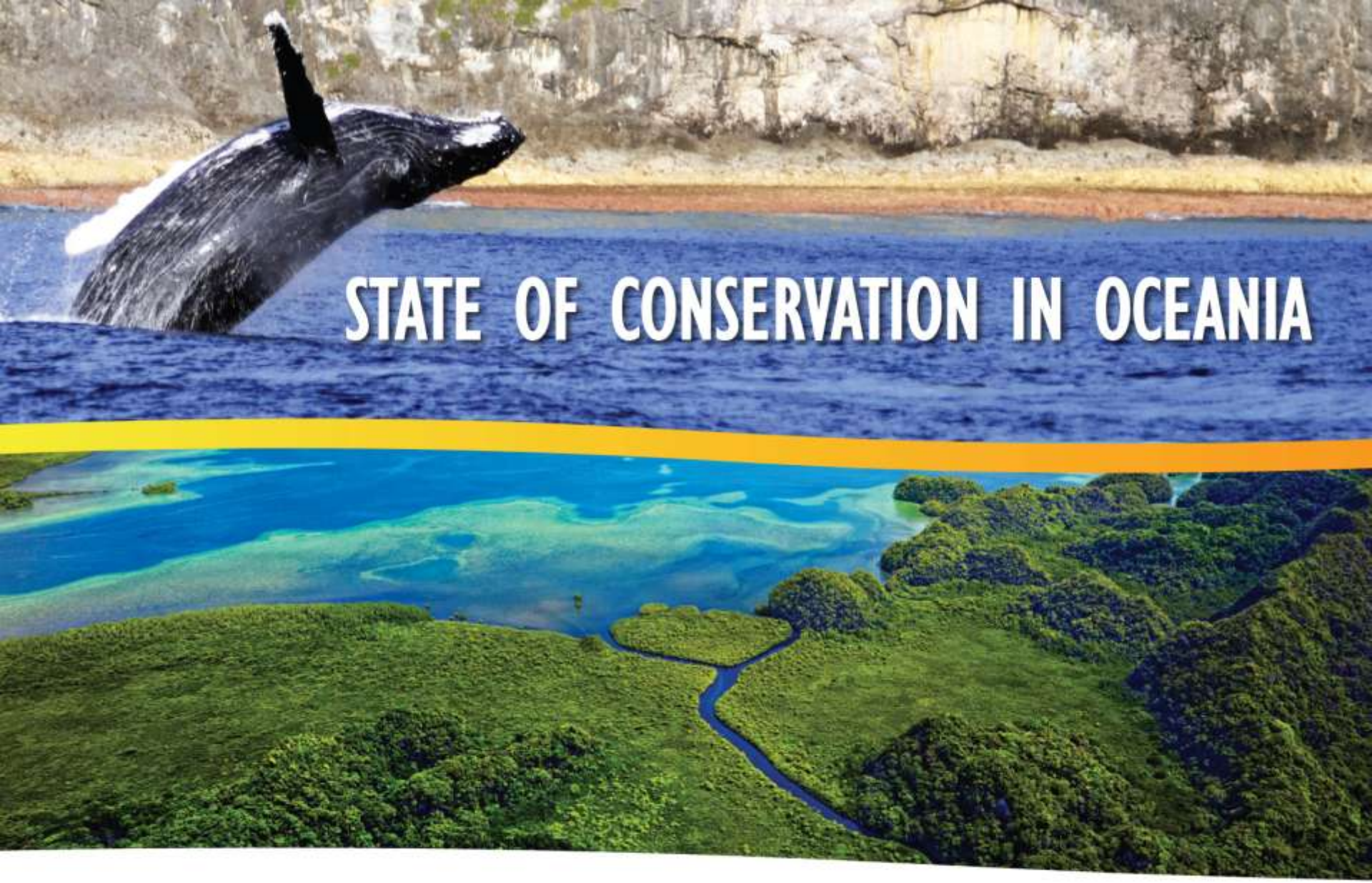


STATE OF CONSERVATION IN OCEANIA

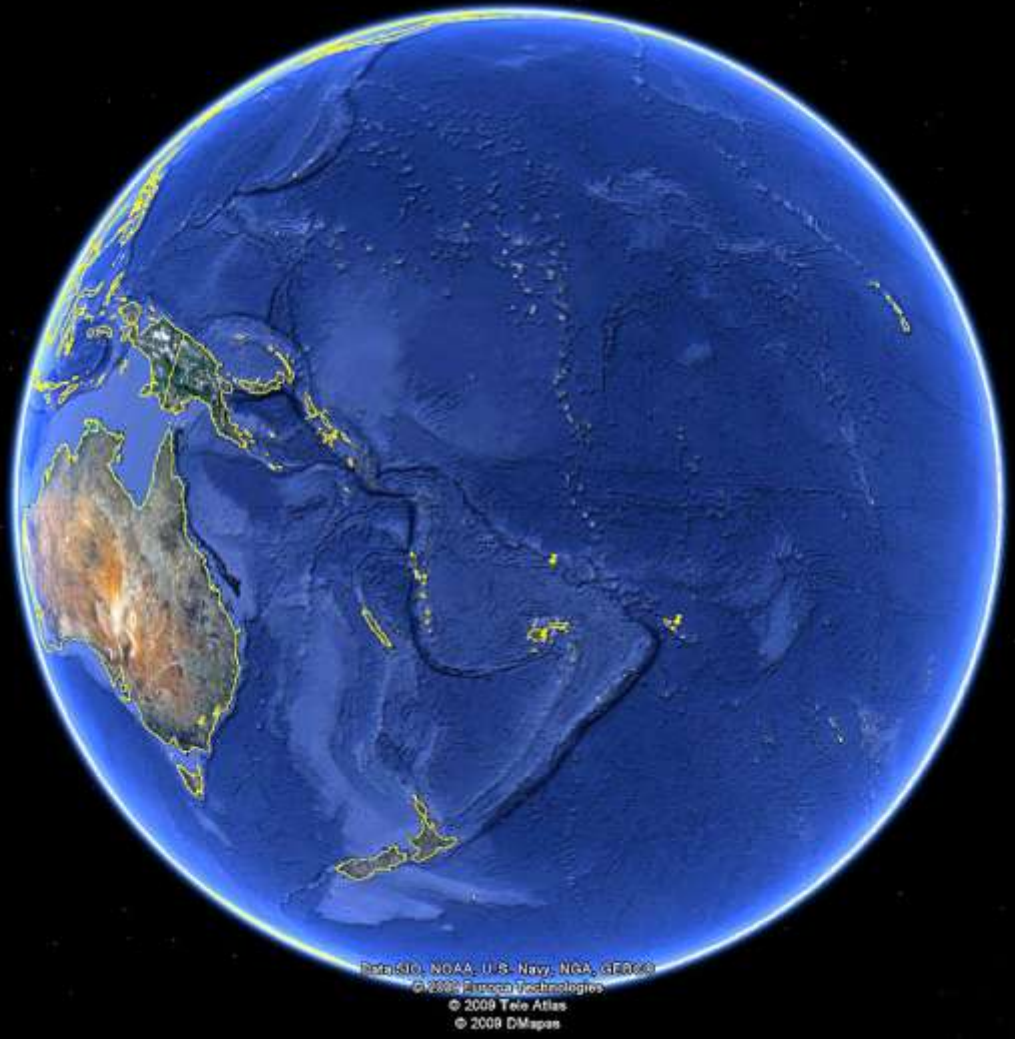
9th PACIFIC ISLAND CONFERENCE ON
NATURE CONSERVATION AND PROTECTED AREAS

