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Proceedings of the 1st International Seminar on Islands and Oceans (2nd Stage)

Tokyo, Japan

August 20－21, 2013

Ocean Policy Research Foundation

This publication was produced under the patronage of the Nippon Foundation from the proceeds of motorboat racing.

Proceedings of the 1st International Seminar on Islands and Oceans (2nd Stage)

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Foreword

Islands serve as an irreplaceable base to protect the ocean that covers 70 percent of the earth's surface and plays a significant role in sustaining human life through its natural resources, maritime routes, role in stabilizing climate and so on.

Today, however, islands are faced with various conservation and management challenges. They face the threat of natural disasters such as typhoons, large waves, inundation, and erosion. Insufficient or inappropriate urban planning caused by increases in population and high population concentration is also to be seen, and deterioration of the marine environment due to inappropriate procedures in residential drainage and waste continues to be a serious problem.

It is indeed not an easy task for small island developing states to address climate change and the other serious problems facing islands while also managing the surrounding ocean areas, as prescribed by The United Nations Convention on the Law of the Sea (UNCLOS). Moreover, the management problems of islands and their surrounding ocean areas raise important issues not only for those small Island States that dot the vast Pacific and other oceans, but also for those States whose territory includes a large number of islands.

We at the Ocean Policy Research Foundation therefore decided to undertake a three-year research project, beginning in 2009, entitled "Management and Conservation of Islands and their Surrounding Ocean Areas," to clearly assess current conditions of Pacific islands and their surrounding areas and, based on that assessment, to identify the most pressing use, conservation, and management issues, and to investigate the conservation and management of islands and the integrated management and sustainable development of their surrounding ocean areas.

As part of this project, the Ocean Policy Research Foundation (OPRF), in cooperation with the Australian National Centre for Ocean Resources and Security (ANCORS) and the Secretariat of the Pacific Community: Applied Geoscience and Technology Division (SOPAC), held the International Seminar on Islands and Oceans every year from 2009 to 2011 in order to discuss the problems of conservation and management of islands and their surrounding ocean areas.

Our proposal drew a certain amount of attention at Rio+20 and other venues, and, I believe, served as a useful reference in discussions on the next Programme of Action. We at the Ocean Policy Research Foundation have therefore decided to undertake a new three-year research project, beginning in 2013, entitled "Sustainable Development of Islands and their Surrounding Ocean Areas." We will propose for discussion at the upcoming 3rd International Conference on SIDS (2014) and the Sustainable Development Goal（2015）. We would furthermore like to consider how these might best be implemented.

It is our hope that these initiatives to promote sustainable development of islands and their surrounding ocean areas will be of use in the conservation, management, and sustainable development of ocean areas surrounding island States as well as the wider Pacific region.

Ocean Policy Research Foundation

Acknowledgement

The 1st International Seminar on Islands and Oceans was made possible by the generous support of the Nippon Foundation from the proceeds of motorboat racing. We could like to express our sincere gratitude for this support and also acknowledge the Foundation's understanding of marine and terrestrial environmental issues and the life of people living on islands.

Brief Overview

Seminar

The 1st International Seminar on Islands and Oceans (2nd stage)

Date

August 20 and 21, 2013

Format

Closed Sessions
(Individuals interested in issues concerning islands and their surrounding waters may be invited as observers)

Venue

The Nippon Zaidan Building (2nd Floor), Akasaka, Tokyo

Organizer

Ocean Policy Research Foundation

Co-Organizers

Australian National Centre for Ocean Resources and Security, ANCORS
Applied Geoscience and Technology Division of the Secretariat of the Pacific Community, SOPAC Division of SPC

Supported by

Nippon Foundation

Participants

Australia:

Prof. Richard KENCHINGTON
(ANCORS)
Prof. Martin TSAMENYI
(ANCORS, Director)
Dr. David LEARY
(University of Technology, Sydney)

Fiji:

Dr. Willy MORRELL
(PIFS, Natural Resources Adviser)
Dr. Arthur WEBB
(SOPAC Division of SPC, Deputy Director)

Japan:

Prof. Tomoya AKIMICHI
(RIHN, Prof. Emeritus)
Dr. Tomohiko FUKUSHIMA
(The University of Tokyo, Associate Professor)
Prof. Moritaka HAYASHI
(Waseda University, Prof. Emeritus)
Mr. Yasuhiko KAGAMI
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Prof. Makoto OMORI
(Akajima Marine Science Laboratory)
Prof. Tomoya SHIBAYAMA
(Waseda University, Professor)
Mr. Shin TANI
(Japan Coast Guard, Director of Hydrographic & Oceanographic Department)
Mr. Hiroshi TERASHIMA
(OPRF, Executive Director)
Prof. Toshio YAMAGATA
(JAMSTEC, Director of Application Lab.)

Chairs

General Chairs:

Mr. Hiroshi TERASHIMA
Prof. Martin TSAMENYI

Session1 Chairs:

Mr. Hiroshi TERASHIMA
Prof. Martin TSAMENYI

Session2 Chairs:

Prof. Richard KENCHINGTON
Mr. Hiroshi TERASHIMA

Session3 Chairs:

Prof. Martin TSAMENYI
Prof. Naoya OKUWAKI

Session4 Chairs:

Prof. Toshio YAMAGATA
Prof. Martin TSAMENYI

Session5 Chairs:

Mr. Hiroshi TERASHIMA
Prof. Martin TSAMENYI
Dr. Willy MORRELL

Staff (OPRF)

Mr. Shigeru YONEYAMA
Dr. Keita FURUKAWA
Dr. Sakura NAGAOKA
Dr. Shingo HORII
Ms. Rina UESATO

Programme

August, 20th

10h-10h30m Opening

10h30m-12h Session 1: Reports from each Organization activities after Rio+20

Presentation: Mr. Hiroshi TERASHIMA (OPRF)
"Status report form OPRF"

Presentation: Prof. Martin TSAMENYI (ANCORS)
"Status report form ANCORS"

Presentation: Dr. Willy John MORRELL (PIFS)
"Status report form PIFS "

12h-14h Lunch

14h-17h Session 2: On Conservation and Management of Islands

Presentation: Dr David Leary (University of Technology, Sydney)
"A Renewable Energy Future for Pacific Island Countries and Territories"

18h-20h Reception

August, 21st

9h-11h Session 3: Management of the Surrounding Ocean Areas

Presentation: Mr. Masanori MIYAHARA (Fisheries Agancy)
"Towards Sustainable Development of Fisheries Resources in the South Pacific"

11h-12h30m Session 4: Response to Climate Change and Variability

Presentation: Prof. Moritaka HAYASHI (OPRF)
"Shifting of Baselines Due to Climate Change and Variability, and the Need for International Legal Measures to Mitigate Adverse Impacts against Islands"

Presentation: Prof. Toshio YAMAGATA (JAMSTEC)
"Adaptation to Climate Change and Variability by Island Societies"

14h-15h30m Session 5: Summary, Target and Work plan for next step

16h-16h30m Closing

Content

Summary of the Sessions

International Seminar on Islands and Oceans (2nd Stage)

Promotion of Sustainable Development of Islands and their Surrounding Ocean Areas

Tokyo, Japan August 20-21, 2013

Opening:

- Chairs Group Nomination
  - General Chairs:
    - Mr. Hiroshi TERASHIMA
    - Prof. Martin TSAMENYI
  - Session Chairs:
    - Prof. Richard KENCHINGTON
    - Dr. Willy MORRELL
    - Prof. Naoya OKUWAKI
    - Prof. Toshio YAMAGATA
- Opening Remarks
  - Mr. Terashima: Serious situation on Islands and Oceans, Target on 2014 SIDS, and 2015 SDG
  - Prof. Tsamenyi: Welcoming continuation of the Seminar and project

Session 1: Reports

- from OPRF by Mr Terashima
  - The future we want (Rio +20), Rio Ocean Declaration
  - Needs of efforts at the global, regional, and national level
- from ANCORS by Prof. Tsamenyi
  - UN activities: UN Secretary General's Oceans Compact
  - Fisheries as opportunities, as victims and as threats
  - Knowledge sharing for local (fisheries) management
- from PIFS by Dr. Morrell
  - PICTs are "Large Ocean Island States"
  - Pacific Island Regional Ocean Policy with "Oceanscape"
  - Needs of concrete action on the ground

Session 1: Discussion

- How local people get involved?
  - Consensus formation meeting (e.g disaster preparedness)
  - CBM Processes, ICM Processes
- Importance of policy link
  - Needs of concrete action
  - Encouragement for a baseline identification
  - Start with SDIS and enhance to regional / international level
- Acidification (ref. section 166 of the Future we want)
  - Important part of climate change and variability
  - Needs for multidisciplinary observation, e.g. not only direct effect on habitat, but also in direct effect on fisheries
- Sharing national research outcome with PICT
  - A good communication is required
  - Global issues and local issues has similarities
- Extend our concern to Management on land
  - e.g. Water cycle from land to sea
  - Add local view point of ICM with adaptive management cycle
  - View point of indigenous practice is also add

Session 2: Islands

- Renewable Energy Future by Dr. Leary
  - It is promised technologies with long history
  - Energy for electricity and motive
  - Status of technologies (mature - less mature)
  - Needs of consideration on spatial and time scale (i.e. size of islands, sustainability etc.)
  - Technologies' selection by donor or end user

Session 2: Discussions 1/2

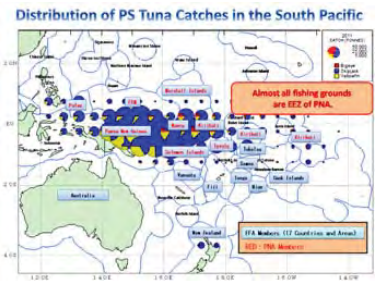
- Management Strategies
  - "Oceanscape" is a baseline document
  - Concerns on (Biodiversity, MPA, ICM…)
  - Importance of National level integrated approa
  - Discussion on MPA was based on community / local based issues, now it is enlarged toward scale up issues
- Safety and Resilience
  - Early warning system implementation (not only hardware equipment installation)
  - Escape tower implementation, new idea of escape ship
- Waste Management
  - "Bring it in, take it out"
  - Concerns on (Waste oil, Oil spill, waste water treatment)
  - Needs of involvement of local community and government
  - Needs of appropriate assessment based on feature of islands
  - More case studies are required

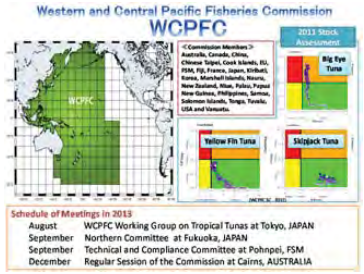
Session 2: Discussions 2/2

- Transport
  - Energy use in transport is an area where greater policy focus is required
  - Safety and reliability of transport is great concerns on sustainable development
- Renewable Energy
  - Affordable Technologies (Wind, Solar, …)
  - Needs of more implementation efforts (system for implementation, mixed operation, smart grid, …)
  - The solution is not identical (depend on each PICT circumstances)
- Energy efficiency
  - Energy efficiency in both electricity generation and transport is an area where more policy work is also required.

