties shall give full consideration to what actions are necessary under the Convention, including actions related to funding, insurance, transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of CC especially on:
  - (a) Small island countries;
  - (b) Countries with low-lying coastal areas;
  - (d) Countries with areas prone to natural disasters;
  - (g) Countries with areas of fragile eco-systems….

Addressing CC in MP & Others

1. Targets under CC/post KP will not be enough especially to avoid reaching "tipping points"
2. CC under Montreal Protocol (M &M)
   a) To accelerate phase-out of Hydroclorofluorocarbons (HCFCs) (16 b tones of CO2 e by 2040)
   b) Collect/destroy banks of ODS
   c) US EPA 2009 CLIMATE AWARD for Micronesia & Mauritius
   d) Regulate Hydrofluorocarbons (HFCs) under MP (non ODS …cover under KP)
   e) Others: biochar, reduction of black carbon soot, Technology transfer etc
3. CBD: Micronesia Challenge (20/30) by 2020

CHALLENGES…..

1. Acceptance

2. Change behavior

3. Political will & Political Leadership

Pray hard…….for the heavens that to provide for us….
Is turning against us!