FOR MORE INFORMATION, PLEASE VISIT **WWW.SPREP.ORG**

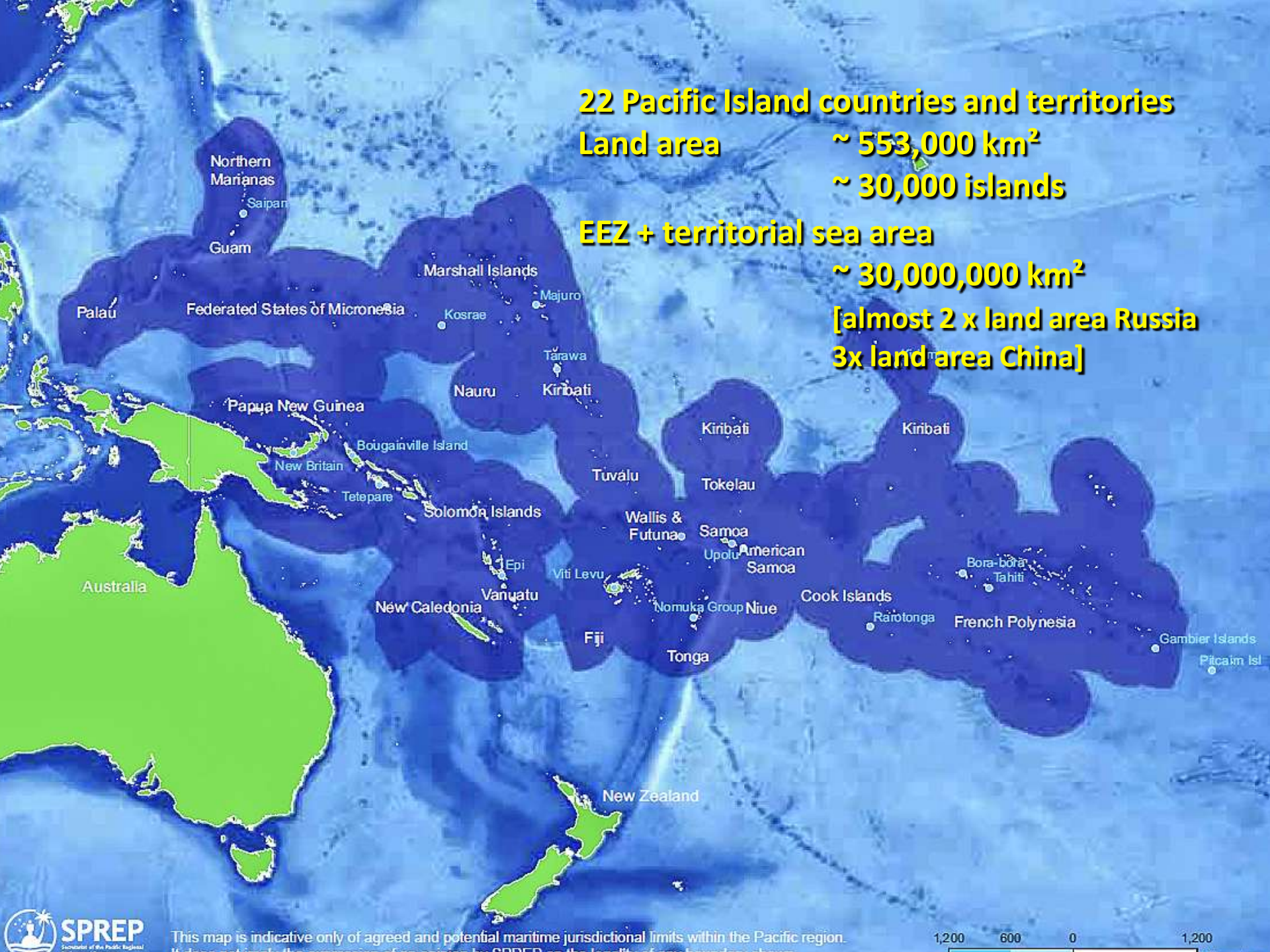
Background

- Need for assessment of the status of biodiversity and conservation in Oceania
- Input to the conference
- Assist with development of the next Action Strategy or its equivalent
- Start of long term, periodic monitoring process
- Commissioned a consortium led by IUCN to undertake the work
- Summary of the synthesis report

SCOPE

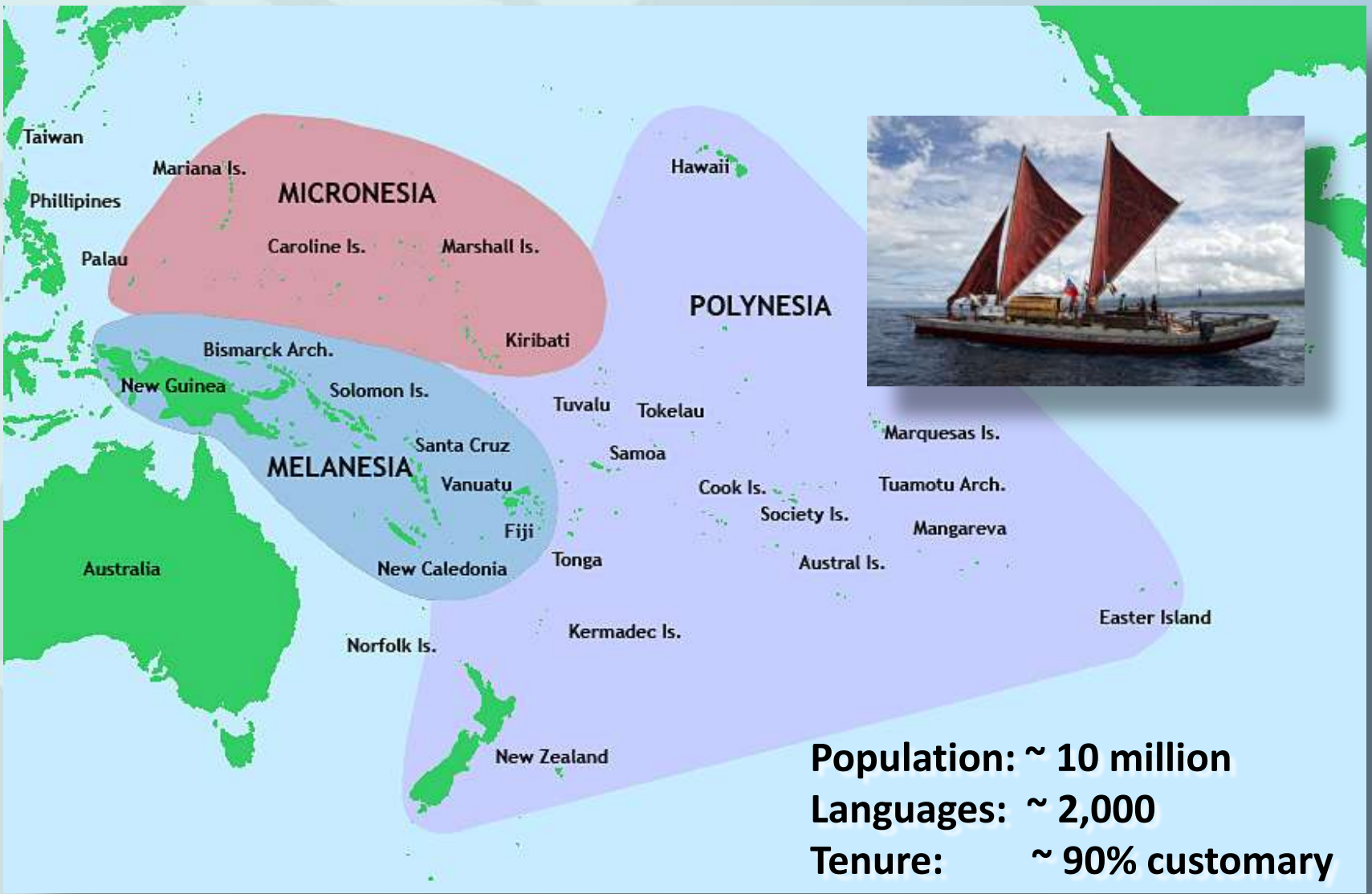


Pacific Islands Region

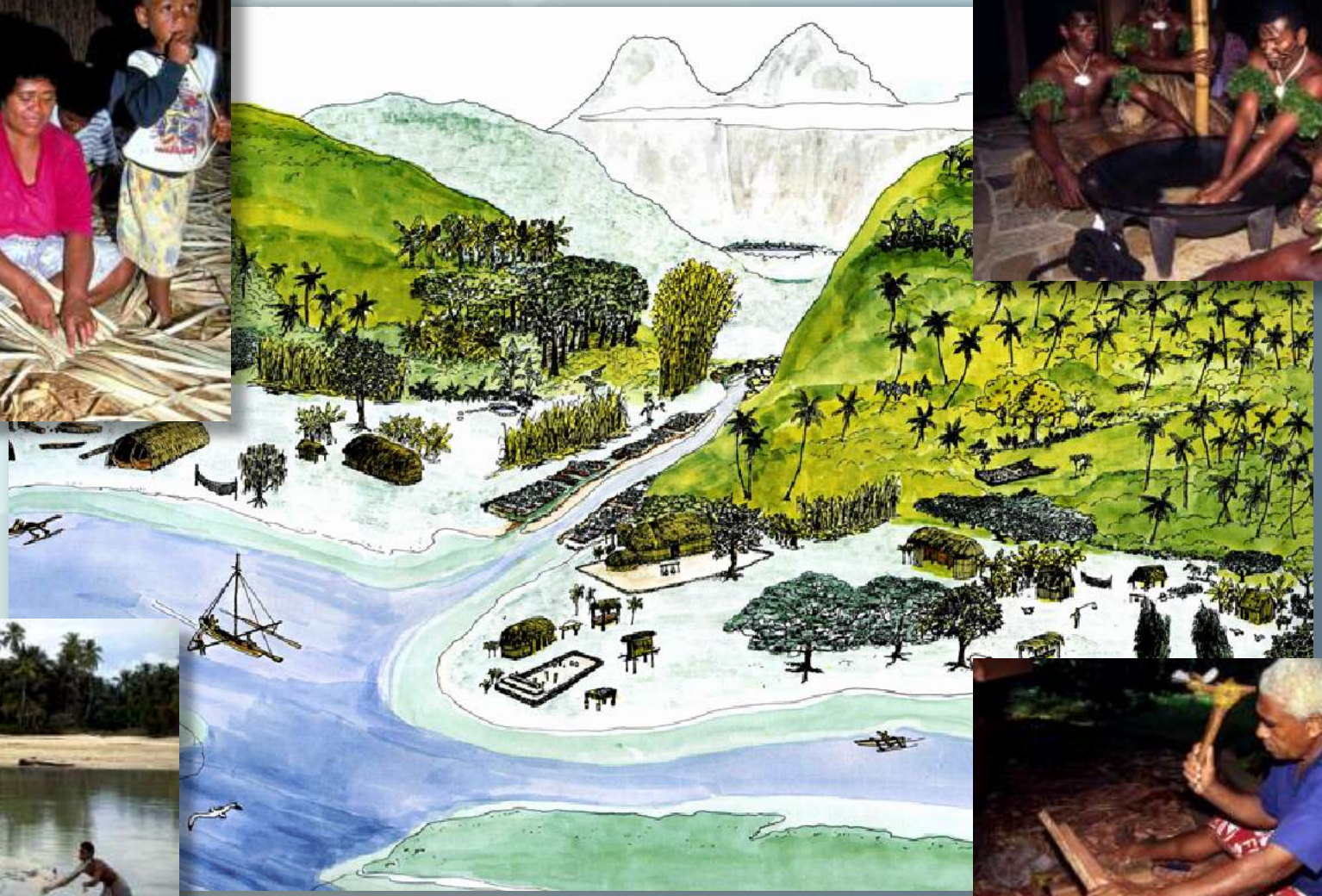

22 Pacific Island countries and territories
Land area ~ 553,000 km²
~ 30,000 islands
EEZ + territorial sea area
~ 30,000,000 km²
[almost 2 x land area Russia
3x land area China]
Northern Marianas
Saipan
Guam
Palau
Federated States of Micronesia
Marshall Islands
Majuro
Kosrae
Tarawa
Nauru
Kiribati
Papua New Guinea
Bougainville Island
New Britain
Tetepare
Solomon Islands
Australia
Epi
Vanuatu
New Caledonia
Viti Levu
Fiji
Tuvalu
Kiribati
Tokelau
Wallis & Futuna
Samoa
Upolu
American Samoa
Nomuka Group
Tonga
Niue
Cook Islands
Rarotonga
Bora-bora
Tahiti
French Polynesia
Gambier Islands
Pitcairn Isl
New Zealand
SPREP
This map is indicative only of agreed and potential maritime jurisdictional limits within the Pacific region.
1,200 600 0 1,200