Session 3: Surrounding Oceans

- Sustainable Fisheries by Mr Miyahara
  - Distribution of Resources are not evenly distribute
  - Discussion in WCPFC (Monitoring, Control, Surveillance)
  - Market driven action for eliminating un sustainable fisheries



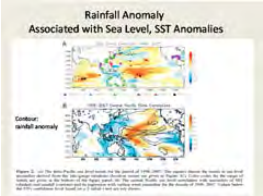


Session 3: Discussions

- Sustainable Fisheries
  - Section 168 in “the future we want”
  - Eliminating IUU fisheries especially, “un regulated” part
  - Concern on Mariculture / relates on food security and economy
- Management Techniques
  - Quota
  - TAC
  - Regulation of total number of ships [with target]
  - Fishing days regulations
  - Fishing boat issues requires practical measures
- Marketing
  - Increasing traceability (IC:tag)
  - The more contribution from market required
- Other concerns
  - Fisheries are Global task
  - Governance, Conservation of nature
  - Capacity Building in Island (Training, Boat, Coordination…)
  - Local fisheries with CBM
- Significance of Fisheries
  - Coastal fisheries and oceanic fisheries / Dependence on fisheries
  - Coastal fisheries by Childs and women
  - Concern on Biodiversity since fish is sitting on very top of food web
  - View point of management of people

Session 4: Climate Change

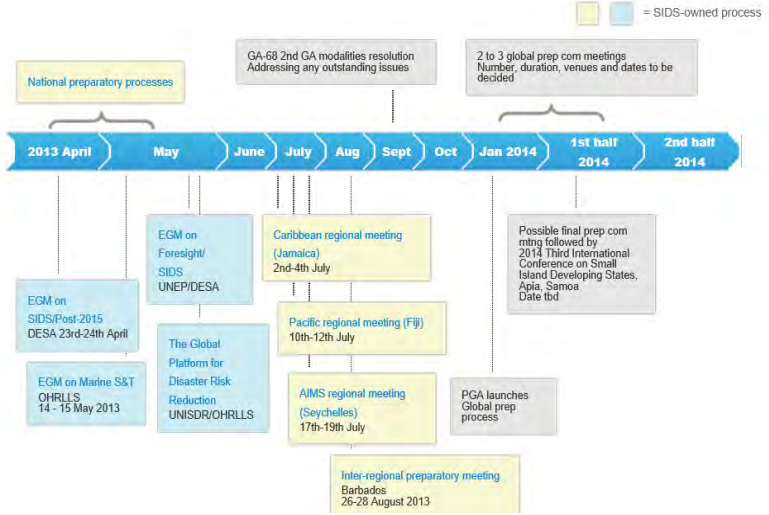
- Shifting of Baseline by Prof. Hayashi
  - Baselines and maritime zones derived there should be permanently established, even after sea level rise causes islands partially or totally submerged.
  - Possible procedures for adopting the new rules should be discussed
- Threats of the Evolving Climate by Prof. Yamagata
  - Timescale of Climate “Change” and “Variability”
  - Climate change affects on SLR, Cyclone, Drought
  - Elnino *Modoki* cause decade variability of Drought
  - Needs of early warning system



Session 4: Discussions

- How implement legal adaptation
  - Needs of enlightenment for islands people
  - Increase friends with strategic approach
  - Cooperative action with PIF
  - Concern on Art.7 (2) in UNCLOS
- How we should react with El Nino Modoki
  - Understanding of phenomena (time scale)
  - Capacity building to local people
  - Early warning system with education
  - Draught is relate to urbanization and preparedness (experience in Australia) can be an issue on islands

Session 5: Target and Work plans



Session 5: Target and Work plans

Targets
- 3rd SIDS conference, 1-4 Sep. 2014
- Sustainable Development Goal, 2015

Load map
- monitoring UN GA on September 2013
- Drafting Policy Proposal until December 2013
- 2nd International seminar at May or June 2014

International Seminar on Islands and Oceans Stage 2

20-12 August 2013

Ocean Policy Research Foundation

Oceans and Islands

70% of the Earth's surface is covered by ocean

—providing natural resources, transport routes, and climate stability…

The islands that dot the ocean

—serve as bases for development and use of the ocean and its resources, conservation of the marine environment and biological diversity

Islands facing a variety of problems for conservation and management

— population increase and concentration in certain areas

— damage from typhoons, high tides, earthquakes, tsunamis, etc.

— erosion of territory due to flooding and inundation

— deterioration of coral reefs and mangrove forests

— increase in waste products and inappropriate waste management

— marine environmental pollution due to industrial and residential waste water

— high dependence on oil and natural gas

Challenges for management of the surrounding oceans

Based on the United Nations Convention on the Law of the Sea, Island States are surrounded by vast Exclusive Economic Zones of 200 nautical miles, in which they have both rights and responsibilities for the development and use of natural resources and the protection and conservation of the marine environment. However, many difficulties exist, hindering appropriate implementation.

Threats from climate change and variability

Moreover, Islands States are greatly affected by global climate change and variability and are facing the problems of rising sea levels and sea temperatures due to global warming.

International Seminar on Islands and Oceans Stage 1 2009-2011

By OPRF, ANCORS, SOPAC

3rd International Seminar on Islands and Oceans (stage 1)
6 September 2011

→ Summary Statement
→ Policy Proposal:
The Better Conservation and Management of Islands and Their Surrounding Ocean Areas by OPRF and ANCORS

Policy Proposal: The Better Conservation and Management of Islands and Their Surrounding Ocean Areas

Ⅰ On Conservation and Management of Islands
a. Development of Island Management Strategies
b. Increased Safety and Resilience of Island Communities
c. Implementation of Waste Management
d. Development of Renewable Energy
Ⅱ Management of the surrounding Ocean Areas
a. Establishment of Baselines and Marine Limits
b. Implementation of Practical Fisheries Management Policies
c. Maintenance and Securing of Shipping Services
d. Exploitation of Marine Mineral Resources and Preservation of Marine Environment
e. Conservation and Sustainable Use of the Marine Environment and Marine Biodiversity

Policy Proposal: The Better Conservation and Management of Islands and Their Surrounding Ocean Areas (cont'd)

Ⅲ Response to Climate Change and Variability
a. Adaptation to Climate Change and Variability by Island Society
b. Response to International Law Issues Related to Climate Change
Ⅳ Capacity Building and Institutional Strengthening
Ⅴ Suggestions for Responding to the Challenges
a) Scientific knowledge should be accumulated, b) appropriate land use plans or national planning mechanisms should be established, c) sustainable development through effective management of ocean areas should be undertaken so as to conserve and manage the environment and resources, etc.

OPRF's Proposal for Rio + 20

1. an independent chapter should be devoted to the Ocean Agenda
2. the Ocean Agenda referred to above should include the following five measures
1) promotion of comprehensive ocean policy
2) management of islands and their surrounding ocean areas
3) sustainable development of marine industries
4) education of the public
5) responses to marine disasters

UN Conference on Sustainable Development (Rio+20)

June 13 to 22, 2012 at Rio de Janeiro, Brazil

Rio Ocean Declaration

1. Integrated Ocean Governance

Scale up successful ecosystem-based management/integrated ocean and coastal management (EBM/IOCM) efforts.

2. Climate and Oceans

Develop an integrated approach to addressing the interlinked issues of oceans, climate change, and security.

3. Protection of marine biodiversity through networks of MPAs

Undertake ecosystem-based approaches for securing the conservation and sustainable use of marine biodiversity in the context of integrated ocean governance.

Rio Ocean Declaration (cont'd)

4. Enhancing fisheries for food security, social and economic benefits

Prevent, deter, and eliminate IUU fishing, and eliminate environmentally and socially harmful fishing subsidies that contribute to overcapacity, overfishing and IUU fishing.

Enhance the capacity of developing countries and SIDS to make optimal use of their fishery resources through enhanced fisheries management.

5. Capacity development

Enhance the capability of SIDS and developing coastal countries to benefit from, and sustainably manage, their marine resources

6. Controlling all sources of marine pollution

Mitigate marine pollution, including marine debris, persistent organic pollutants, heavy metals, and nitrogen-based compounds, from land-based and marine sources.

7. Move toward the blue economy

Outcome Document of the Rio + 20 'The Future We Want'

I. Our common vision
II. Renewing political commitment
III. Green economy in the context of sustainable development and poverty eradication
IV. Institutional framework for sustainable development

V. Framework for action and follow-up

A. Thematic areas and cross-sectoral issues

Oceans and seas (158-177)
Small Island Developing States (178-180)
Call for the convening in 2014 of a third international conference on SIDS (180)

A New Initiative —International Seminar on Islands and Oceans (Stage 2) 2013-2015

Objective of the 2nd Stage Seminar:

Propose the contents from the Stage 1 Proposal to the upcoming 3rd International Conference on SIDS (2014) and the Sustainable Development Goal (2015) and work towards their implementation.

OPRF Ocean Policy Research Foundation

ANCORS

SPC CPS Secretariat of the Pacific Community

Applied Geoscience and Technology Division (SOPAC)

PACIFIC ISLANDS FORUM

Thank you for your attention and collaboration!

Hiroshi Terashima
Executive Director
Ocean Policy Research Foundation

ANCORS' ACTIVITIES AFTER POST RIO+20

Prof Martin Tsamenyi
&
Prof Richard Kenchington

1st International Seminar on Promotion of Sustainable Development of Islands and their Surrounding Ocean Areas

Tokyo, Japan 20-21 August 2013

RIO + 20 OCEANS OUTCOMES

"THE FUTURE WE WANT"

- The main Oceans outcomes of Rio+20 can be found in
  - –Paragraphs 158-177- Oceans and Seas
  - –Paragraphs 178-180 - Small Island developing States (SIDS)
- Also see
  - –UN Secretary General's Oceans Compact

Recognition of Importance of the Oceans and Coasts

- Recognition that the seas and coastal areas form an integrated and essential component of the Earth's ecosystem and are critical to sustaining it (Paragraph 158)
- Commitment commit to protect, and restore, the health, productivity and resilience of oceans and marine ecosystems, and to maintain their biodiversity, enabling their conservation and sustainable use for present and future generations (Paragraph 158)

Recognition of the Importance of the Law of the Sea Convention

- The Law of the Sea Convention provides the legal framework for the conservation and the sustainable use of the oceans and their resources (**Para. 158)**
- Urged all its Parties to fully implement their obligations under the Convention **(Para. 159)**

Capacity Building

- Recognize the importance of building the capacity of developing countries to be able to benefit from the conservation and sustainable use of the oceans and seas and their resources
- Emphasize the need for cooperation in marine scientific research to implement the provisions of UNCLOS and the outcomes of the major summits on sustainable development (Para 160)

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Reporting and Assessing State of the Marine Environment

- Support the Regular Process for Global Reporting and Assessment of the State of the Marine Environment, including Socioeconomic Aspects, established under the auspices of the General Assembly (Para 161)
- Look forward to the completion of its first global integrated assessment of the state of the marine environment by 2014 and the subsequent consideration by the Assembly (Para 161)

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MARINE POLLUTION

- Note with concern that the health of oceans and marine biodiversity are negatively affected by marine pollution, including marine debris, especially plastic, persistent organic pollutants, heavy metals and nitrogen-based compounds, from a number of marine and land-based sources, including shipping and land run-off (Para. 163)
- Commit to take action to reduce the incidence and impacts of such pollution on marine ecosystems, including through the effective implementation of relevant conventions adopted in the framework of the International Maritime Organization, and the follow-up of relevant initiatives such as the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, as well as the adoption of coordinated strategies (Para. 163)
- Commit to take action to, by 2025, based on collected scientific data, achieve significant reductions in marine debris to prevent harm to the coastal and marine environment (Para. 163)

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Alien and Invasive Species

- Note the significant threat alien invasive species pose to marine ecosystems and resources
- Commit to implement measures to prevent the introduction of, and manage the adverse environmental impacts of, alien invasive species (Para. 164)

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Biodiveristy in Areas Beyond National Jurisdiction

- Recognition of the importance of the conservation and sustainable use of marine biodiversity beyond areas of national jurisdiction (Para 162)
- Commitment to address, “on an urgent basis, the issue of the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction including by taking a decision on the development of an international instrument under UNCLOS (Para 162)

Sea Level Rise and Climate Change

- Note that sea level rise and coastal erosion are serious threats for many coastal regions **and islands particularly in developing countries** (Para. 165)
- **Called on the international community to enhance its efforts to address these challenges** (Para 165).

Sea Level Rise and Climate Change

- Call for support to initiatives that address ocean acidification and the impacts of climate change on marine and coastal ecosystems and resources (Para. 166)
- Reiterate the need to work collectively to prevent further ocean acidification, as well as to enhance the resilience of marine ecosystems and of the communities whose livelihoods depend on them, and to support marine scientific research monitoring and observation of ocean acidification and particularly vulnerable ecosystems, including through enhanced international cooperation (Para. 166)

Sea Level Rise and Climate Change

- Concern about the potential environmental impacts of ocean fertilization (Para 167)
- Resolve to continue addressing ocean fertilization with utmost caution, consistent with the precautionary approach (Para 167)

Sustainable Fisheries

- Commit to intensify efforts to meet the 2015 target as agreed to in the Johannesburg Plan of Implementation to maintain or restore stocks to levels that can produce maximum sustainable yield on an urgent basis (Para. 168)
- Commit to urgently take the measures necessary to maintain or restore all stocks at least to levels that can produce the maximum sustainable yield, with the aim of achieving these goals in the shortest time feasible, as determined by their biological characteristics (Para. 168)

Sustainable Fisheries

- Commit to urgently develop and implement science-based management plans, including by reducing or suspending fishing catch and fishing effort commensurate with the status of the stock (Para 168)
- Commit to enhance action to manage by-catch, discards and other adverse ecosystem impacts from fisheries, including by eliminating destructive fishing practices (Para 168)
- Commit to enhance actions to protect vulnerable marine ecosystems from significant adverse impacts, including through the effective use of impact assessments (Para. 168)

Sustainable Fisheries

- Urge all States to ratify or accede to and/or implement relevant international instruments (Para 169 & 171)
  - UN Fish Stocks Agreement
  - Code of Conduct for Responsible Fisheries
  - Various FAO International Plans of Action
  - Port State Measures Agreement
  - Commit to eliminating illegal, unreported and unregulated fishing as advanced in the Johannesburg Plan of Implementation, and to prevent and combat these practices (Para 170)

