

**Vol. 29. no. 1**

**June 2017**

**ISSN 1015-3217**

## Editorial



Talofa lava! Bula from the PIMRIS team in Suva.

The first six months of 2017 has been very busy but went past quickly. The library at lower campus (PIMRIS) experienced an increase in the number of users this semester, doing research and needing study space. The PIMRIS-Taiwan 2015-16 Project successfully ended with the receipt of final orders of equipment in early February and this project has now closed with its signed financial report released by USP Finance in late May.

As you may be aware, the world-wide campaign to promote the UNFCCC's 23<sup>rd</sup> Session of the Conference of the Parties (COP23) organised by Fiji has been gaining momentum. Perhaps the most significant issue of interest for small island states at this event is the need to address our vulnerability to climate change especially with rising sea levels and frequent natural disasters. Although the United States' recent decision relating to the Paris Agreement has been discouraging, our fight for the future of our islands and the whole world must continue. Implementation is very important.

On the regional front, recent negotiations relating to the tuna fisheries and other marine/fisheries developments have been encouraging. These included the signing of a new deal between the Cook Islands and the European Union and the annual surveillance of our Exclusive Economic Zones (EEZ) in partnership with our developed neighbours. Other national efforts to upskill fisheries staff and develop local fisheries are progressive and some of these are highlighted in this issue.

All the best for the rest of the year and happy reading!

Susana Macanawai, *PIMRIS Coordinator*

### Contents

New faces, New places	2
Breakthrough discovery to control starfish	3
New shrimp species named after Pink Floyd	4
Mineral treasures in Cook Islands seas	5
Pacific Islands Head of Fisheries meeting	7
Pacific TAFE course on fisheries surveillance	9
News from around the region	10
New Additions	14
Conference & Workshop Notices	16



The container ship, Southern Phoenix in Suva (Fiji) harbour after it sank in early May 2017. (Photo: Fiji Village)

--Opinions expressed in articles included in the PIMRIS Newsletter do not necessarily represent those of any participants. --

## Directory

PIMRIS is a cooperative network of fisheries and marine resources libraries and information centres in the Pacific. Participants include national ministerial libraries and regional agencies listed below.

For additional information, please contact the PIMRIS coordination unit or the specific agency.

### Secretariat of the Pacific Regional Environment Programme (SPREP)

Miraneta Williams-Hazelman  
*Information Resource Centre Manager*

[MiranetaW@sprep.org](mailto:MiranetaW@sprep.org)  
[www.sprep.org](http://www.sprep.org)

### Secretariat of the Pacific Community (SPC) / Secrétariat général de la Communauté du Pacifique

Aymeric Desurmont  
*Fisheries Information Officer/Charge de l'information halieutique*

[AymericD@spc.int](mailto:AymericD@spc.int)

Samuela Nakalevu  
*Library Officer*  
[samuellan@spc.int](mailto:samuellan@spc.int)

### Pacific Islands Forum Fisheries Agency (FFA)

Eddie Marahare  
*Librarian*  
[eddie.marahare@ffa.int](mailto:eddie.marahare@ffa.int)  
[www.ffa.int](http://www.ffa.int)

### University of the South Pacific (USP) PIMRIS Coordination Unit

Susana Macanawai  
*PIMRIS Coordinator*  
Sese Cokomata (*Library Assistant*)  
Mere Vada (*PTJLA*)  
Paul Antonio (*Library Attendant*)

[pimris@usp.ac.fj](mailto:pimris@usp.ac.fj)  
[www.usp.ac.fj/library/pimris.htm](http://www.usp.ac.fj/library/pimris.htm)

## New Faces, New Places

### Welcome Daniel & Yawen!

**Daniel Ferrer**, the new Library Systems Manager for the USP's main library in Suva has started, after a search of more than 5 years. Daniel holds two masters degrees, one in Librarianship and another in Information



Daniel Ferrer

Science and has 25 years' experience as Head of Library Systems at Central Michigan University.



Yawen Kang

**Yawen Kang** is one of two new senior staff at USP's Laucala Library in Suva this semester. Yawen is Librarian, E-Resources and joins USP library from the United States where she worked for more than 15 years in both government and academic libraries.