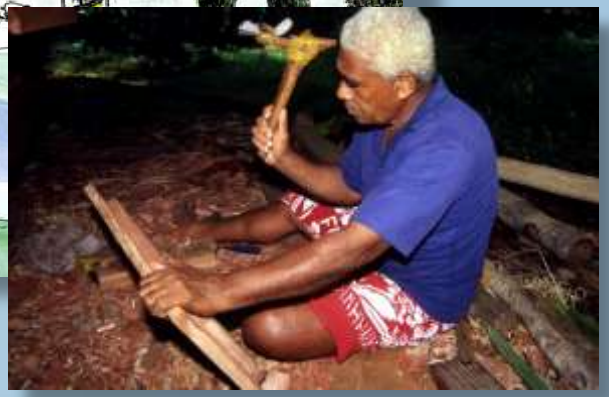
Island Ecosystem Diversity

Cultural Diversity

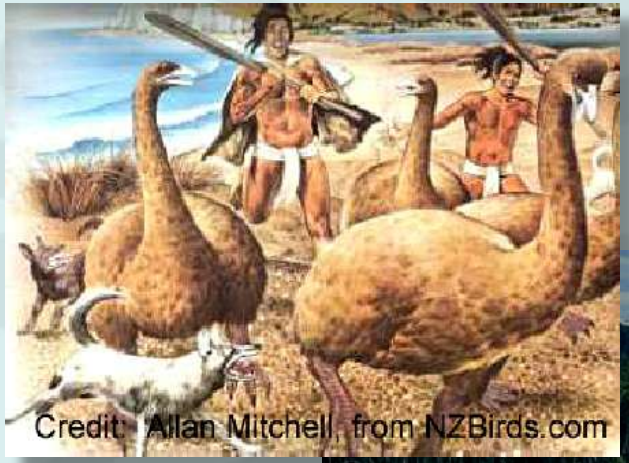


Historic Cultural & Social Interrelationships





Early Impacts on Biodiversity



1000s of early extinctions and ecosystem transformation

Environmental degradation a key factor in social collapse of some island societies

Increasing Environment and Development Issues

Mining and Logging Pollution and Waste Climate Change

Coastal Development

Unsustainable Fishing

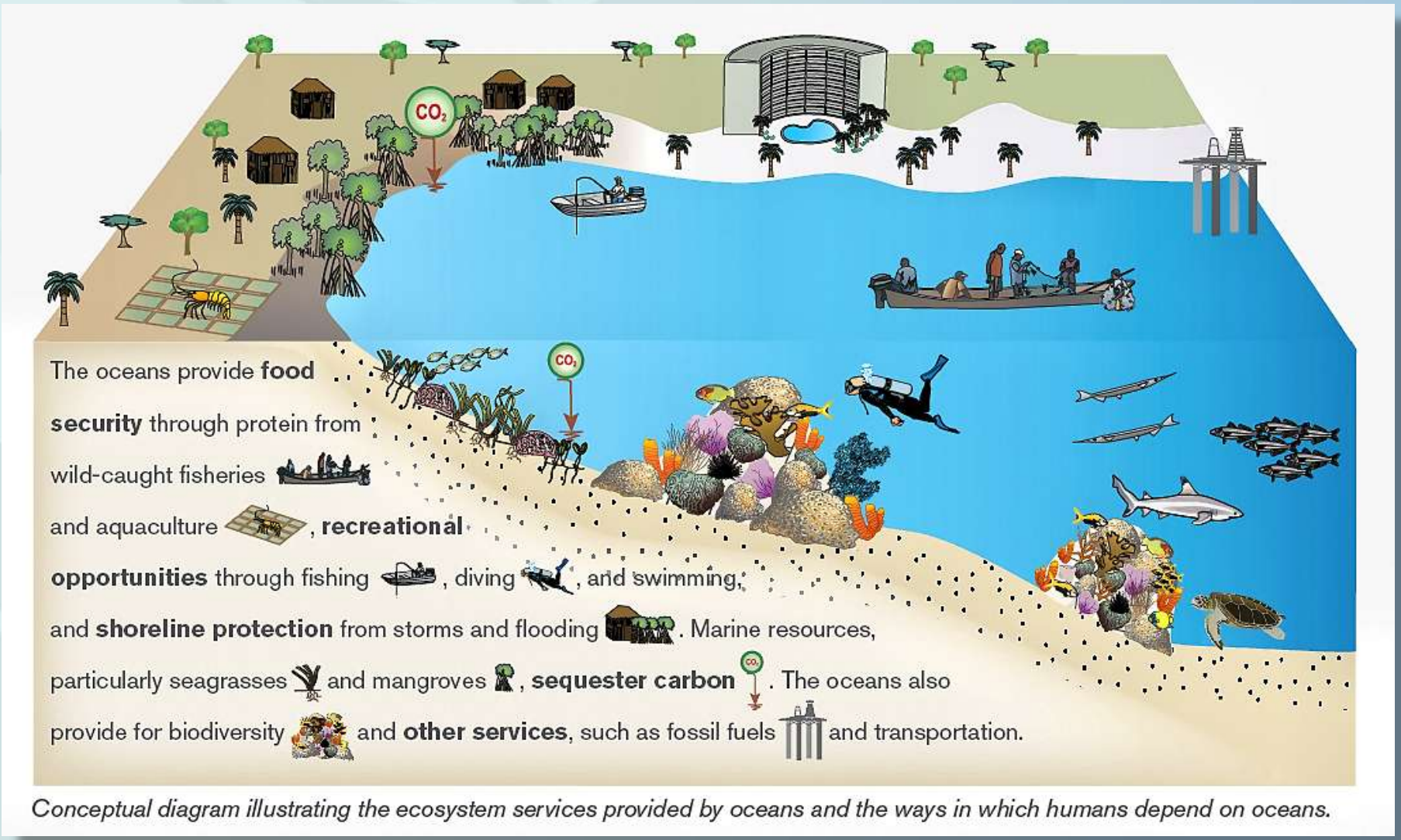
Invasive Species

Emerging Uses


© Chris Jordan

Pacific island people reliant on natural resources

Ecosystem services even more important today



Conceptual diagram illustrating the ecosystem services provided by oceans and the ways in which humans depend on oceans.