Sustainable Fisheries

- Recognise the need for transparency and accountability in fisheries management by regional fisheries management organizations(Para 172
- Call on RFMOs to regularly undertake and implement performance reviews and make the results publicly available (Para 172)
- Commitment to eliminate subsidies that contribute to illegal, unreported and unregulated fishing and overcapacity (Para 173)

Sustainable Fisheries

- Urge urge the identification and mainstreaming by 2014 of strategies that further assist developing countries, in particular the least developed countries and small island developing States, in developing their national capacity to conserve, sustainably manage and realize the benefits of sustainable fisheries, including through improved market access for fish products from developing countries (Para 174)
- Commit to observe the need to ensure access to fisheries and the importance of access to markets, by subsistence, small-scale and artisanal fisherfolk and women fish workers, as well as indigenous peoples and their communities, particularly in developing countries, especially small island developing States (Para 175)

Coral Reefs

- Recognize the significant economic, social and environmental contributions of coral reefs, in particular to islands and other coastal States, as well as the significant vulnerability of coral reefs and mangroves to impacts, including from climate change, ocean acidification, overfishing, destructive fishing practices and pollution (Para 176)
- Support international cooperation with a view to conserving coral reef and mangrove ecosystems and realizing their social, economic and environmental benefits, as well as facilitating technical collaboration and voluntary information-sharing (Para 176)

Area-based management

- Reaffirm the importance of area-based conservation measures, including marine protected areas, consistent with international law and based on best available scientific information, as a tool for conservation of biological diversity and sustainable use of its components (Para 177)

Small Island Developing States

- **Reaffirm that small island developing States (SIDS) remain a special case for sustainable development in view of their unique and particular vulnerabilities, including their small size, remoteness, narrow resource and export base, and exposure to global environmental challenges and external economic shocks, including to a large range of impacts from climate change and potentially more frequent and intense natural disasters (Para 178)**

Small Island Developing States

- Note with concern that the outcome of the 5-year review of the Mauritius Strategy for Implementation (MSI+5) concluded that **SIDS have made less progress than most other groupings, or even regressed, in economic terms, especially in terms of poverty reduction and debt sustainability** (Para 178)
- Note with concern that **sea-level rise and other adverse impacts of climate change continue to pose a significant risk to SIDS and their efforts to achieve sustainable development and for many represent the gravest of threats to their survival and viability, including for some through the loss of territory** (Para 178)

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Small Island Developing States

- **Call for continued and enhanced efforts to assist small island developing States in implementing the Barbados Programme of Action and the Mauritius Strategy** (Para 179)
- **Call for a strengthening of United Nations system support to small island developing States in keeping with the multiple ongoing and emerging challenges faced by these States in achieving sustainable development** (Para 179)

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Small Island Developing States

- **Call for the convening in 2014 of a third international conference on small island developing States, to build on the Barbados Programme of Action and the Mauritius Strategy** (Para 180)
- **Recognize the importance of coordinated, balanced and integrated actions to address the sustainable development challenges facing small island developing States** (Para 180)

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UN SECRETARY GENERAL'S OCEANS COMPACT "HEALTHY OCEANS FOR PROSPERITY"

- "The world's oceans are key to sustaining life on the planet. The ocean constitutes a conduit for ninety per cent of the world trade, and for connecting people, markets and livelihoods. In light of the ocean's interconnectedness, all nations of the world should strive to make the oceans places of safety and sustainability of maritime activities for all humankind'.

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ONE GOAL, THREE OBJECTIVES

GOAL

•"I will encourage Member States, the private sector and civil society **to make global and individual commitments to restoring oceans to healthy, productive and resilient systems as a matter of urgency and against the appropriate baselines to ensure human well-being and prosperity.**

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OBJECTIVES

- Protecting people and improving the health of the oceans
- Protecting, recovering and sustaining the oceans' environment and natural resources and restoring their full food production and livelihoods services
- Strengthening ocean knowledge and the management of oceans

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Oceans Advisory Group

- Plan to establish an Oceans Advisory Group, composed of Executive Heads of involved UN system organizations, high-level policy-makers, scientists, leading ocean experts, private sector representatives, representatives of non-governmental organizations and civil society organizations
  - bring together different stakeholders and contribute to developing a new focus and direction
  - advise on strategies for mobilizing resources needed for the implementation of the Oceans Compact Action
  - serve to catalyze UN system-wide cooperation and arrangements in support of the Oceans Compact

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ANCORS ACTIVITIES AT A GLANCE

•Research activities

•Workshops and conferences

•Capacity Building

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Major Research Activities

"Fishing for Security in the Gulf of Guinea"

•2 Years research project funded by AusAID

•Scope of Project

- What are the drivers of piracy and other unlawful maritime activities in the Gulf of Guinea?
- Can criminality arise within communities because of conflict between fisheries sectors, or because of conflicts between fisheries and other sectors?
- In what ways can communities and governments ensure that fisheries remain economically viable and attractive by comparison with alternative, criminal livelihoods?
- How can governments act to minimise threats, including threats to community cohesion and livelihoods, from conflict, piracy and other unlawful maritime activities?
- Can international cooperation minimise conflict in maritime sectors and communities?

Major Research Projects

"Improving Community-based Fisheries Management in Pacific Island Countries"

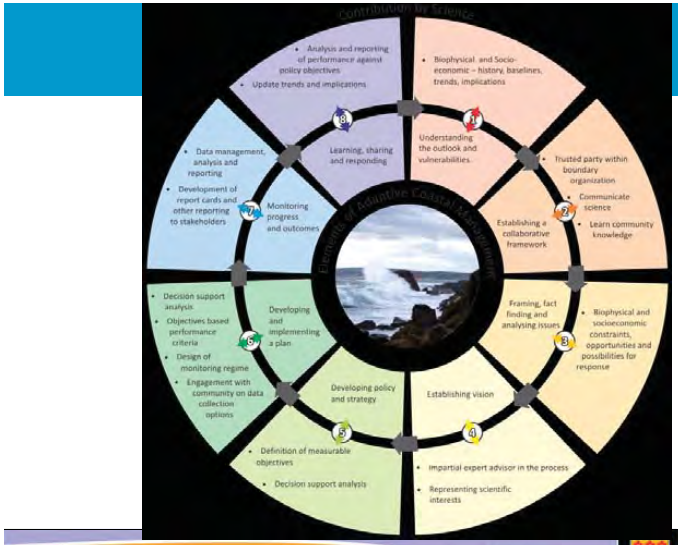
•Five Year Research Project in collaboration with World Fish, funded by the Australian Centre for International agricultural Research

•Scope of project

- Assessing the value of coastal fisheries in Pacific Island countries
- Understanding the barriers to the sustainable management of coastal fisheries in Pacific Island countries
- Developing appropriate policy and management interventions

coastal Collaboration Cluster

- 3 year research program funded through CSIRO's Flagship Collaboration Fund.
  - Identification of the key social and institutional barriers that inhibit the uptake of science in the coastal zone.
  - Innovative ways to introduce and apply the best knowledge available to coastal policy-making and planning processes, to better manage changing coastal pressures.



UNEP- Marine and Freshwater program

- Coral Reef Program
- International Coral Reef Initiative
- Ecosystem based management of marine uses
- Marine Spatial Planning

Workshops

- UN Intersessional Workshop to study issues relating to the conservation and sustainable use of marine biological diversity beyond areas of national jurisdiction and a marine conservation, **6-7 May 2013 in New York**

Capacity Building

- Capacity Building programme of 105 weeks as follows:
  - Ocean Governance and Maritime Security Training course for east Africa
  - Ocean Governance and Maritime Security course
  - Ocean Governance and Maritime Security course for West Africa
  - Oceans Governance and Fisheries course for the Caribbean countries
  - Gulf of Guinea Maritime Security course (1 week)

Setting Ocean Policy within the Pacific Islands Region in the Post Rio+20 Context

OPRF Seminar 20-21 August 2013

Dr Willy Morrell, Natural Resources Adviser

PIFS Mission

Our mission is to ensure the effective implementation of the Leaders' decisions for the benefit of the people of the Pacific.

Our goals are to stimulate economic growth and enhance political governance and security for the region, through the provision of policy advice; and to strengthen regional cooperation and integration through coordinating, monitoring and evaluating implementation of Leaders' decisions.

PIFS Founded in August 1971

⇩

Comprises 16 independent and self-governing states in the Pacific

⇩

The region's premier political and economic policy organisation

⇩

Guided by the Pacific Plan, the Forum Leaders meet annually to develop collective responses to regional issues

16 member countries
A combined EEZ of >30 million square kilometers
A total population of 32.7 million people.

Australia
Capital: Canberra
Land: 7,686,848 sq km
EEZ: 8.6 million sq km
Population: 19.6 million (2003 est.)
Language: English
Currency: Australian Dollar
Economy: Agriculture, mining, manufacturing, services and tourism

Cook Islands
Capital: Rarotonga
Land: 240 sq km
EEZ: 1.8 million sq km
Population: 19,000 (2003 est.)
Language: Cook Islands Maori, English
Currency: New Zealand Dollar, Cook Islands coins
Economy: Agriculture, black pearls, offshore banking and tourism

Kiribati
Capital: Tarawa
Land: 726 sq km
EEZ: 3.6 million sq km
Population: 88,000 (2003 est.)
Language: English, Kiribati
Currency: Australian Dollar
Economy: Copra, fisheries and seaweed

Nauru
Capital: Yaren
Land: 21 sq km
EEZ: 320,000 sq km
Population: 12,000 (2003 est.)
Language: English, Nauruan
Currency: Australian Dollar
Economy: Phosphate

Federated States of Micronesia
Capital: Pohnpei
Land: 700 sq km
EEZ: 2.9 million sq km
Population: 112,000 (2003 est.)
Language: English, Micronesian languages
Currency: United States Dollar
Economy: Agriculture and fisheries

Fiji
Capital: Suva
Land: 18,272 sq km
EEZ: 1.26 million sq km
Population: 775,000 (2003 est.)
Language: English, Fijian, Hindi
Currency: Fiji Dollar
Economy: Agriculture, clothing, fisheries, forestry, tourism and sugar

New Zealand
Capital: Wellington
Land: 270,000 sq km
EEZ: 2.2 million sq km
Population: 3.8 million (2003 est.)
Language: English, Maori
Currency: New Zealand Dollar
Economy: Agriculture, forestry, services, manufacturing and tourism

Niue
Capital: Alofi
Land: 259 sq km
EEZ: 390,000 sq km
Population: 1,650 (2003 est.)
Language: English, Niuean
Currency: New Zealand Dollar
Economy: Agriculture, banking, telecommunications and tourism

Palau
Capital: Koror
Land: 487 sq km
EEZ: 600,000 sq km
Population: 20,000 (2003 est.)
Language: English, Palauan
Currency: United States Dollar
Economy: Fisheries and tourism

Papua New Guinea
Capital: Port Moresby
Land: 462,000 sq km
EEZ: 3.1 million sq km
Population: 5.6 million (2003 est.)
Language: English, Tok Pisin, Hiri Motu, local languages
Currency: Kina
Economy: Agriculture, fisheries, forestry and mining

Solomon Islands
Capital: Honiara
Land: 28,000 sq km
EEZ: 1.6 million sq km
Population: 450,000 (2003 est.)
Language: English, Pijin, local languages
Currency: Solomon Islands Dollar
Economy: Agriculture, fisheries and forestry

Tonga
Capital: Nuku'alofa
Land: 688 sq km
EEZ: 700,000 sq km
Population: 101,000 (2003 est.)
Language: English, Tongan
Currency: Pa'anga
Economy: Agriculture

Republic of Marshall Islands
Capital: Majuro
Land: 181 sq km
EEZ: 2.1 million sq km
Population: 54,000 (2003 est.)
Language: English, Marshallese
Currency: United States Dollar
Economy: Agriculture and US Military spending

Samoa
Capital: Apia
Land: 2,934 sq km
EEZ: 120,000 sq km
Population: 179,000 (2003 est.)
Language: English, Samoan
Currency: Tala
Economy: Agriculture, fisheries, manufacturing and tourism

Tuvalu
Capital: Funafuti
Land: 26 sq km
EEZ: 757,000 sq km
Population: 10,000 (2003 est.)
Language: English, Tuvaluan
Currency: Australian Dollar
Economy: Agriculture, fisheries and philatelic sales

Vanuatu
Capital: Port Vila
Land: 12,190 sq km
EEZ: 680,000 sq km
Population: 204,000 (2003 est.)
Language: Bislama, English, French, local languages
Currency: Vatu
Economy: Agriculture, fisheries and tourism

PASO
Pacific Aviation Safety Office

Forum Fisheries Agency
Pacific Islands Forum Fisheries Agency (FFA)

Secretariat of the Pacific Community (SPC)

Pacific Islands Forum Secretariat

Secretariat of the Pacific Regional Environmental Programme (SPREP)

south-pacific travel
south-pacific.travel (previously the South Pacific Tourism Organisation (SPTO)

Pacific Islands Development Program
Pacific Islands Development Program (PIDP)

USP
University of the South Pacific (USP)

Pacific Power Association (PPA)

PIFS 1 of 9 Council of Regional Organisations of the Pacific (CROP)

1971 Forum Meeting

- Oceans have been central to Forum Leaders meetings since they first met in 1971 and laid emphasis on the unique dependence of Pacific countries on marine resources which in their view merited special consideration in the recognition of territorial claims.
- The Leaders also called for Pacific countries to be adequately informed of the ongoing work of the then UN Seabed Committee that eventually gave rise to the UNCLOS.