**Paul Antonio** is the new Library Attendant at the PIMRIS (Lower Campus Library) this year. His new assignment is part of the Laucala Library's annual rotation programme. Paul has been with USP library for more than 10 years.



Paul Antonio

### Vinaka Liviana!



Liviana Tabalala

**Liviana Tabalala**, the USP Library's Librarian – Training was farewelled by the Laucala Library in late March. She leaves the library after more than 20 years of service and has relocated to the

USP's Pacific TAFE, as Head for the College of Humanities. We wish her all the best at Pacific TAFE.

## Breakthrough discovery that could decimate deadly starfish



A crown-of-thorns starfish. (Photo: University of Queensland news)

An American who fell in love with both the Great Barrier Reef and his wife via The University of Queensland has led a breakthrough discovery that could protect one of the Seven Natural Wonders.

Husband-and-wife Professor Bernard Degnan and Associate Professor Sandie Degnan, believe they, along with research colleagues, can use the powers of attraction to decimate one of the reef's fiercest enemies.

In the esteemed journal *Nature*, the international research team has revealed crown-of-thorns starfish gather en masse due to a release of pheromones – a scent they've decoded so the prickly pests can be lured to their capture.

“For an already struggling Great Barrier Reef, and indeed any reefs across the Indo-Pacific region, these starfish pose an enormous threat due to the ability of a single female to produce up to 120 million offspring in one spawning season,” Professor Bernard Degnan said.

“They feast on the coral and leave it bleached white and vulnerable to destruction in heavy storms.

“Millions of dollars have been spent over many years on a variety of ways to capture crown-of-thorns starfish, whether it be via diver collection, injections or robotics.

“Now we've found the genes the starfish use to communicate, we can begin fabricating environmentally safe baits that trick them into gathering in one place, making it easier to remove reproductively-primed animals.”

The Degnans worked alongside a team of UQ researchers, and long-standing colleagues at the Australian Institute of Marine Science (AIMS), the Okinawa Institute of Science and Technology (OIST) and University of the Sunshine Coast (USC).

The painstaking process of sequencing the crown-of-thorns genome and its pheromones was completed 30 years after Professor Degnan moved from his hometown of New York to Brisbane to study as one of UQ's first international exchange students.

A graduate in Marine Biology and Molecular Biology, Professor Degnan developed an early fascination with the biodiversity of Queensland's Great Barrier Reef in his formative years, and while at UQ's Heron Island Research Station he met his future wife.

“I guess there is a nice story there about the reef bringing us together and now we're working hard to develop novel ways to understand and preserve it,” Professor Bernard Degnan said.

“But beyond us, there's personal history with some of the other researchers, like Mike Hall at AIMS who is one of our oldest colleagues and who came up with the original genome concept.”

Research article available in full via the [Nature journal](#)

(More on: [UQ News](#))

## New shrimp species found off the Pacific Coast of Panama named after Pink Floyd

A new species of shrimp has been named after Pink Floyd thanks to a pact between prog rock-loving scientists.

The *synalpheus pinkfloydi* uses its large pink claw to create a noise so loud it can kill small fish.

The team behind the discovery vowed years ago if it ever found a new pink shrimp it would "honour" the rockers.

Sammy De Grave, head of research at Oxford University Museum of Natural History, said he has been a fan of the band since he was a teenager.



*Synalpheus pinkfloydi* is a new species of pistol or snapping shrimp. (Photo: Arthur Anker)

And it is not the first crustacean he's named after a rock legend, having already named a species of shrimp after Rolling Stones front man, Mick Jagger - *elephantis jaggerai*.

He said: "I have been listening to Floyd since *The Wall* was released in 1979, when I was 14 years old.

"The description of this new species of pistol shrimp was the perfect opportunity to finally give a nod to my favourite band.

"We are all Pink Floyd fans, and we always said if we would find a pink one, a new species of pink shrimp, we would name it after Pink Floyd."

The pistol, or snapping shrimp, has an ability to generate sonic energy by closing their enlarged claw at rapid speed.

It can reach 210 decibels - louder than your average rock concert - and results in one of the loudest sounds in the ocean.