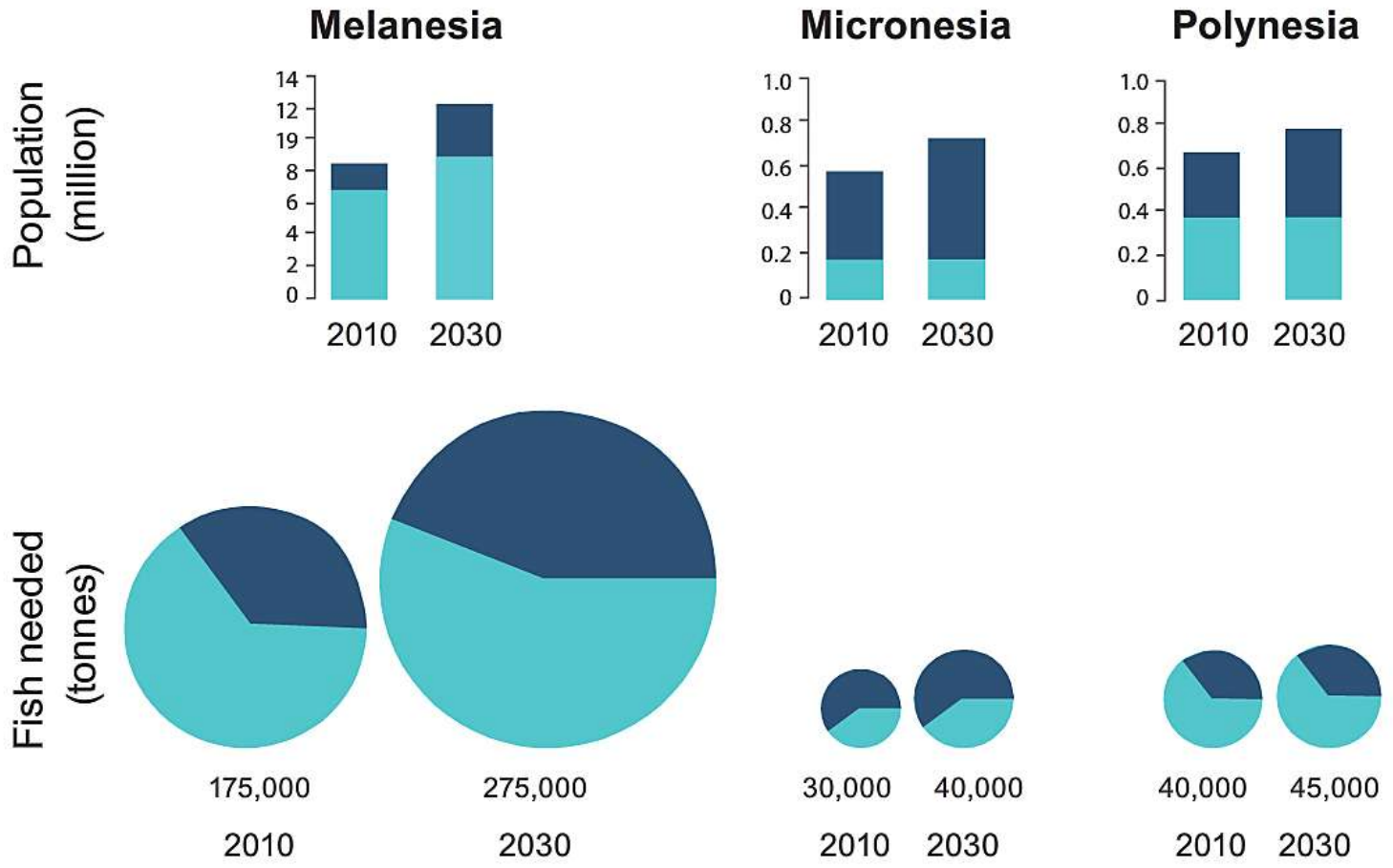
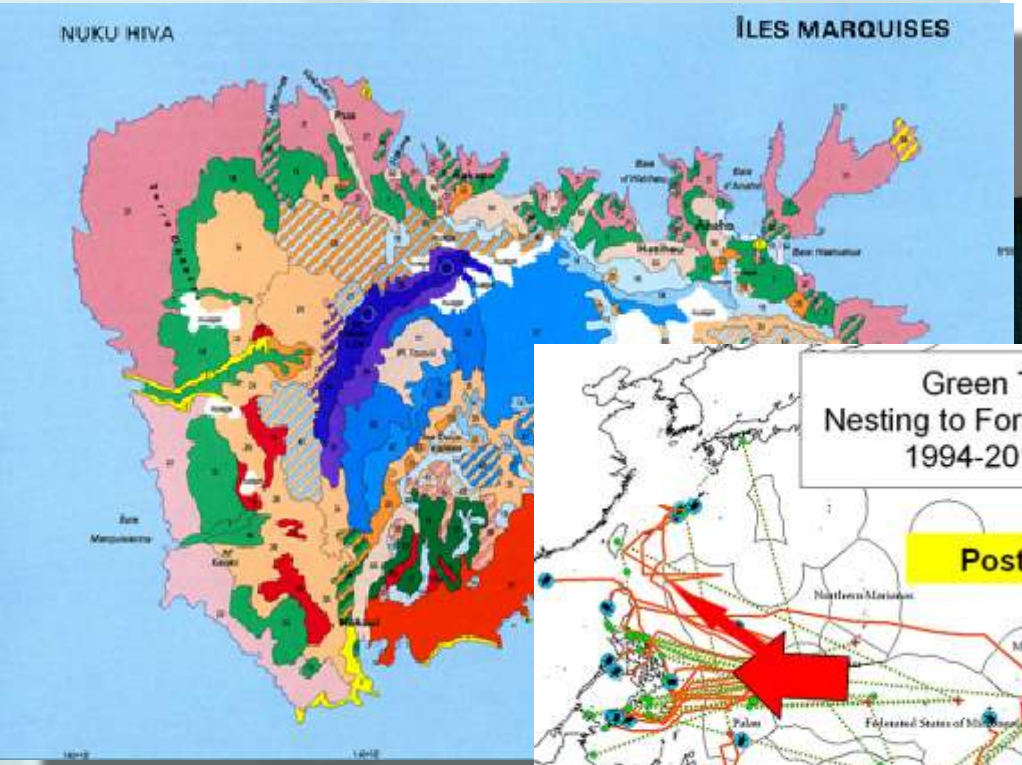
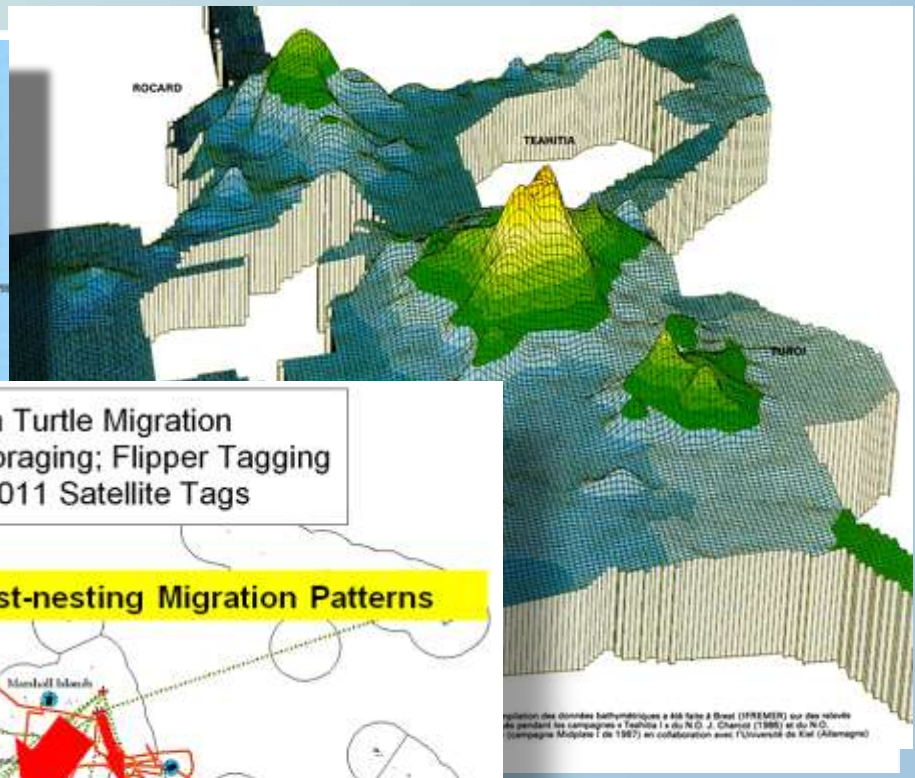
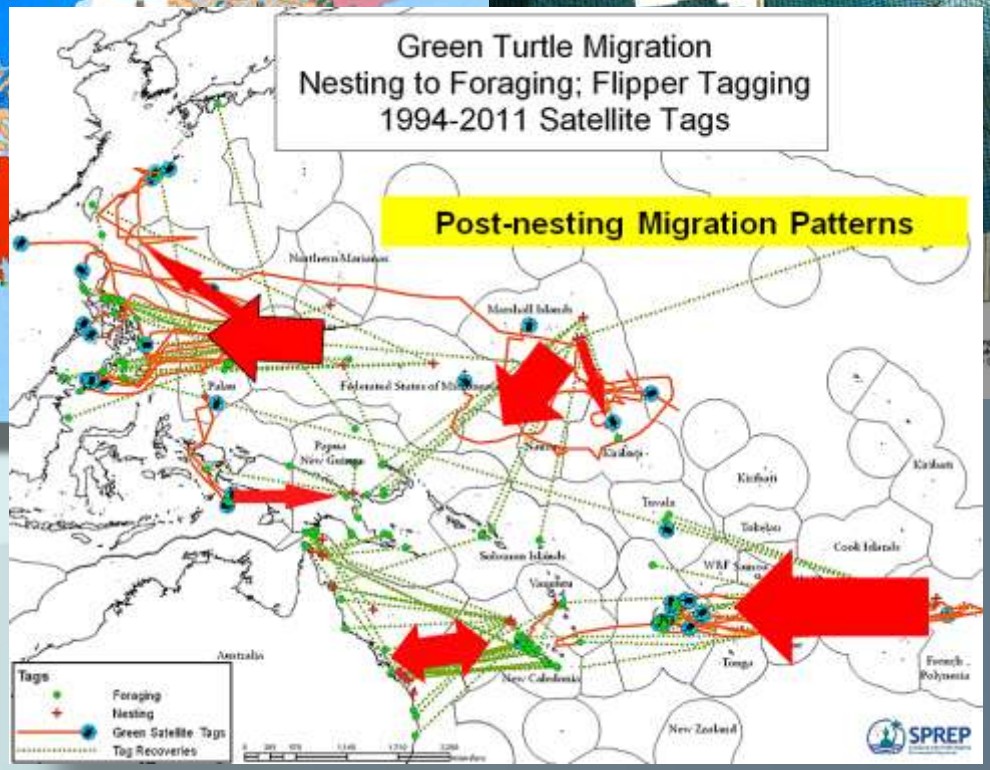


Figure 1.8 Forecasts of population growth, and the fish needed for food security in rural (■) and urban (■) areas of Melanesia, Micronesia and Polynesia in 2030 (source: SPC).