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2012 Forum Meeting

- The Central theme of the Cooks Islands hosted meeting was "**Large Ocean Island States – the Pacific Challenge.**"
- Built on the outcomes of Rio+20 and the need to strike a balance between developing and conserving marine resources.
- The theme drew on the fact that nearly10% of world's oceans fall within the jurisdictional realm of the 22 PICTS and that many are hugely dependent on the Pacific Ocean's services for transport and trade, fisheries, food security and tourism.

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2012 Issues Highlighted

- 2012 Forum Communiqué makes reference to – *deep sea minerals(RLRF); fisheries; monitoring, control and surveillance challenges (MCS); market access; food security; maritime boundaries; climate change; marine spatial planning; and marine governance.*
- Inclusion of a given issue into a Forum Communiqué provides a high-level 'hook' to drive policy-making but is seldom accompanied by specific resourcing.

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Growing Global Interest in Oceans

- Increased bilateral support from key donors
- World Bank's Global Partnership for Oceans (GPO)
  - ➢ Pacific Regional Oceanscape Program (WB)
- The UN SG's Oceans Compact
- Rio+20 - some 20 paragraphs on oceans and fisheries
- The opportunities associated with this increased interest in oceans are not lost on Pacific Leaders who have long recognised and campaigned that the ocean is the overarching determinant for sustainable development in PICTs

Why the Interest in Oceans?

- Fishing is a $90 billion dollar industry
- Employs 43 million
- Provides 40% of the protein for 2/3 of the planet's population
- Oceans generate > 50% of our oxygen
- Have absorbed about 30% of the anthropogenic CO_2
- Harbour untold species, ecosystems, pharmaceutical constituents, oil, gas and mineral resources that continue to be discovered on a daily basis

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A few Pacific Regional Fisheries Statistics

- 2.6 million tons (tuna ~50% PICTS) valued at >USD 4.3 billion
- License fees provide 3-40% of government revenue for 7 PICs
- Fish provides 50-90% of protein of most coastal communities where consumption is typically 3 to 4 times the global average
- 47% of households in coastal communities (in 17 PICTs) derive their first or second income from catching and selling fish
- Industrial fishing and processing provides more than 12,000 jobs
- Aquaculture employs a further 6,000 in pearl and shrimp farming

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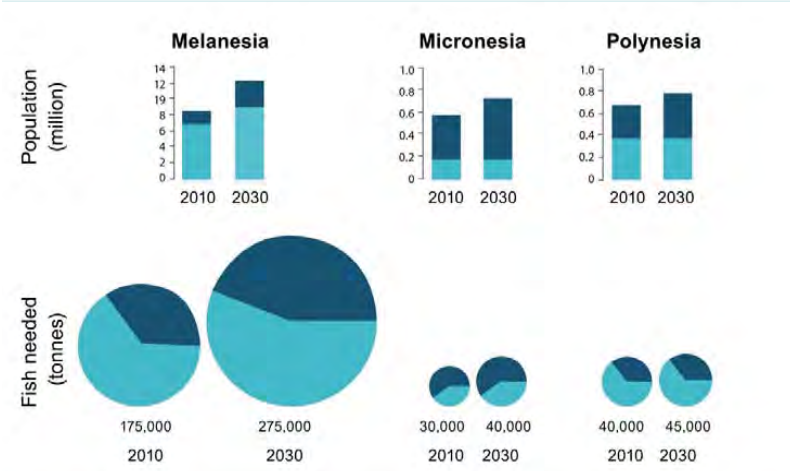

Figure 1.8 Forecasts of population growth, and the fish needed for food security in rural (■) and urban (■) areas of Melanesia, Micronesia and Polynesia in 2030 (source: SPC).

SIDS 2014 Conference/ Post 2015 Agenda

- Following Rio+20 PICTs are using the SIDS 2014 preparatory process to formulate priorities on oceans and sustainable development in the Pacific region
- Conference will be held in Samoa in September 2014
- The Conference and preparatory process provide opportunities to shape the post-2015 development agenda and the new sustainable development goals (SDGs) that are currently being developed

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Priorities, Messaging and Gaps

Some key messaging that the Pacific Countries will take forward to SIDS2014 in Samoa

•The important stewardship role of PICTS

•The need for habitat protection both within and beyond EEZs, particularly critical ecosystems vulnerable to climate change impacts

•The need for a dedicated ocean-focused SDG

•The need to finalise maritime boundaries given their implications around resource extraction and MCS

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Maritime Boundary Work Important

- All Pacific Island Countries (PICs) are signatories of UNCLOS but only Fiji, Nauru and Palau have declared their maritime baselines, zones and outer limits in accordance with UNCLOS
- Nauru is the only PIC with complete and declared marine zones, limits and boundaries around its entire jurisdictional perimeter.

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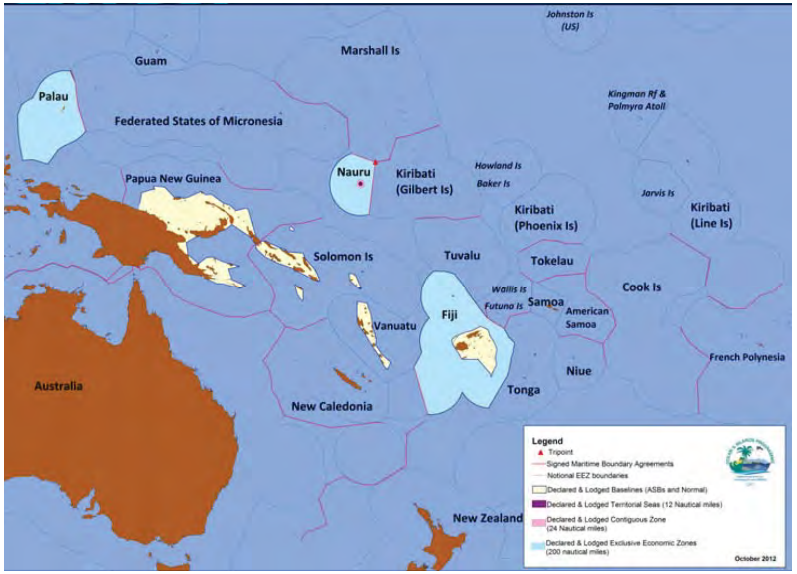

Continental Shelf Work

- Ten PICs have submitted claims to the UN Commission on the Limits of the Continental Shelf (UN CLCS) and are now all engaged in the task of defending the technical and legal aspects of these claims to the UN CLCS.
- The total cumulative area of these claims is some 2 million km^2
- Partly associated with a renewed focus on Deep Sea Minerals (DSM)

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Some Other Priorities and Gaps

1. Opportunities to utilise large scale marine spatial planning to facilitate informed decision making.
2. Ocean acidification – reef degradation has dire implications for fisheries, food security and the very existence of low lying atolls.
3. Impacts of sedimentation and land based pollution including agricultural fertilisers, pesticides and herbicides
4. Determining rates of coastal habitat destruction.
5. Marine Invasive species management.

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The Solutions?

1. We need to ensure we better understand the combined and cumulative effects of climate change (warming, acidification, deoxygenation, sealevel rise) and other stressors such as deforestation, urbanisation and ongoing resource extraction.
2. We need to ensure that the research and technical assistance (TA) is demand driven and tailored to the end-users whom often have scant resources to analyse and synthesise complex reporting.

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The Solutions...continued

4. Capacity development must be ongoing – development efforts must also address capacity retention and strengthening of regional organisations
5. Given the proliferation of MPAs at all scales – we need to better evaluate their merit and role in the conservation and management of fisheries in the Pacific Islands region.

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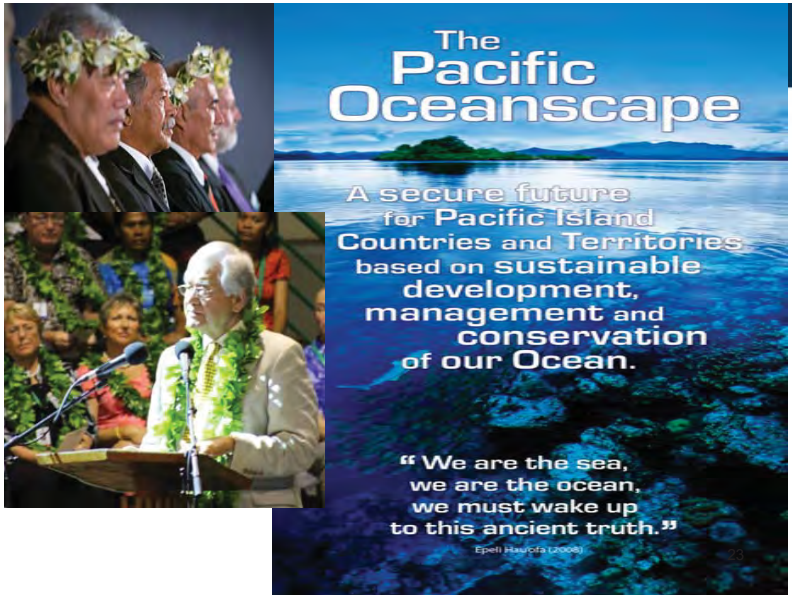

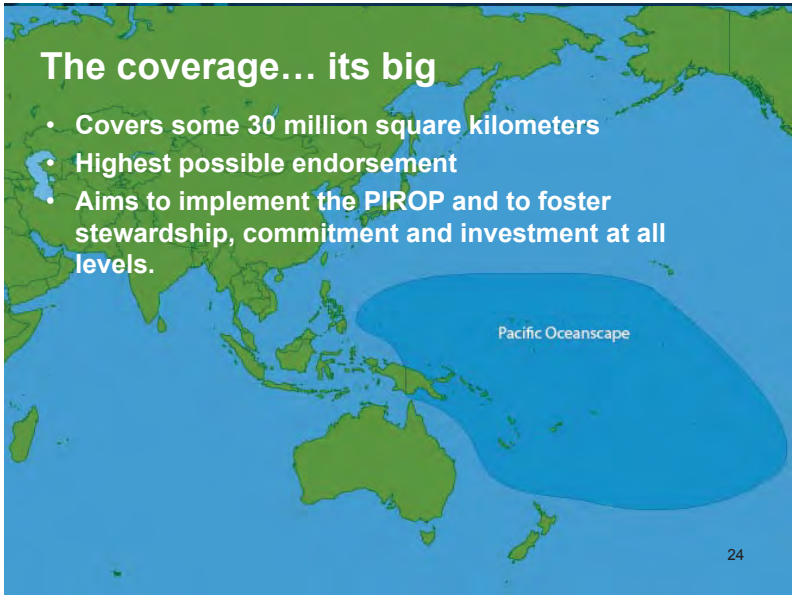

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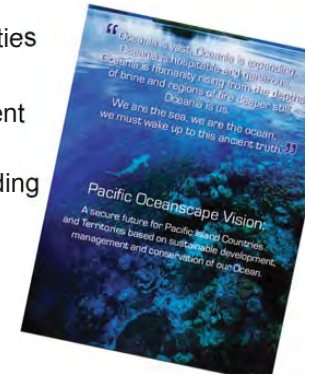
Six Strategic Priorities of the Oceanscape

1. Jurisdictional Rights and Responsibilities
2. Good Ocean Governance
3. Sustainable development, management and conservation
4. Listening, Learning, Liaising and Leading
5. Sustaining Action
6. Adapting to a rapidly changing environment



Pacific Oceanscape Framework

- The Pacific Island Regional Ocean Policy was approved by Pacific Island leaders in 2002/2005
- Pacific Plan was adopted by Pacific Island leaders in 2005
- Pacific Oceanscape Framework was conceived by His Excellency Anote Tong, in 2009 and endorsed by Pacific Island leaders
- The Forum's Marine Sector Working Group developed the Framework in 2010

Commitments to the Pacific Oceanscape

- Pacific Island Forum leaders endorsed the Framework in 2009, 2010 and 2011
- Kiribati – continues commitment to development of Phoenix Island Protected Area (PIPA)
- Cook Islands –1 million km^2 MPA
- Australia & New Caledonia – huge MPAs
- Tokelau – declared EEZ as shark sanctuary

Three Take-home Messages

1. Pacific Island Countries and Territories (PICTs) are drawing on the fact that they are '*Large Ocean Island States*' – this challenges the notion they are Small Island Developing States (SIDS)
2. PICTS recognise the role they play as stewards of the Pacific Ocean - a global resource of significant worth not only on account of the many ecosystem services that it provides.
3. Climate change is a 'threat-multiplier' and PICTs are rightly concerned about its present and pending impacts on their marine resources and ecosystems that underpin their economies.