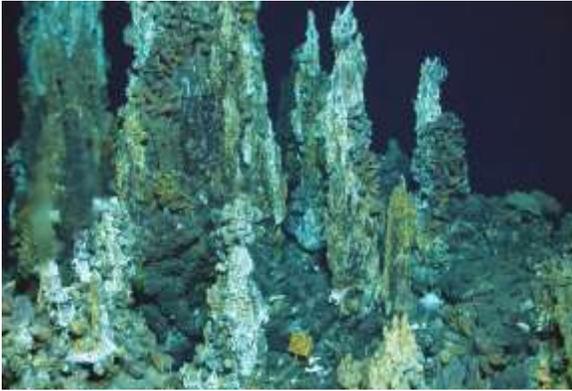


The description of the species, found off the Pacific coast of Panama, has been published in the *Zootaxa* journal and was co-authored with the Universidade Federal de Goiás in Brazil, and Seattle University in the US.

**Left:** Pink Floyd-themed artwork was created to mark the discovery.  
(Source: <http://www.bbc.com/news/uk-england-oxfordshire-39570005>)

(Source: [BBC news](#))

## Mineral treasures in Cook Islands seas



An underwater view. (Photo: SPC)

Deep below the sparkling blue waters around the Cook Islands lie deposits of minerals that could spark a new industry for the people of this small Pacific Island nation.

Marine scientific research and offshore mineral exploration in the Exclusive Economic Zone (EEZ) of several Pacific countries has found minerals of different types and varying quantities.

In the Cook Islands, abundant manganese nodules with high cobalt-content have been found in the EEZ.

As technology progresses and commercial extraction becomes viable, the country will be able to make the most of this hidden seabed treasure.

The nation is preparing to engage with the deep sea mineral industry and is one of the first countries in the world to pass laws to regulate activities in its EEZ.

The activities are part of the Deep Sea Minerals project that began in 2011, through a partnership between the European Union and the Geoscience Division (GSD) of the Pacific Community (SPC). GSD works to promote sustainable development in the Pacific.

Fifteen Pacific nations are taking part in the project, which is boosting technical knowledge, capacity and policy so countries can engage successfully with the deep sea minerals industry.

The project team visited the Cook Islands in 2012 to meet government officials and hold a national stakeholder consultation workshop about deep sea minerals.

Tom Marsters, Cook Islands former Minister for Minerals and Natural Resources, said there may be as much as 20 billion tons of nodules in the Cook Islands' EEZ, situated at great depths – 3000 metres to 6000 metres and far from the country's shoreline.

"The Cook Islands have been advised by Japanese scientists that these nodules have significant resources of cobalt, nickel and copper," Mr Marsters said.

"There is great global demand for these core metals," he said.

Japanese scientists have also found deposits of rare earth metal in the Pacific Basin, which may include the Cook Islands' deep water mudflats.

"If the Cook Islands manage these resources carefully, there may be thousands of years' worth of mineral resources in the EEZ," Mr Marsters said.

*(con't next page)*

On July 15 2016, the Cook Islands Investment Corporation signed a contract with the International Seabed Authority for exploration for polymetallic nodules in the Clarion-Clipperton Fracture Zone, a deal which was regarded as “being a significant milestone in the Cook Islands aspirations to realise the potential of the mineral resource within its EEZ.”

Mineral wealth could be a major economic boost for the Cook Islands, which relies on agriculture and tourism.

While technology to harvest the mineral nodules may still be some years away, putting in place the right legislation and decision-making processes will ensure that the people of the Cook Islands can make sustainable use of this treasure below the sea.

Highlights:

- Manganese, cobalt, nickel, copper and rare earth deposits have been found on the seabed in the Cook Islands’ Exclusive Economic Zone (EEZ)
- Technology to harvest some minerals is still being developed but it is vital to put legislation and processes in place to ensure a sustainable industry
- Cooks Islands is one of the first countries in the world to pass laws to regulate activities in its EEZ

Source: [SPC news](#)

---

## **About the SPC-EU Deep Sea Minerals Project**

The Deep Sea Minerals Project is collaboration between the Pacific Community (SPC) and the European Union (EU).

Initiated in 2011, the €4.4 million DSM Project is helping Pacific Island countries to improve the governance and management of their deep-sea minerals resources in accordance with international law, with particular attention to the protection of the marine environment and securing equitable financial arrangements for Pacific Island countries and their people.

The DSM Project has 15 member Pacific Island Countries: the Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor Leste, Tonga, Tuvalu and Vanuatu.