Need to Improve our Knowledge of Biodiversity and Ecosystem Services and Issues





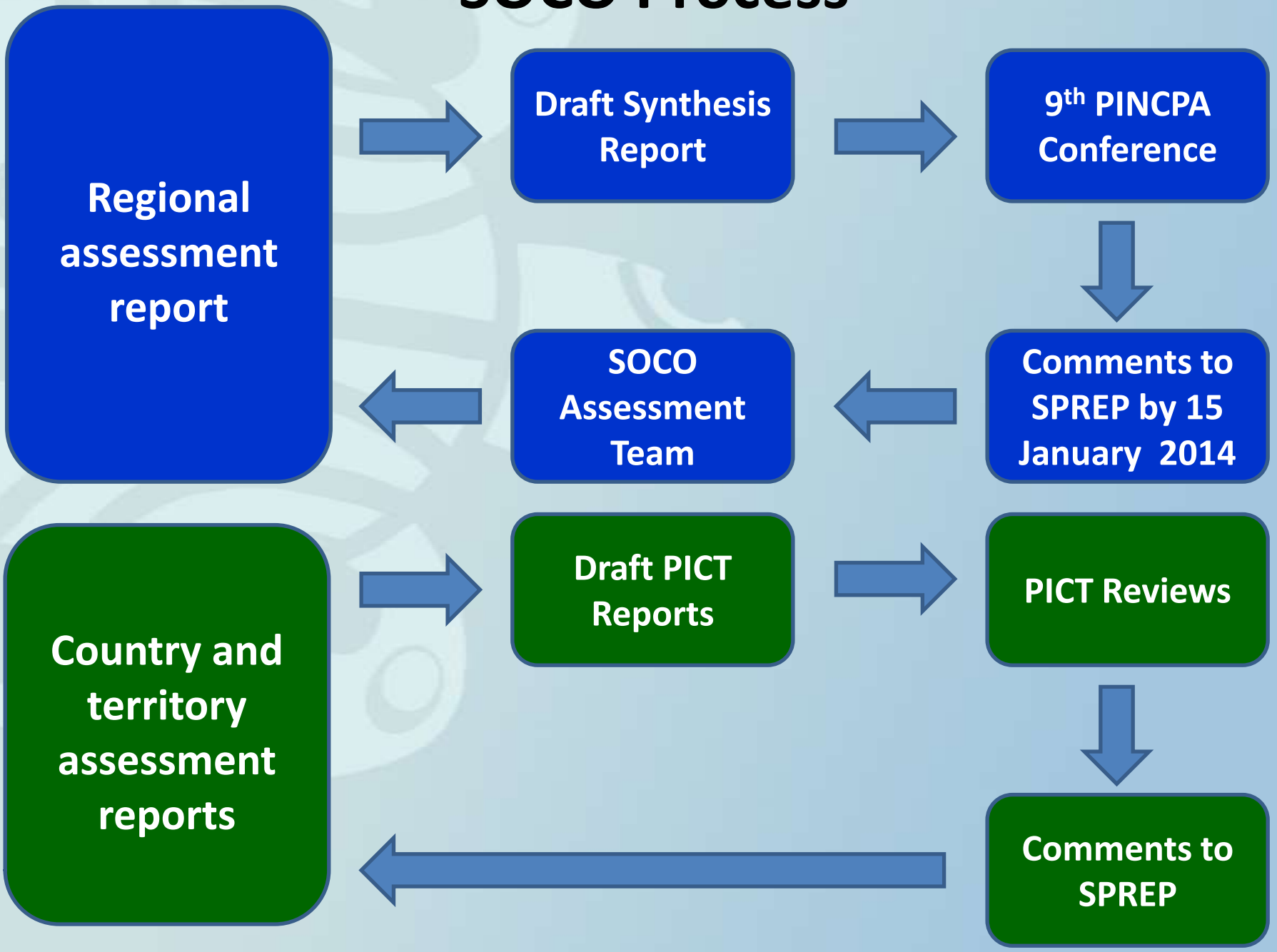


State of Conservation in Oceania 2013

A synthesis of key findings

DRAFT FOR REVIEW

SOCO Process



Methodology

Pressure/Threat	State	Response
Forest cover		Environmental governance: international treaties
Freshwater ecosystems		Environmental governance: national polices and legislation
Coastal ecosystems		Traditional governance
Marine ecosystems		Protected areas and protected area coverage: ecoregions and species
Important biodiversity areas		
Native species	Species diversity: abundance, distribution and extinction risk	National biodiversity strategies and action plans
Invasive/introduced species		Invasive alien species management

Methodology

- **Pressures and Threats**

  Factors and drivers of environmental change impacting on Oceania's biodiversity

- **State**

  Current health of key habitat types and resources across Oceania

- **Response**

  Action being taken to improve the health and sustainability of Oceania's biodiversity

- **Data**

  Best available existing

STATUS

For Pressures and threats, status represents assessed level of threat, from minimal (Good) to high (Poor).

For State of conservation, status represents the current condition of biodiversity, habitats and ecosystems (Good to Poor)
For Responses to safeguard biodiversity, status represents assessed level and effectiveness of activity to protect biodiversity (Good to Poor).

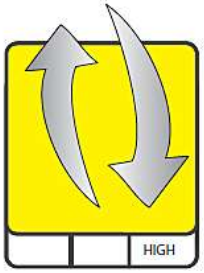
TREND

For each indicator, this assesses whether things are getting better or worse, or are staying about the same. For some indicators there was insufficient information to judge the trend or even to determine the current state at regional level.

Status
Fair

Trend
Mixed

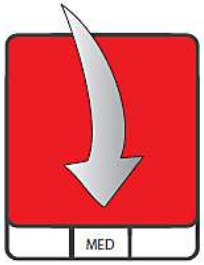
Data confidence
High



Status
Poor

Trend
Deteriorating

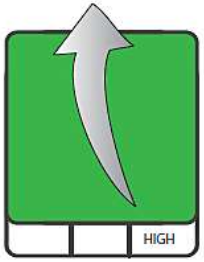
Data confidence
Medium



Status
Good

Trend
Improving

Data confidence
High



MIXED: some aspects have improved and some have worsened

DETERIORATION: The state of biodiversity related to this indicator has worsened

IMPROVEMENT: The state of biodiversity related to this indicator has improved

UNDETERMINED: Not enough information was available to determine a baseline

BASELINE: Some aspects have improved and some have worsened

DATA CONFIDENCE

This provides an estimate of the amount and quality of data available that was used to assess the trend for each indicator.

HIGH: A large amount of recent data available

MEDIUM: A moderate amount of recent and relatively recent data available

LOW: Not enough information was available to determine a baseline

Overall PRESSURE Indicators

Status Fair
Trend Mixed
Data confidence Medium

Forest cover

Status Fair
Trend Deteriorating
Data confidence Medium

Ocean health

Status Fair
Trend Deteriorating
Data confidence Low

Freshwater ecosystems

Status Poor
Trend Deteriorating
Data confidence Medium

Important biodiversity areas

Status Fair
Trend Mixed
Data confidence Medium

Coral reefs

Status Fair
Trend Mixed
Data confidence Medium

Native species, single country endemic species & endangered and migratory marine species

Status Fair
Trend Deteriorating
Data confidence Low

Mangroves & seagrasses

Status Poor
Trend Deteriorating
Data confidence Medium

Invasive species

Status Fair

Trend Deteriorating

Data confidence Medium

Forest cover, freshwater ecosystems, ocean health, utilised marine species

Status Fair

Trend Mixed

Data confidence High

Coral reefs

Status Fair

Trend Improving

Data confidence Medium

Mangroves

Status Fair

Trend Deteriorating

Data confidence Medium

Seagrass

Status Fair

Trend Unknown

Data confidence Medium

Important bird & biodiversity areas & biologically significant marine areas

Status Fair

Trend Unknown

Data confidence Medium

Species diversity: abundance, distributions & extinction risk

Overall STATE Indicators

Overall RESPONSE indicators

Status Good
Trend Improving
Data confidence High

Environmental governance: international treaties

Status Good
Trend Improving
Data confidence Medium

National biodiversity strategies & action plans

Status Poor
Trend Improving
Data confidence Medium

Environmental governance: national policies & legislation

Status Poor
Trend Improving
Data confidence Medium

Protected land & sea areas

Status Good
Trend Stable
Data confidence Medium

Environmental governance: traditional governance

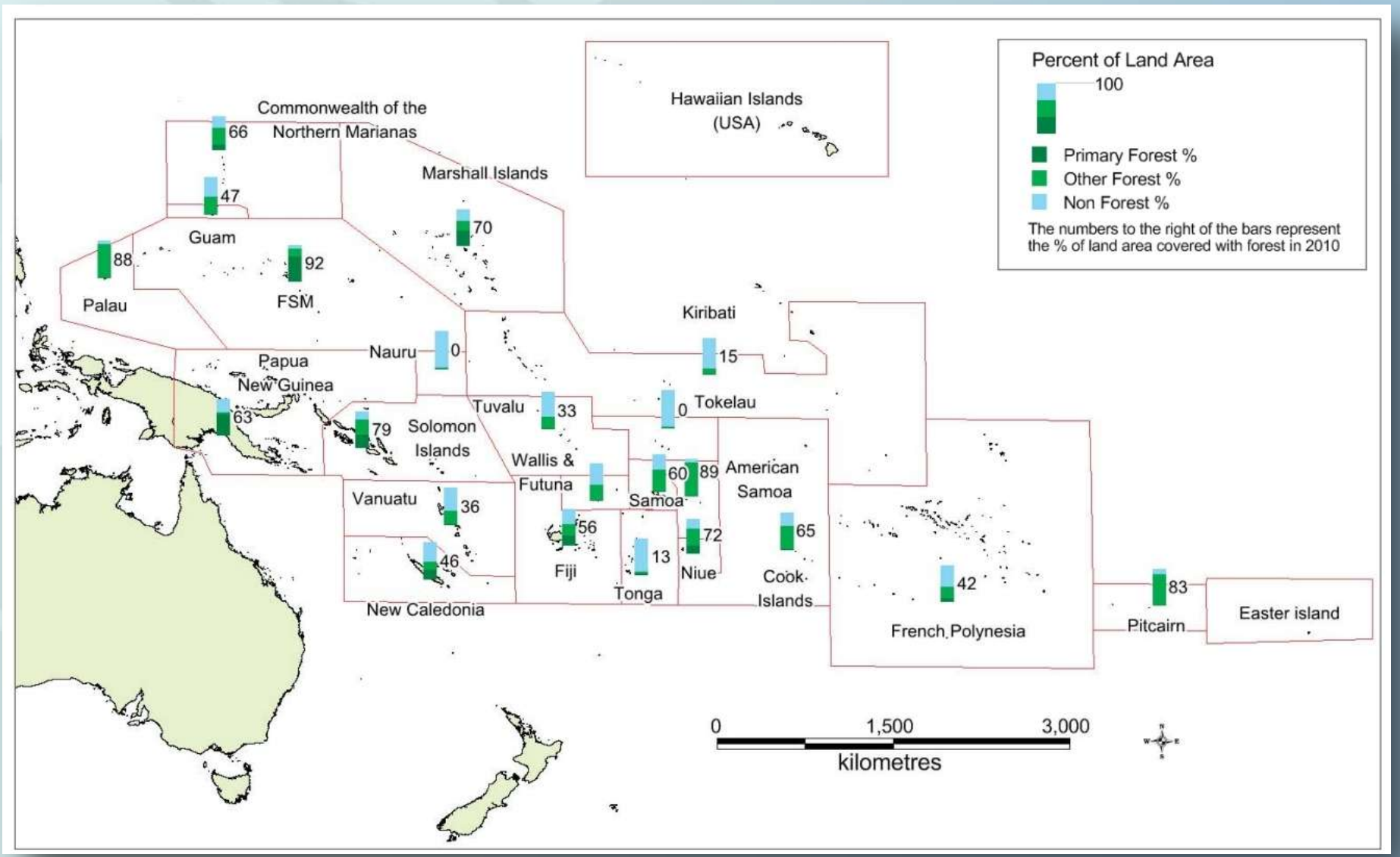
Status Poor
Trend Mixed
Data confidence Medium

Protected area coverage: ecoregions & species

Status Fair
Trend Mixed
Data confidence Medium

Invasive alien species management

Forest cover on Pacific island countries and territories



Forest Cover: Summary Findings

Pressures/Threats

- **0.4%** forest cover area lost per year between **2005 and 2010** - **global** deforestation average: **0.14%**. Most of the loss in Oceania in Papua New Guinea.
- Forest habitat **loss** mostly due to **logging** and **agriculture**
- **Forest degradation** is also caused by natural disasters such as **cyclones** and **fire** and the spread of **invasive** species.