Vinaka vakalevu

Thank you

Doumo arigatou gozaimasu

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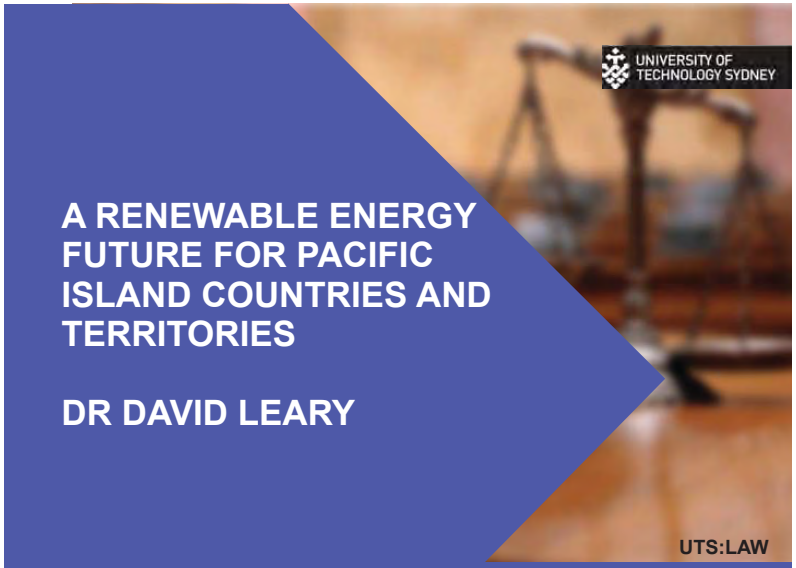


A RENEWABLE ENERGY FUTURE FOR PACIFIC ISLAND COUNTRIES AND TERRITORIES

DR DAVID LEARY

UTS:LAW

UTS CRICOS PROVIDER CODE: 00099F

law.uts.edu.au

OVERVIEW

- OPRF & ANCHORS joint policy recommendations for Rio + 20
- Sources of renewable energy available to PICTs
- International legal, policy and political developments related to renewable energy and PICTs
- Renewable energy initiatives in the pacific region today
- Have renewable energy initiatives failed?
- Challenges ahead
- Questions for discussion and future research

OPRF AND ANCHORS JOINT POLICY RECOMMENDATION FOR RIO + 20

d. Development of Renewable Energy

d-1. A key to the economic independence of island States is to encourage societies that do not depend excessively on imported energy. Consequently, it is necessary to promote renewable energy innovation according to the natural conditions of each island, and provide business operators with the necessary incentives to promote the use and development of renewable energy as appropriate. In addition, there is a need to encourage measures to conserve energy including awareness-raising at both the political and civil levels.

d-2. The international community should assist island States in the identification and adoption of renewable energy technologies appropriate to the environmental conditions of each country.

SOURCES OF RENEWABLE ENERGY IN PICTS

- Most PICTs heavily dependant on imported oil for electricity and transport
- Renewable energy can help reduce vulnerability to oil price volatility
- Remoteness, small size, long distances between islands and isolated populations
  - does not allow for economies of scale in electricity production and distribution; and
  - ensures that the costs of supply remain high (SOPAC 2004)
- Each PICT different
- Range of different options and technologies

SOURCES OF RENEWABLE ENERGY IN PICTS- PV (SOLAR)

PV installation, Nukunonu atoll, Tokelau

(Image: Energy for all)

Motofoua high school, Funafuti, Tuvalu

(Image: isolar calculator)

SOURCES OF RENEWABLE ENERGY IN PICTS- SOLAR HOT WATER

Domestic solar hot water heater, Tahiti

(Image: Berkley University)

SOURCES OF RENEWABLE ENERGY IN PICTS- WIND ENERGY

Devil's Point Wind Farm, Vanuatu

(Images: Vergnet)

SOURCES OF RENEWABLE ENERGY IN PICTS- HYDRO-ELECTRIC

Nadarivatu Hydro-Electric Power Project, Fiji

(Image: Fiji Electric Authority)

SOURCES OF RENEWABLE ENERGY IN PICTS-GEOTHERMAL ENERGY

Solomon Islands Geothermal exploration
(Images: Geodynamics)

SOURCES OF RENEWABLE ENERGY IN PICTS-BIOFUEL-COCONUT AND SUGAR CANE

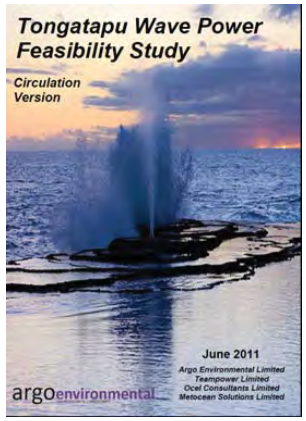
Sugar cane Fiji

(Image: Fiji Broadcasting Corporation)

Electricity generator in Fiji running on 10% coconut oil

(Image: SOPAC)

SOURCES OF RENEWABLE ENERGY IN PICTS-TIDAL & WAVE POWER, OTEC



INTERNATIONAL LEGAL, POLICY DEVELOPMENTS RELEVANT TO RENEWABLE ENERGY AND PICTS

- 1994- Global Conference on the Sustainable Development of Small Island Developing States
  - *Barbados Programme of Action for the sustainable development of small island developing states*- Chapter VII-Energy Resources
    - ✓ Noted reliance on petroleum based fuels
    - ✓ Highlighted potential of energy efficiency and renewable energy
    - ✓ Noted constraints in SIDS including level technology development; investment costs; lack of local skills; lack of maturity of technology;
    - ✓ Lists national, local and international actions to support growth of renewable energy in SIDS

INTERNATIONAL LEGAL AND POLICY DEVELOPMENTS RELEVANT TO RENEWABLE ENERGY AND PICTS

- 2005 Mauritius Strategy for the Further Implementation of the Programme of Action for Sustainable Development of Small Island Developing States
- UN General Assembly Resolution 63/213 leads to 2010 high-level five year review meeting of Mauritius Strategy of Implementation
- 2010 UN General Assembly Resolution 65/2- emphasise need for finance including regional mechanisms to build and develop infrastructure
- 2010 UN General Assembly resolution 65/151 declaring 2012 the "*International Year of Sustainable Energy for All*"

INTERNATIONAL LEGAL AND POLICY DEVELOPMENTS RELEVANT TO RENEWABLE ENERGY AND PICTS

- 2012 Barbados Declaration on Achieving Sustainable Energy for All in Small Island Developing States
  - Commitments on targets etc by 7 PICTs
- RIO + 20- commitments relating to the 'Green economy'- "access to modern energy services"
- 2013 Pacific Islands Forum Leaders meeting
  - Key sub theme "*Accelerate Energy Efficiency and the transition to renewable energy in the Pacific region with a "Pacific New Energy Drive*"

INTERNATIONAL LEGAL AND POLICY DEVELOPMENTS RELEVANT TO RENEWABLE ENERGY AND PICTS

- Regional and International funded projects
  - *Pacific Islands Climate Change Assistance Programme (PICCAP) (1997-2001) (SPREP, GEF, UNDP)*
  - *Pacific Islands Renewable Energy Project (PIREP)*
  - *Asian Development Bank's Renewable Energy and Energy Efficiency Program (REEP) (2004-2006)*
  - *Capacity Building for development of adaptation measures in Pacific Island Countries (CBDAMPIC) (2000-2005)*
  - *European Union (EU) 9th EDF for the FSM, Nauru, Niue, Palau and RMI (2005-2010)*
  - *Pacific Islands Energy Policy and Strategic Action Planning (PIESAP) (2004-2007)*
  - *Pacific rural Renewable Energy France-Australia Common Endeavour (PREFACE) (2000-2003)*
  - *UNDP Regional Energy Programme for Poverty Reduction Project (REP-PoR) (2005-2008)*
  - *UN ESCAP Institutional Capacity Building on Renewable Energy Training project (2002-2005)*
  - *European Union Energy Facility for ACP Countries*

Source: UNDP-GEF PIGGAREP Project Brief

INTERNATIONAL LEGAL AND POLICY DEVELOPMENTS RELEVANT TO RENEWABLE ENERGY AND PICTS

- Bilateral (actual and proposals)
  - Fiji: Fiji Renewable Energy Power Hybrid Systems (GEF funded) (2001-2004);
  - Fiji Electricity Authority's Renewable Energy Development Programme
  - Kiribati: EU funded solar PV electrification programme
  - Papua New Guinea- Bongo/Kawa micro-hydro
  - Samoa: Asian Development Bank Power Sector Improvement Project
  - Samoa: Asian Development Bank loan program
  - Samoa: Coconut Oil for Power Generation (CocoGen)
  - Samoa: Apolima Photovoltaic (PV) project (partially funded UNDP)
  - Tonga: New Zealand assistance to provide solar PV for Niuafo'ou island
  - Vanuatu Micro hydro electricity programme

Source: UNDP-GEF PIGGAREP Project Brief

INTERNATIONAL LEGAL AND POLICY DEVELOPMENTS RELEVANT TO RENEWABLE ENERGY AND PICTS

reeep renewable energy & energy efficiency partnership

NEW ZEALAND Aid Programme

Australian AID

Australian AID

gef GLOBAL ENVIRONMENT FACILITY INVESTING IN OUR PLANET

JICA Japan International Cooperation Agency

The World Bank

IUCN

UNDP

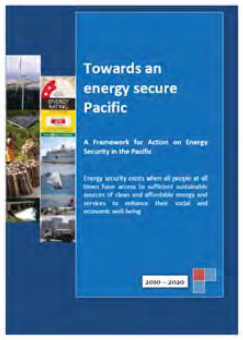
RENEWABLE ENERGY INITIATIVES IN THE PACIFIC REGION TODAY

RENEWABLE ENERGY INITIATIVES IN THE PACIFIC REGION TODAY

- International Renewable Energy Agency (IRENA)
  - Data platform
  - Grid stability issues
    - ✓ 2013 Pacific Power Association and IRENA project agreement (Grid stability)
  - Market development
  - Capacity building
  - Assessing resource potential
  - Assessing renewable energy, land use and water resources nexus
  - Integrating IRENA activities into a coherent roadmaps for PICTS (IRENA 2012)

RENEWABLE ENERGY INITIATIVES IN THE PACIFIC REGION TODAY

- Secretariat of the Pacific Community (SPC) lead agency mandated by Pacific Energy Ministers (work in conjunction with SOPAC, SPREP and aid partners)



- Framework for Action on Energy and Security in the Pacific (FAESP)
- 3.2.2 Long-term objective-

"Increased level of investment in proven renewable energy technologies (including biomass) in PICTs, as part of the region's strategic response to mitigating the harmful effects of petroleum fuels on environments and economies and, where feasible, supplementing and replacing petroleum fuels as the predominant source of energy, particularly noting the price volatility of this market"

- Key priorities:
  - Resource assessment, research and studies;
  - Investment in renewable energy;
  - Capacity development
  - Higher proportion of renewable energy in the energy mix

RENEWABLE ENERGY INITIATIVES IN THE PACIFIC REGION TODAY

Pacific Islands Greenhouse Gas Abatement through Renewable Energy Project (PIGGAREP)

❑Partners including SPREP, SPC, UNDP, GEF.

❑Projects/"Interventions" in PICTS including Cooks Islands, Fiji, Kiribati, Nauru, Niue, PNG, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu

❑Global environmental goal "reduction of the growth rate of greenhouse gas emissions from fossil fuel use in PICs through the removal of barriers to the widespread and cost effective use of feasible renewable energy technologies"

❑Expected to bring about: (i) increased number of sucessfull commercial renewable energy applications; (ii) expanded market for renewable energy applications; (iii) enhanced institutional capacity to design, implement and monitor renewable energy projects; (iv) availability and accessibility of financing to existing and new renewable energy projects; (v) strengthened legal and regulatory structures in the energy and environmental sectors; and (vi) increased awareness and knowledge on renewable energy and renewable energy technologies among key stakeholders

PIGGAREP

RENEWABLE ENERGY INITIATIVES IN THE PACIFIC REGION TODAY

❑ Tonga Energy Road Map 2010-2020

- 2009 Tonga adopted target of 50% by 2012 and embarked on process to develop overall plan for period 2010-2020
- Partners include: Tonga, Japan, China, UAE, Australia, EU, World Bank, ADB, IRENA, Pacific Islands Forum Secretariat,, SPC, European Investment Bank, NZAID, REEP, SOPAC, gtz, IUCN, MAZDAR, PPA, Chatham House

RENEWABLE ENERGY INITIATIVES IN THE PACIFIC REGION TODAY

❑ SIDS-SIDS Sustainable Energy Initiative (SIDS Dock)

- Joint initiative of Caribbean Community Climate Change Centre and SPREP
- Aims to:
  - ✓ Assist SIDS with developing a sustainable energy sector by increasing energy efficiency and developing renewable energy resources
  - ✓ Provide a vehicle for mobilizing financial and technical resources to catalyze low carbon economic growth.
  - ✓ Provide SIDS with a mechanism for connecting with the global financial, technology, and carbon market taking advantage of the resource transfer possibilities that will be afforded.
  - ✓ Provide a mechanism to help SIDS generate the financial resources to invest in climate change adaptation.
- Initial funding by Japan and Denmark

SIDSDOCK
SMALL ISLAND DEVELOPING STATES
ISLAND ENERGY FOR ISLAND LIFE

RENEWABLE ENERGY INITIATIVES IN THE PACIFIC REGION TODAY

SUSTAINABLE ENERGY FOR ALL

United Nations Secretary-General Ban Ki-moon is calling on governments, businesses, and civil society to make specific commitments that help achieve Sustainable Energy for All by 2030. The Secretary-General's Sustainable Energy for All Initiative has three complementary objectives:

ENSURING *universal access* TO MODERN ENERGY SERVICES.