- **Population growth** likely to **increase pressure**

- **Climate change** expected to have significant, but as yet unpredictable, impacts

Forest Cover: Summary Findings

Current State

- Many countries and territories of Oceania have relatively high forest cover, with an average of **61%** of land area covered in forest in **2010**, higher than the **global** average of **31**%
- Highest percent forest cover: **FSM with 92%**
- Papua New Guinea, 91% is classified as primary forest
- In some smaller countries area of uncleared primary forest is almost 0%
- **Forest quality declining** – **more open forest and invasive species** altering forest ecosystems
- **Very little lowland forest remaining**
- Most only have **low percentages of their land area formally protected**

Species Conservation





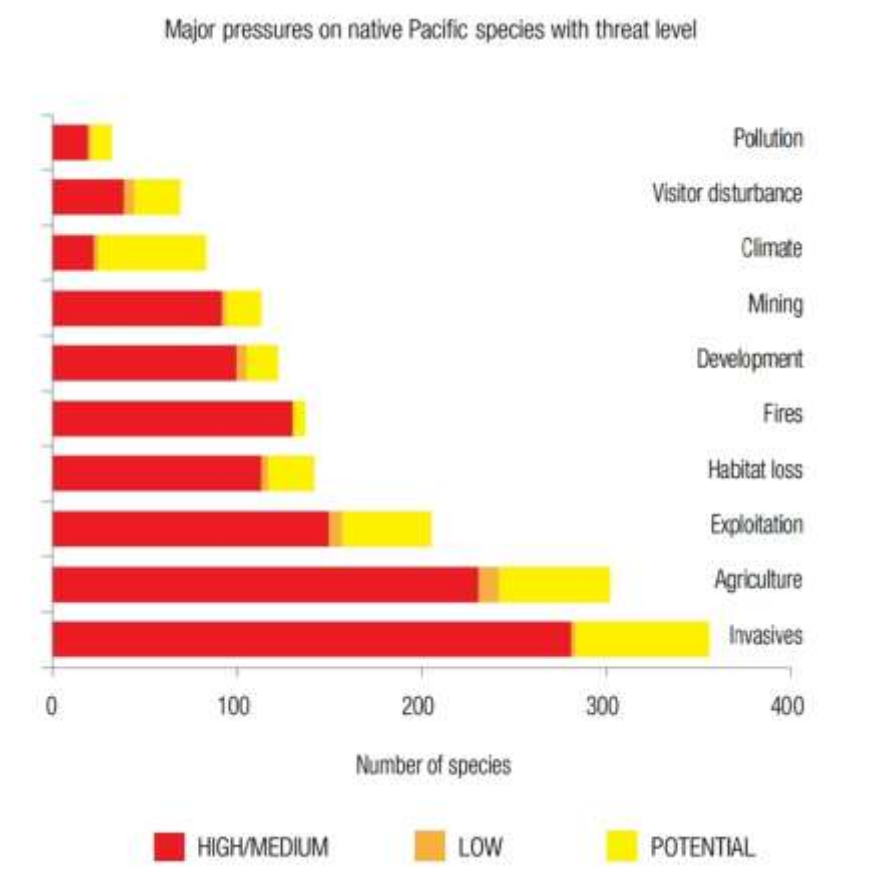





Species Conservation

Pressures/Threats

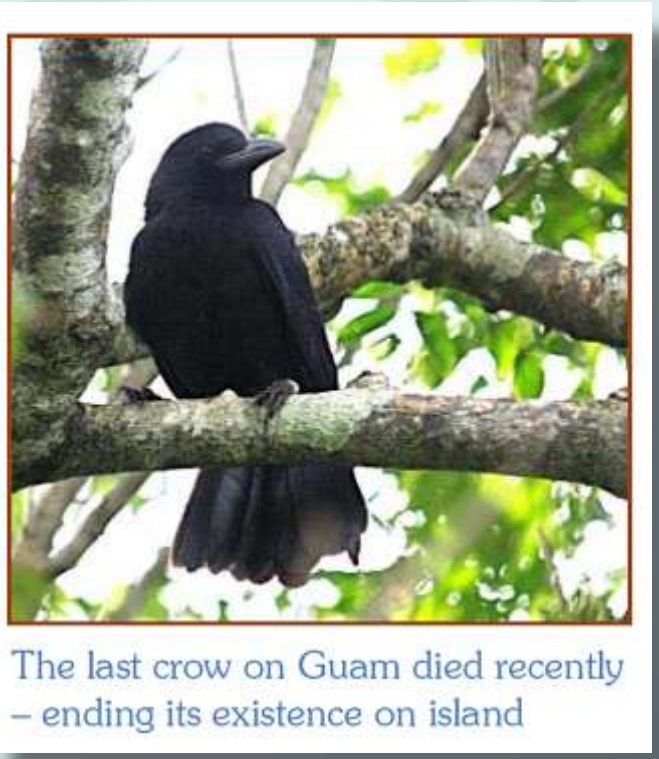
- **Invasive species** - highest impact on largest numbers of terrestrial threatened endemic, non-endemic and critically endangered species, followed by impacts of **habitat loss** due to agriculture and forestry

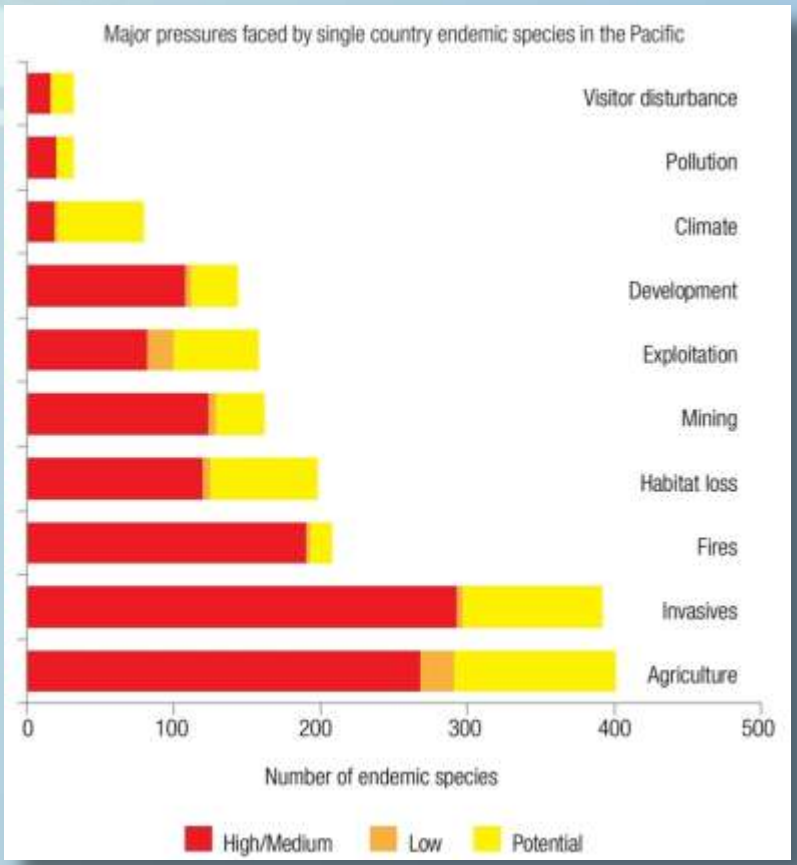


Species Conservation

Pressures/Threats: Endemic Species

- Of **2,189 single country endemic species** recorded across Oceania 115 (**5.3%**) are already extinct and 12 (0.5%) now exist only in captivity
- **930 of the 2062 extant single country endemic spe**cies (nearly **45**%) are at a risk of extinction





Species Conservation

State

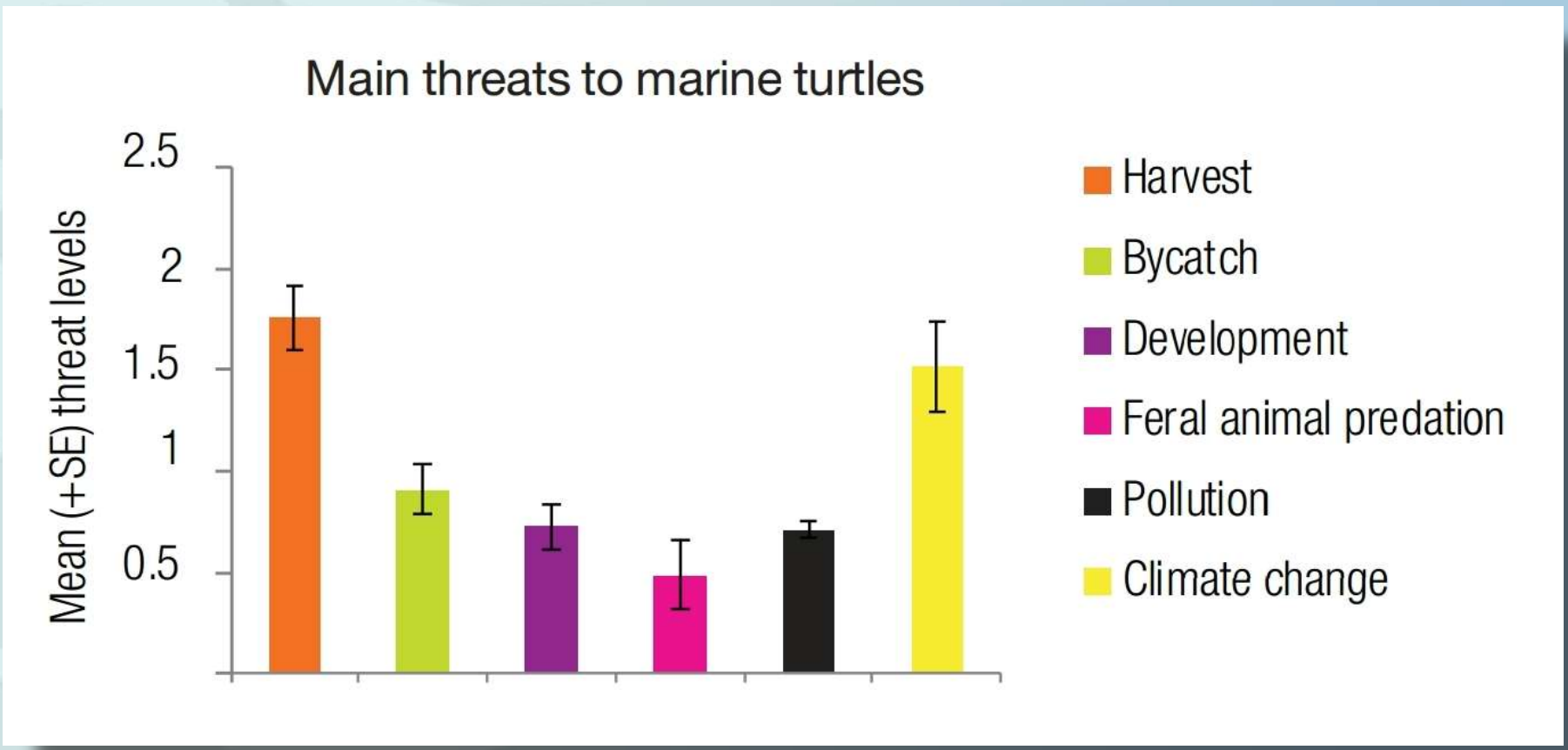
- **1,327 Oceania species are vulnerable, endangered or critically endangered**: 127 species already extinct
- For **>800 species endangered status not known**
- 23% Pacific island species assessed for IUCN Red List are threatened
- Of **316 mammal species almost 20% are threatened with extinction**
- **Recent surveys** of freshwater fishes, land snails, and of reptiles have filled some of the gaps in Oceania biota knowledge

Summary of our current knowledge of endemic species in Oceania.

Country	No.	No. threatened	% threatened
American Samoa	7	5	71
Cook Islands	25	5	20
Fiji	260	145	56
French Polynesia	344	102	30
Federated States of Micronesia	88	16	18
Guam	48	4	8
Kiribati	1	1	100
Marshall Islands	1	0	0
Nauru	1	1	100
New Caledonia	511	355	69
Niue	1	1	100
Northern Mariana Islands	7	5	71
Palau	81	38	47
Papua New Guinea	602	172	29
Pitcairn	16	16	100
Samoa	21	7	33
Solomon Islands	116	32	28
Tokelau	0	0	0
Tonga	12	6	50
Tuvalu	0	0	0
Vanuatu	40	15	38
Wallis & Futuna	7	4	57

Utilised marine groups assessed for the IUCN Red List of threatened species

Group	Total Oceania species	% threatened in Oceania	% data deficient in Oceania
Sharks	75	**27**	25
Groupers	60	7	23
Angelfishes	52	0	0
Butterfly fishes	59	0	5
Parrotfishes	40	3	0
Wrasses	209	0	8
Sea turtles	5	**100**	0
Marine mammals	36	**17**	53


Main threats to marine turtles
Mean (+SE) threat levels
2.5
2
1.5
1
0.5
Harvest
Bycatch
Development
Feral animal predation
Pollution
Climate change

Coastal and Marine Ecosystems

Pressures/Threats

- Over-exploitation of resources

- **Climate change**: rising sea temperatures, acidification and deoxygenation' loss of 13% of mangrove area by 2100

- **Habitat destruction**, extractive activities, pollution and invasive species are also serious threats

- Reefs are vulnerable to elevated sea temperature and acidity, cyclones, predation and disease, increased water turbidity, overfishing and pollution as well as physical breakage from coastal developments

- **By 2050 most reefs in the Pacific are predicted to be rated as threatened, with more than half rated at high, very high, or critical levels**

Coastal and Marine Ecosystems

State

- Oceania supports the world's largest **tuna fisheries** and stocks of the major species **must be sustainably managed** if they are to continue to support island economies
- **70-80% of the catch from inshore fisheries** is used for **subsistence purposes**, with around 20% going to markets
- Exploitation of beche-de-mer, trochus, live coral and live reef fish for international markets has depleted stock in some areas
- **Cetaceans and marine turtle species feed and migrate through Oceania and the Pacific region supports the world's largest remaining nesting populations of green and hawksbill tur**tles

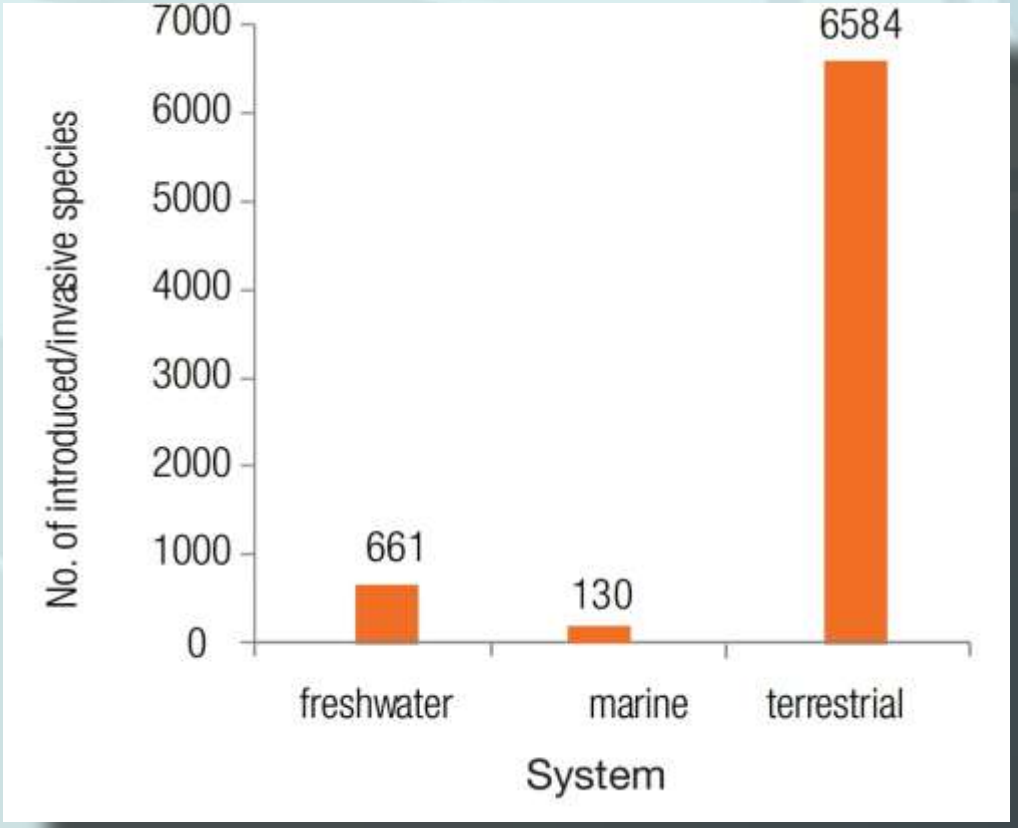
Coastal and Marine Ecosystems

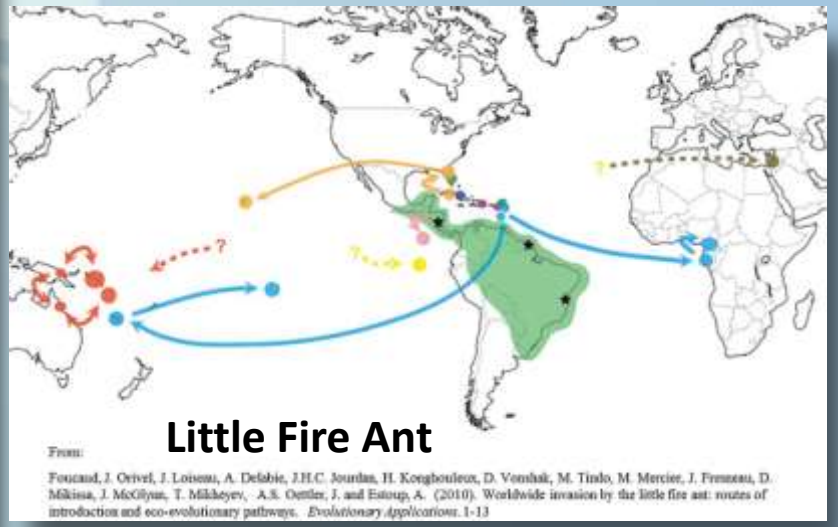
State

- **Coral** reefs are **vital** to **land protection and food security** across Oceania.
- **Over 650 000 km^2 of coral reefs**
- **Extent of coral reef is stable, but most show declining quality around heavily populated areas**
- Total mangrove area in Oceania is 5717 km^2 which is 3.8% of the global mangrove cover
- **Mangroves under increasing threat from conversion for housing, industrial and tourism-related development**
- **Increasing awareness of role of mangroves in coastal protection**