DOUBLING THE GLOBAL RATE OF IMPROVEMENT IN *energy efficiency.*

DOUBLING THE SHARE OF *renewable energy* IN THE GLOBAL ENERGY MIX.

Little meaningful application so far in the pacific.

RENEWABLE ENERGY INITIATIVES IN THE PACIFIC REGION TODAY

❑ 2013 Pacific Energy Summit, Auckland, New Zealand

- co-hosted by New Zealand and the European Union (EU),
- attended by Heads of Government (Cook Islands, Federated States of Micronesia, French Polynesia, the Republic of Kiribati, New Caledonia, Niue, Samoa, Tokelau and Tonga) and
- representatives from other PICTs (American Samoa, the Republic of Nauru, Fiji, Guam, Papua New Guinea, the Republic of the Marshall Islands, the Republic of Palau, Northern Marianas, Pitcairn, Solomon Islands, Tuvalu, Vanuatu, and Wallis and Futuna)
- Also attended by Donors and funding agencies (World Bank, EU, ADB, AusAid etc), regional organisations (eg SPC, SPREP), private sector
- Prospectus of 79 renewable energy projects
- Funding commitments/'restatements announced

HAVE RENEWABLE ENERGY INITIATIVES FAILED?

"*Despite all the efforts…little progress has been made in replacing fossil fuels and moving towards low-carbon energy sources in small island developing States; the use of fossil fuels has continued to increase faster than the use of renewable energy in most of them*"

Five Year review of the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (UN Doc. A/65/115) (2010)

HAVE RENEWABLE ENERGY INITIATIVES FAILED?

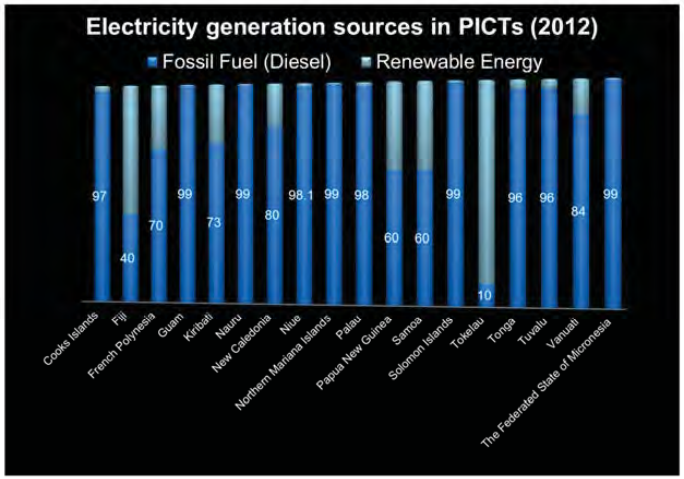
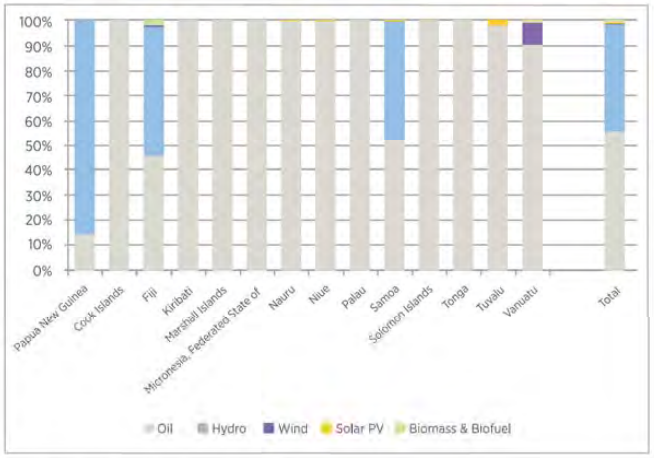


Figure 1 by Leary (2013) based on data contained in Pacific Energy Summit (2012)

FIGURE 1: GROSS ELECTRICITY GENERATION BY SOURCE FOR MAIN GRIDS IN 2010



Source: IRENA on data from (Pacific Power Association, 2012)

HAVE RENEWABLE ENERGY INITIATIVES FAILED?

Type	Barriers
Technical	Lack of sustainable renewable energy based energy system installations on the ground
	Absence of guidelines on renewable energy technical specifications suitable for PICTS
Market	Lack of private sector involvement in renewable energy service delivery
	High Cost of delivering renewable energy services
Institutional	Inadequate capacity to design and implementation of renewable energy projects
	Ineffective coordination among stakeholders
Fiscal & Financial	Absence of sustainable capital fund for renewable energy development
	Local investors are not confident on renewable energy projects
	Biased fiscal policies
Legislative, regulatory and policy	Climate change and energy legislation and policies are either not in place or ineffective
Knowledge, awareness and information	PICTS lack qualified nationals in area of renewable energy applications
	Inadequate national public awareness campaigns
	Lack of knowledge about renewable energy resource potentials in PICTs
	Absence of guidelines on renewable energy technical specifications suitable for the PICS

Barriers to renewable energy in PICTS (adapted and revised from PIGGAREP project brief)

TABLE 2: STATUS OF ENERGY AND RENEWABLE ENERGY POLICY AND REGULATIONS IN SOME PICTS

Source: IRENA 2012

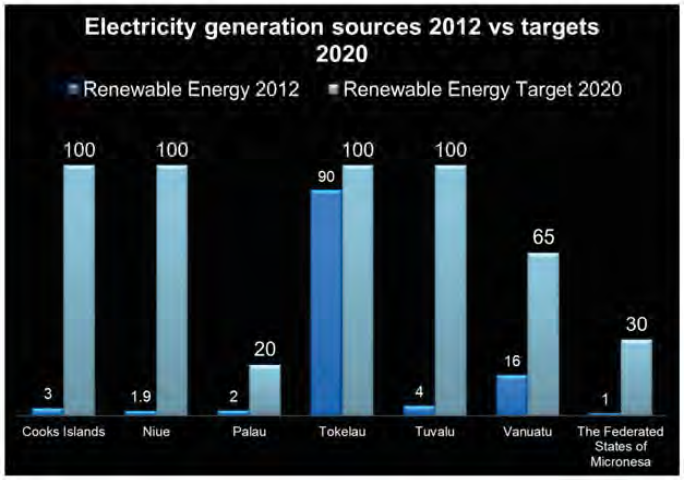


Figure 2 by Leary (2013) based on data contained in Pacific Energy Summit (2012)

NON 2020 TARGETS FOR RENEWABLE ENERGY IN PICTS

PICT	Current	Target
Cook Islands	3%	-100% by 2015 (across six islands)
Fiji	60%	-90% renewable for grid connected supply by 2014. -Rural-100% by 2016
Guam	Less than 1%	-25% by 2035. All future electricity plants must be a minimum 10% renewable
Kiribati	27%	-Tarawa-45% reduction in diesel usage for electricity generation by 2025 (renewable energy and electricity efficiency) -Kirimati 60% redduction in diesel usage by 2025
Marshall Islands	Unclear	-20% by 2020
Nauru	Less than 1%	-50% by 2015
New Caledonia	20%	-To be set in 2013
Niue	1.9%	-30% by 2013 -100% by 2020
Northern Mariana Islands	Less than 1%	-Unknown
Papua New Guinea	40%	-Unknown
Samoa	40%	-Increase the contribution of renewable energy to total energy consumption by 10% by 2016
Tonga	4%	-50% reduction on reliance on diesel for electricity generation

Table by Leary (2013) based on data contained in Pacific Energy Summit (2012)

HAVE RENEWABLE ENERGY INITIATIVES FAILED?

(Image: 350 Pacific)

CHALLENGES AHEAD

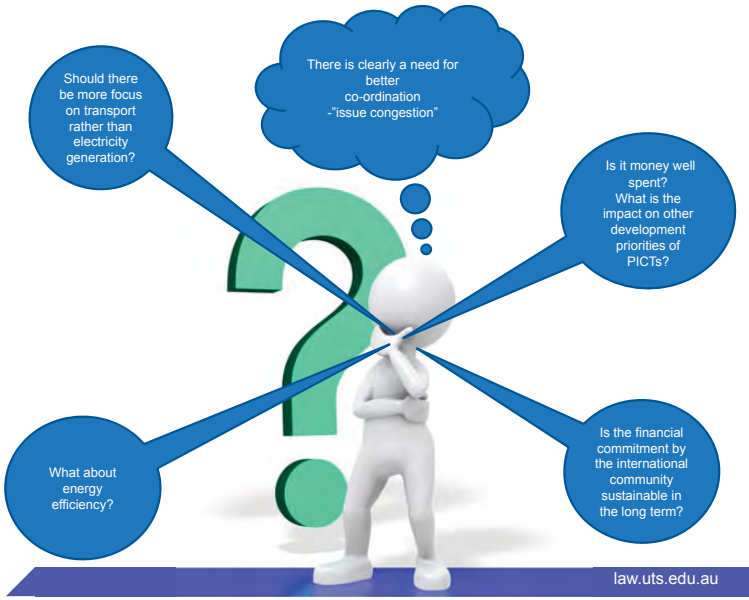
- Disconnect between political/ministerial level and aid community and government officials tasked with implementing
  - How policies selected?
  - Lack of modelling
- Lack of experience of policy makers and government departments
- Lack of technical expertise
- "Brain drain"
- Future budget constraints
- Cost of technology (but less so in future)
- Small market size so still less attractive to investors
- Data still lacking

(IRENA 2012)

CHALLENGES AHEAD

- Persistent institutional barriers
- Emerging challenge of reliability/intermittancey
- Competing demands of other sectors into the future
- "Weaning" PICTs off foreign aid and making renewable energy market competitive

(IRENA 2012)



Session 3 : Management of Islands and Surrounding Ocean Areas

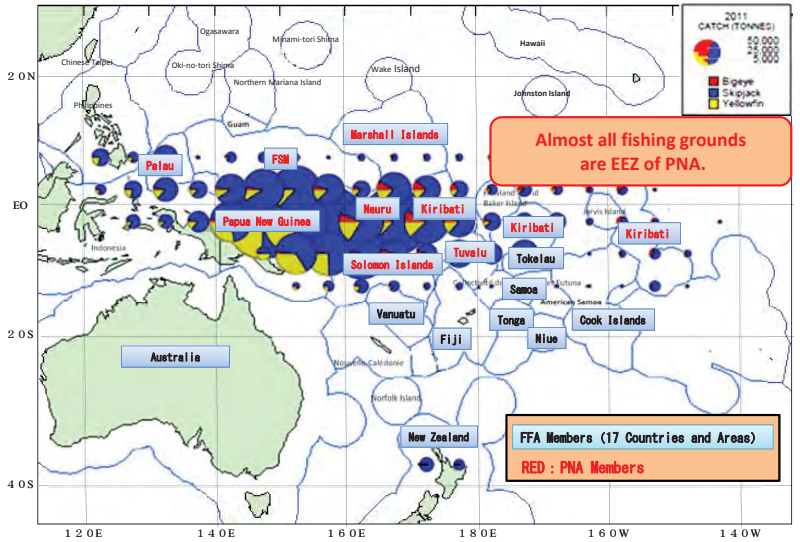
Towards Sustainable development of Fisheries Resources in the South Pacific

August 21st, 2013

Masanori MIYAHARA

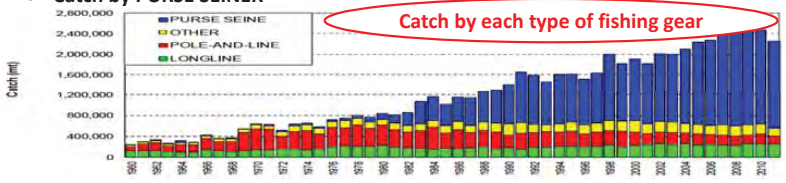
Deputy Director-General,
Fisheries Agency of JAPAN

Distribution of PS Tuna Catches in the South Pacific



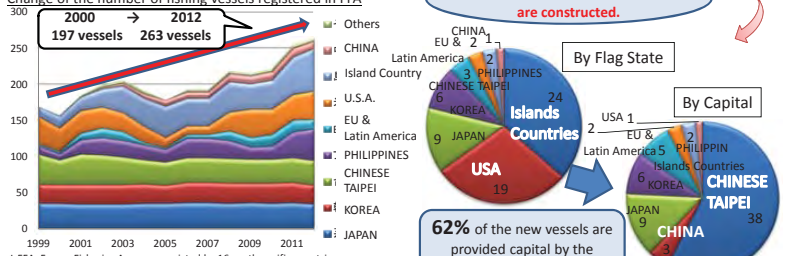
Catch by PURSE SEINE & Number of PURSE SEINER

- **Catch by PURSE SEINER**

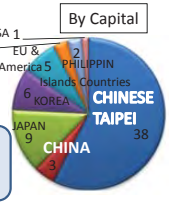


- **Change of the Number of PURSE SEINER**

Change of the number of fishing vessels registered in FFA



Since 2000 , 66 new vessels are constructed.