Introduced and Invasive Species

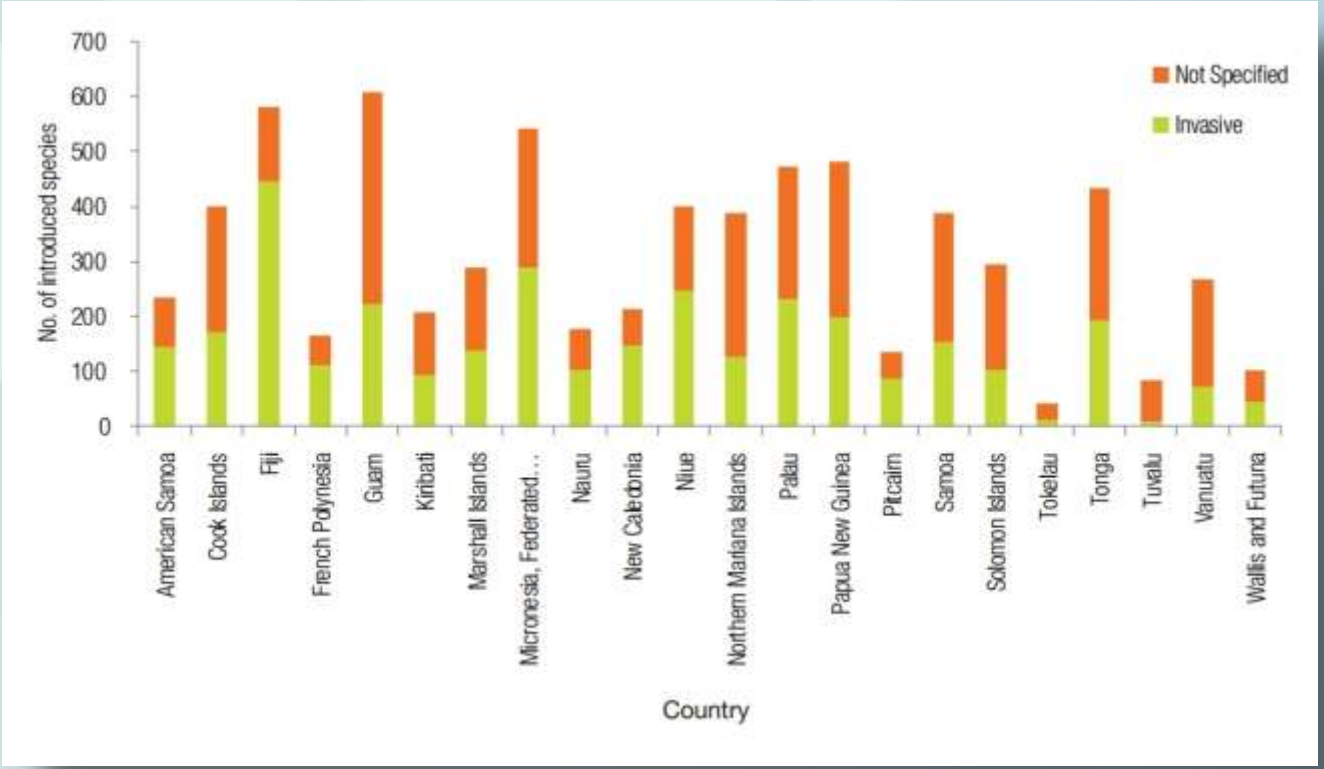
- **Primary threat to endemic and threatened species** in Oceania, as well as economies and livelihoods
- Region continues to have incursions of **new introduced and invasive species,** necessitating ongoing biosecurity improvements



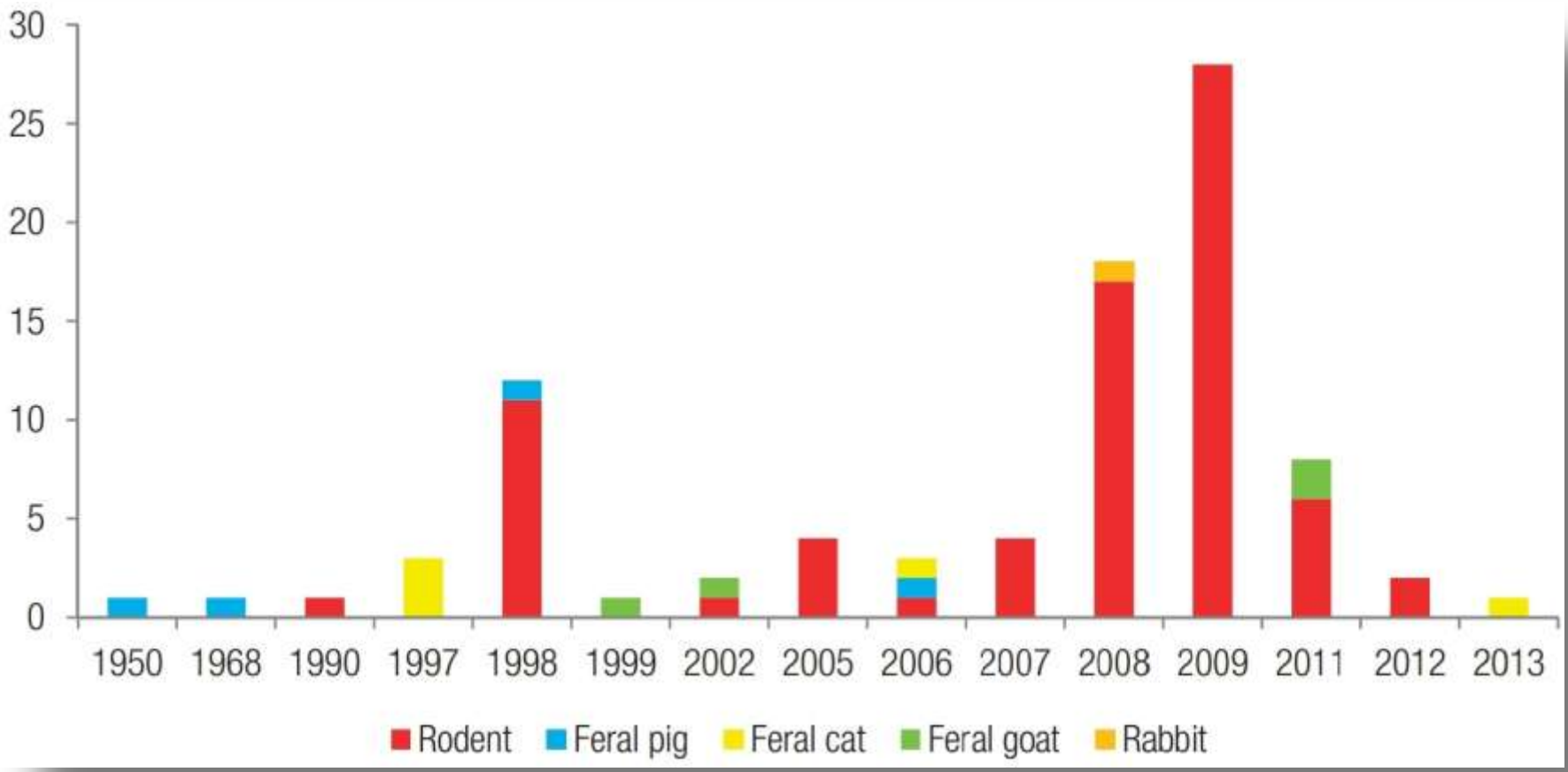


Introduced and Invasive Species

- Highest numbers of known invasive species are in **Fiji**, followed by the **Federated States of Micronesia**, **Niue**, **Palau**, and **Guam**



Reported successful invasive animal eradications 1950-2013



Note: Peaks of activity in 2008 and 2009 reflect donor support

Responses to safeguard Oceania's biodiversity and natural resources

Protected Land and Sea Areas

- Coverage by protected areas in the region is low: **<5% terrestrial area**; **1.91% territorial waters** (and **0.9% of all marine areas**)

- Only 4 countries/territories countries have reached CBD **Aichi** terrestrial target: **Pitcairn** (81%), N**e**w **Caledonia** (51%), **Guam** (27%) and **Kiribati** (22%)

- Only **Kiribati** has exceeded the marine target, with **12**% of its territorial waters protected

Locally Managed Marine Areas (MMAs) contribute to biodiversity conservation, and implementation by over 500 communities represent a unique achievement

Protected WWF Ecoregions and Species

- Only **19**% of **terrestrial** and **30**% of **marine** ecoregions have more than 17% and 10% protected
- **1% or less of birds, amphibians and cartilaginous fishes** (and no species in any other group) have their distributions completely covered by protected areas.

Achievements and Commitments

Significant commitments by Pacific island countries:

- **Kiribati**: 408,250 km^2 Phoenix Islands Protected Area
- **Cook Islands**: 1 million km^2 Marine Park
- **Palau**: Exclusive Economic Zone - marine mammal sanctuary for the protection of whales, dolphins, and dugongs; Shark Haven Act
- **Tonga**: whale sanctuary
- **Micronesian Challenge**: 20-30% conservation commitment
- **Coral Triangle Initiative**
- **Pacific Oceanscape Framework**
- **Numerous community level initiatives**

Next 6 Years: Address Critical Issues

1. Achieving CBD 2020 Aichi Targets
2. Translating MEA and national commitments to concrete action beyond policies: laws, enforcement, capacity, awareness and education, community participation
3. Ecosystem approaches at scale – replicating approaches
4. Protecting biodiversity that can sustainably support livelihoods and food security
5. Providing the level of resources needed to deal with manageable threats, especially invasive species
6. Implementing ecosystem-based adaptation approaches to climate change impacts that sustain ecological services
7. Taking monitoring and assessment seriously to understand the scale of threats and change and develop appropriate responses

Thank you!