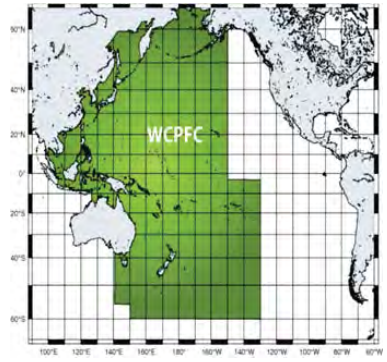


62% of the new vessels are provided capital by the **Overseas Chinese**

＊FFA：Forum Fisheries Agency, consisted by 16 south pacific countries.
※Reference : FFA・WCPFC Record of Fishing Vessels and Hearing by the industry

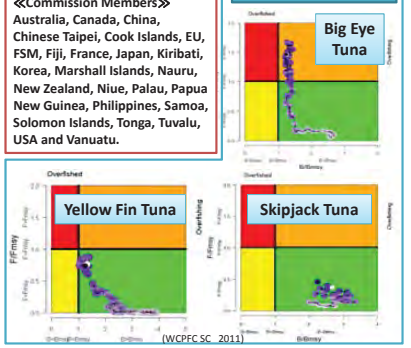
Western and Central Pacific Fisheries Commission

WCPFC



≪Commission Members≫
Australia, Canada, China, Chinese Taipei, Cook Islands, EU, FSM, Fiji, France, Japan, Kiribati, Korea, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Philippines, Samoa, Solomon Islands, Tonga, Tuvalu, USA and Vanuatu.

2011 Stock Assessment



Schedule of Meetings in 2013

August	WCPFC Working Group on Tropical Tunas at Tokyo, JAPAN
September	Northern Committee at Fukuoka, JAPAN
September	Technical and Compliance Committee at Pohnpei, FSM
December	Regular Session of the Commission at Cairns, AUSTRALIA

Requirement of the major Markets

- **Un-sustainable products are under scrutiny of the major markets.**
- **Main Market in the world**

IMPORT OF TUNAS (FAO, MT)

year	JAPAN	USA	EU	CHINA
2008	298,249	221,121	906,191	13,107
2009	313,630	229,448	870,572	36,209

- **EU IUU Regulation**

…were adopted on September 2008 and has been in effect since October 2010;

Requirement for **the catch certificate for import of fish products**

Declaration

- EU – USA September 2011
- EU – JAPAN July 2012
- EU – CHINA not yet fixed

⇒*Eliminate IUU products from their markets.*

CONCLUSION

- To regulate PURSE SEINERS

  ⇒Stop the uncontroled increase of purse seine fishing boats, otherwise, future Island development of tuna fisheries would be ruined not only for resource decline but also for losing markets.
- JAPAN is prepared to support capacity building of island states for effective fishing management, in addition to the continuing support for sustainable fishing development.

  ex. FFA Promotion Fund
- To cooperate within the WCPFC, in order to strengthen the management in particular for purse seine fisheries.

Shifting of Baselines Due to Climate Change, and the Need for International Legal Measures to Mitigate Adverse Impacts against Islands

Moritaka Hayashi

International Seminar on Promotion of Sustainable Development of Islands and their Surrounding Ocean Areas, Tokyo, 20-21 Aug. 2013

Outline

I. Sea level rise due to climate change and variability

- **IPCC's 4th Assessment Rep. (2007): A rise of 0.18 to 0.59 meters of sea level by the end of the century.**
- **More recently, scientists generally share the view that sea level is likely to rise approx. one meter by the end of the century (*Environmental Research Letters*, 2012. 11. 27).**
- **UN SG (2009): World average temperature rise during this century would be 1.8-4.0 ℃ (assuming greenhouse gas emissions continue to rise at their current pace). → sea level rise of *one meter or more* is predicted.**
- **Leaders of the Pacific Islands Forum and UNSG - Joint statement of 7 Sept. 2011: stressed the need to address in all relevant international fora the urgent threats caused by adverse impacts of ocean acidification and climate change, including the *implications of sea level rise for the territorial integrity* of Pacific SIDS and *their continued existence as viable dynamic communities*.**

II. Possible effects of sea level rise on baselines and maritime zones

- **Baselines, normally low-water lines, constitute the points from which maritime zones like territorial seas and EEZs are measured. They must be publicized, i.e., marked on official charts or shown by a list of geographical coordinates.**
- **When sea level rises, the actual low-water lines and basepoints for drawing other baselines (straight baselines and archipelagic baselines) normally shift landwards. (Baselines are "ambulatory".) → The outer limits of the TS, EEZ and portion of the continental shelf claimed on the basis of distance from baselines also shift landwards.**

→ Loss of rights and jurisdiction of coastal States regarding outermost areas of maritime zones, except for the outer CS area which has been established on the basis of CLCS recommendation.

- **Small islands may suffer most serious effects, including submersion of lands and possible loss of their maritime areas.**

III. Adverse impacts of sea level rise on small islands and island States

Four scenarios:

(1) Total submergence of an island or rock belonging to a State

(2) Near total submergence of an island belonging to a State (Where an island becomes nearly submerged to the extent that it is considered a "rock" under UNCLOS Art. 121 (3)):

(3) Total submergence of *all* the islands constituting an island State

(4) Near submergence of an island State

III. Adverse impacts of sea level rise on small islands and island States (cont'd)

(1) <u>Total submergence of an island or rock belonging to a State</u>

- **Literal interpretation of UNCLOS Art. 121: no EEZ may be claimed; nor CS, except outer CS established on the basis of a CLCS recommendation, which remains permanently. (Coastal States should also be given the same opportunity to establish CS up to 200 nm.)**
- **CZ, being an area for exercising jurisdiction relating to activities of coastal territory, may no longer be claimed.**
- **No clear rule on the seabed area created by the submerged island and its TS (a "CD hole"). (A State under international law physically consists of the land and its subsoil. → the seabed area, including that of its TS, should belong to the coastal State, as an area assimilated to CS.)**

III. Adverse impacts of sea level rise on small islands and island States (cont'd)

<u>(2) Near total submergence of an island belonging to a State (</u>Where an island becomes nearly submerged to the extent that it is considered a "rock" under Art. 121 (3)):

- **TS and CZ remain, with adjustments in baselines.**
- **No EEZ may be claimed.**
- **No CS, except where it is established on the basis of CLCS recommendation.**

III. Adverse impacts of sea level rise on small islands and island States (cont'd)

<u>(3) Total submergence of *all* the islands constituting an island State</u>

Assuming that the government and population of the island State move out somewhere else to form a new State under merger arrangements with another State (successor State):

- **Successor State may claim no EEZ, nor CZ.**
- **Successor State may exercise no rights over CS except where it is established on the basis of CLCS recommendation.**
- **No clear rule on the seabed area ("CD hole") formed by submerged islands and their TS. (Same rule as discussed under (1) above should apply.)**

III. Adverse impacts of sea level rise on small islands and island States (cont'd)

(4) Near submergence of an island State

The case where *all* the remaining islands of an island State become nearly submerged to the extent that they are considered "rocks" under Art. 121 (3). Assuming that the State itself survives somewhere else:

- **The entire EEZ of the island State would be lost.**
- **Successor State may exercise no rights over CS, except where it is established on the basis of CLCS recommendation.**
- **Successor State may exercise sovereignty and jurisdiction over TS and CZ of the islands.**
- **No clear rule on the "CD hole" formed by submerged islands and their territorial sea. (Same rule as discussed under (1) above should apply.)**

9

VI. Need for new international legal measures to mitigate adverse impacts

・Several scholars have suggested new rules for avoiding or reducing some of the adverse effects :

– Fixing/freezing of the baselines as currently accepted; or

– Fixing/freezing of the outer limits derived from them.

⇒Baselines and maritime zones derived therefrom become permanently established, even after sea level rise causes islands partially or totally submerged.

・The new rules would harm no rights of other countries under existing law of the sea; thus should be generally acceptable.

10

VI. Need for new international legal measures to mitigate adverse impacts (cont'd)

Possible procedures for adopting the new rules:

- Formal amendment to UNCLOS
- Decisions of UNCLOS States Parties
- New agreement supplementary to UNCLOS

11

UNCLOS

Article 121
Regime of islands

1. An island is a naturally formed area of land, surrounded by water, which is above water at high tide.

2. Except as provided for in paragraph 3, the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf of an island are determined in accordance with the provisions of this Convention applicable to other land territory.

3. Rocks which cannot sustain human habitation or economic life of their own shall have no exclusive economic zone or continental shelf.

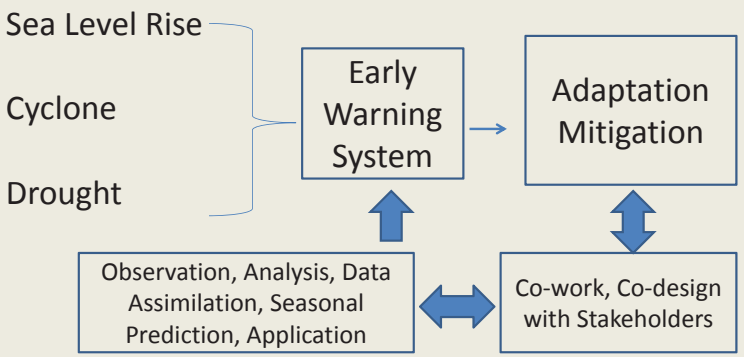
12

International Seminar
on Promotion of Sustainable Development
of Islands and their Surrounding Ocean Areas
August 20, 21 at Nippon Foundation

On Threats of the Evolving Climate in Small Island Developing States (SIDS)

Toshio Yamagata
Director, Application Lab of JAMSTEC
Special Fellow of OPRF

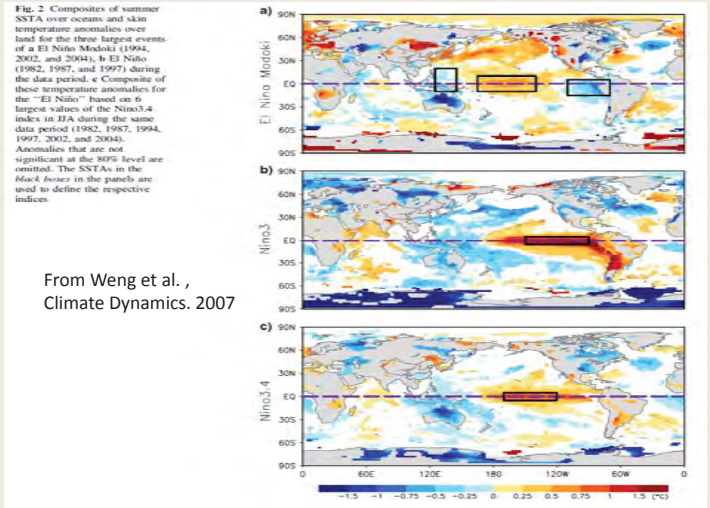
Major Threats Related to Climate Variations under the Pressure of Climate Change



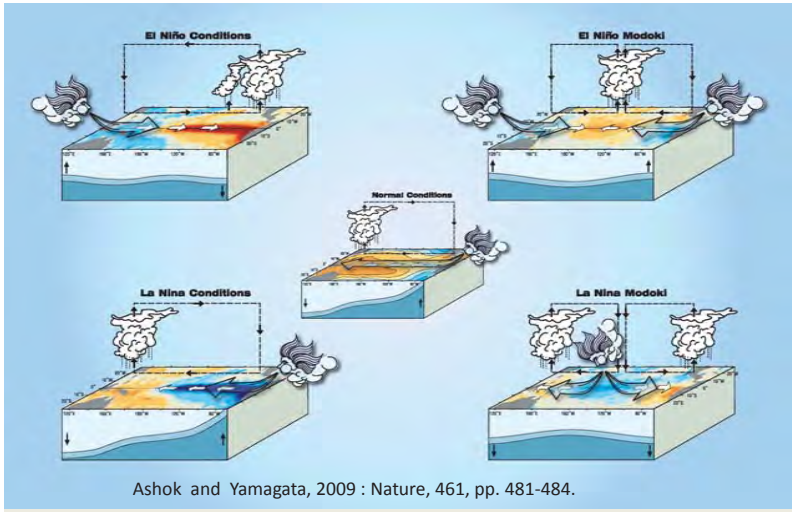
Our climate is evolving!

El Niño Modoki
(Pseudo El Niño)

In recent decades, the central Pacific warming, in contrast to the conventional El Niño, is more frequent with cool SST anomaly in both the eastern and the western Pacific.



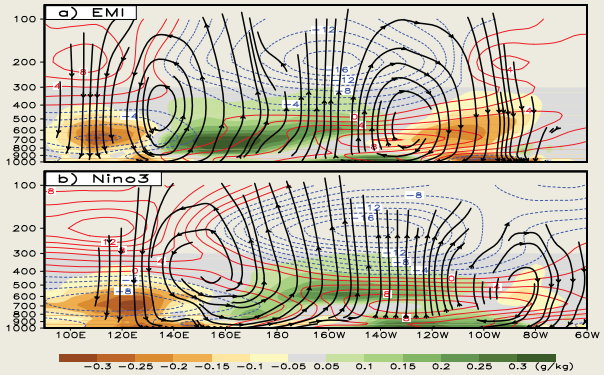
From Weng et al. ,
Climate Dynamics. 2007



Ashok and Yamagata, 2009 : Nature, 461, pp. 481-484.

The El Niño Modoki events, distinguished by a tripolar SSTA pattern in tropical Pacific. These are occurring with increased frequency since late 1970s, and are distinctly different from canonical ENSO in terms of evolution and impacts (Ashok et al., 2007). The El Niño Modoki, such as seen in 2004, is associated with anomalous twin Walker cells with common ascending limb in the anomalously warm central tropical Pacific resulting in impacts (Ashok et al., 2007, 2009; Weng et al, 2007, 2008; Taschetto et al., 2009) distinct from those of the canonical El Niño, such as that in 1997.

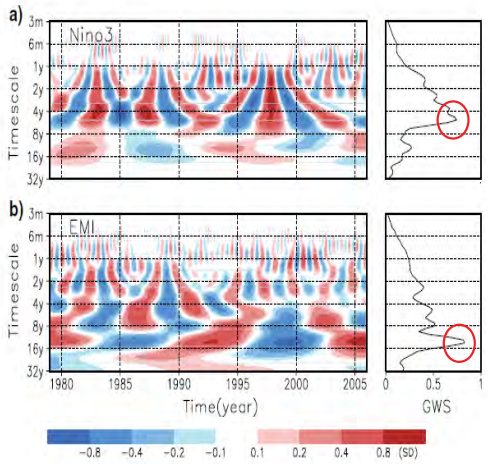
El Niño Modoki (Pseudo El Niño)



Anomalous Walker Circulation (10S -10N)
between 90E and 60W based on partial regression for EMI and Niño3.
The regressed specific humidity is shaded. The contours are for regressed velocity potential (unit: $10^5\ m^2s^{-1}$).

Modoki Signal is More Decadal

Fig. 5 Morlet wavelet real coefficients (*left panels*) and global wavelet spectra (*right*) of the normalized 3-month running mean time series in Fig. 4 for a Niño3 and b EMI



Threat of Sea Level Rise is due to Decadal El Niño Modoki

Behera
and Yamagata,
GRL, 37, 2010

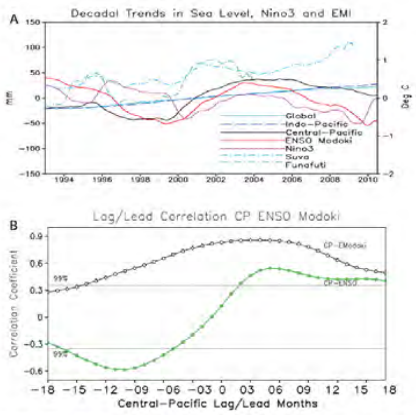


Figure 1. (a) Indices of global, Indo-Pacific and central Pacific sea level anomalies and ENSO Modoki Index (EMI) together with the sea level anomalies derived from tide-gauge stations of Suva (18:08S 178:26E) and Funafuti (08:32S 179:13E). A five-year running average is applied on all the time series. (b) Lead-lag correlation of central Pacific sea level index with EMI (open circle) and Nino3 (closed circle) indices for the period from July 1996 to June 2009. A five-month running mean is applied to all the time series before calculating the correlation coefficients.

Rainfall Anomaly
Associated with Sea Level, SST Anomalies

Contour:
rainfall anomaly

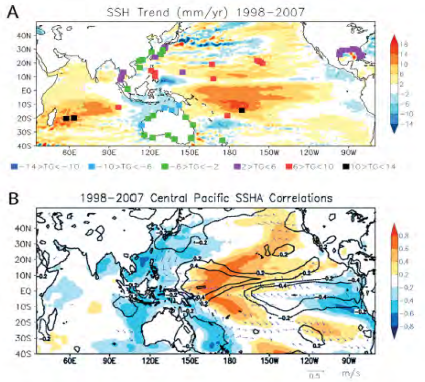
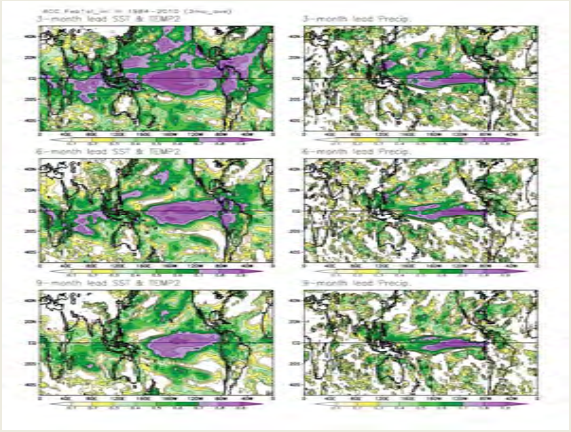


Figure 2. (a) The Indo-Pacific sea level trends for the period of 1998–2007. The squares denote the trends in sea level anomalies derived from the tide-gauge satiations (location names are given in Figure S1). Color codes for the range of trends are given at the bottom of the figure panel. (b) The central Pacific sea level correlation with anomalies of SST (shaded) and rainfall (contour) and its regression with surface wind anomalies for the decade of 1998–2007. Values below the 95% confidence level based on a 2-tailed t test are not shown.

Early Warning is Possible
by Use of a Seasonal Prediction System



Application Lab, JAMSTEC

ENSO character is changing;

ENSO Modoki is occurring more often in accord to climate evolution under global change pressure.

Drought, in addition to sea level rise, is becoming serious in SIDS.

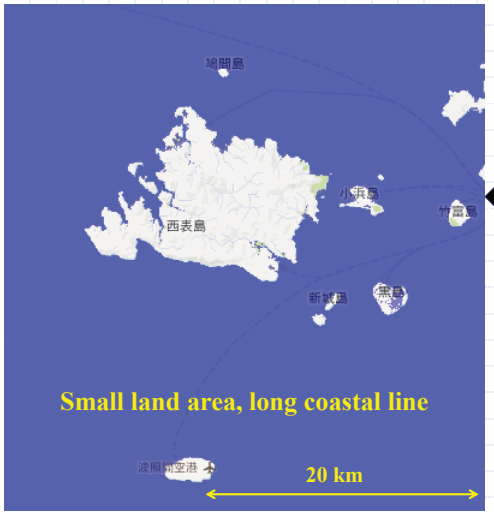
There is a need of an early warning system and suitable measures for adaptation and mitigation.

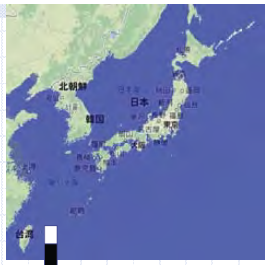
August 21, 2013

Dialogue with students
~Reductions of Local Grant~

Tomohiko Fukushima
University of Tokyo

Taketomi-Cho





Inhabited Island: 9

Population: 3889

Area: 333 km²

Coastal line: 381 km

Administrative Services of the coastal municipality

Because small islands settlements

Port maintenance
Infrastracture for daily life

Due to long coastal line

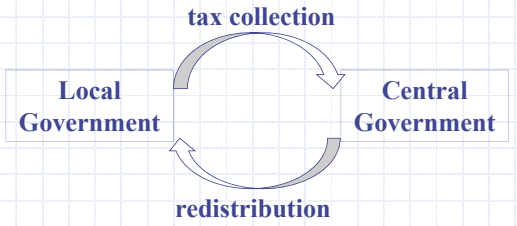
Clean up drifting buoy

For rich natural environment

Environmental conservation

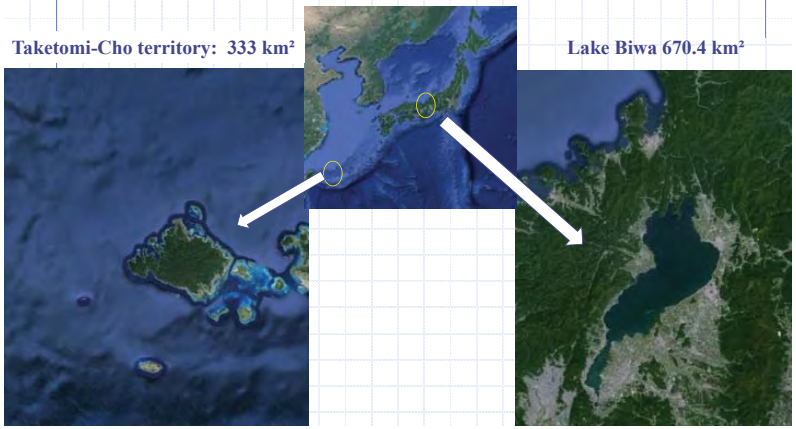
Local Grant

Local grant is a mechanism that to adjust the imbalances between local governments. Amount of grant is calculated on the basis of extend of land, population and industrial revenue etc.



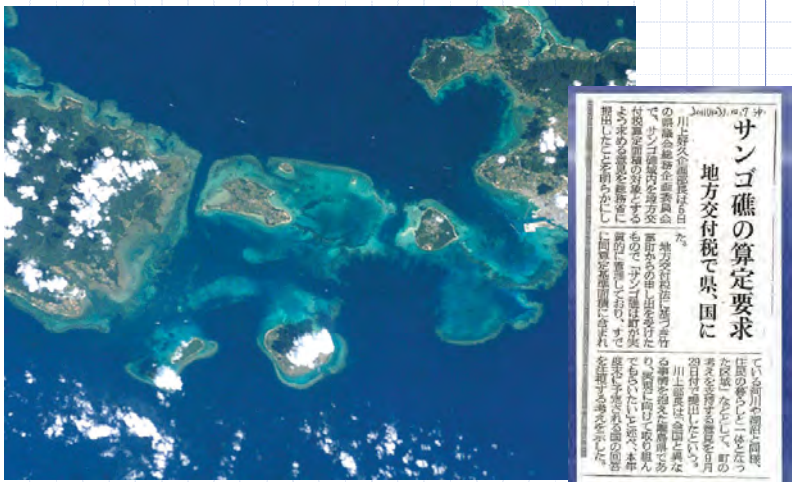
Unfair Legal Status ?
~ Coral sea and Lake ~

Taketomi-Cho territory: 333 km²



Lake Biwa 670.4 km²

Coral sea is place for life



サンゴ礁の算定要求
地方交付税で県、国に

Demonstration by local government

A symposium for the problem raised

Local governments face
the same problem participated.

Supported by NPO, think tank etc.

Stakeholders

Sympathizer
Local governments face the same problem

Public Diffuser
Local news paper

Original Idea Main Promoter
Representatives of Taketomi-cho

Theoretical Support
Private think-tanks and universities

Financial Support

Summary

- Problem of coastal areas are diverse and complex
- There are a lot of ways to solve those problem
- Whatever methods we apply to, it is indispensable to ask cooperation from various stakeholders.
- Typical Stakeholders are;

  promoter, performer (practical action), theological supporter, financial supporter, public diffuser, sympathizer

Thank you for your kind attention

Tomohiko Fukushima (Dr. of Science)
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UT OCEAN ALLIANCE

Okinotorishima

Okinotorishima

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Ocean Policy Research Foundation

1st International Seminar on Islands and Oceans

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