### **Project Goal and Objectives:**

A primary objective of the project is to support informed and careful governance of any deep sea mining activities in accordance with international law, with particular attention to the protection of the marine environment and securing equitable financial arrangements for Pacific Island countries and their people.

The Project is also working to encourage and support participatory decision-making in the governance and management of national deep sea minerals resources.

Despite the rapidly growing commercial interest in deep sea minerals many Pacific nations do not have the necessary legal or management systems needed to ensure the responsible management of these important natural resources.

More on: <http://dsm.gsd.spc.int/>

## Heads of Fisheries call to action on sustainable fisheries management



SPC's Director-General and Head of FAME Division during the meeting. (Photo: SPC)

The Pacific Community's Director-General, Dr Colin Tukuitonga officially opened the 10th SPC Heads of Fisheries meeting in New Caledonia with a call to strengthen the development and management of the Pacific region's fisheries resources.

In his opening address, to almost 90 delegates from 27 countries, Dr Tukuitonga said Pacific people are custodians of around one quarter of the world's ocean resources – including the world's biggest tuna fishery.

SPC is the main provider of scientific information for the management of tuna stocks in Western and Central Pacific Ocean (WCPO).

Sixty percent of global tuna is caught in the WCPO, equivalent to 2.5 million tonnes, valued at US\$5b creating over 22,000 jobs in the tuna industry.

"While more than 80% of the tuna catch comes from skipjack and yellowfin resources that our scientists estimate to be in good condition, more needs to be done to rebuild bigeye and albacore tuna to levels that can sustain healthy populations and profitable fisheries," Dr Tukuitonga said.

By 2030, it is estimated that 115,000 metric tons of fish will be needed to feed Pacific people and small pockets of effective coastal fisheries management will not be enough to maintain a sustainable level of stock.

"Ineffective coastal fisheries management is becoming a real threat to the sustainability of Pacific fisheries, as it is these fisheries that currently provide Pacific Islanders with most of their nutrition and employment in the fisheries sector".

The Pacific Community's (SPC) Fisheries, Aquaculture and Marine Ecosystems Division is tasked with providing technical assistance to SPC's 22 member countries and territories to help inform decisions on the management and development of their aquatic resources, and build the capacity needed to implement these decisions.

In 2016, Pacific Island Forum Leaders appointed SPC as the lead agency for coordinating regional efforts to improve coastal fisheries management.

The biennial Heads of Fisheries meeting provides strategic guidance to SPC's Coastal and Oceanic Fisheries programmes.

*(con't next page)*

High on the agenda this week is the development of a new monitoring and evaluation framework for fisheries to assess the impact of services provided by regional organisations and to assist Pacific Island countries and territories with reporting on their Sustainable Development Goals (SDG 14).

The discussions on regional indicators at the 10<sup>th</sup> Heads of Fisheries meeting will inform contributions to the Pacific Regional Preparatory Meeting towards the UN Oceans Conference being held this week in Suva.

The adequate collection and analysis of coastal fisheries data also remains an on-going challenge and the four-day meeting provides an important opportunity to discuss and approve a harmonized data collection framework for the development of evidence based management measures for coastal fish.

Another key issue for discussion is the implementation of *A new song for coastal fisheries – pathways to change: the Noumea strategy* to achieve sustainable inshore fisheries, underpinned by community-based approaches that provide food security, long-term economic, social and ecological benefits to Pacific Islands communities.

Over 100 participants representing fisheries and environment departments across the region developed the new song initiative in 2015.

The 10<sup>th</sup> Heads of Fisheries meeting, which is being hosted at SPC's Headquarters in Noumea, concluded on 17 March.



(Photo: Pacific Community (SPC))

More information on: [SPC HoF meetings](#)

## Upskilling of fisheries officers at USP's Pacific TAFE

Students undertaking Certificate IV in Fisheries Enforcement and Compliance through the University of the South Pacific's (USP) Pacific Technical and Further Education (Pacific TAFE) underwent a week-long competency based assessment from 13-17 February 2017 at USP's Laucala Campus in Suva.

The assessment was the culmination of nine (9) months of training that fifteen (15) students undertook as part of their programme. Out of this, eight (8) students were assessed last week because each individual needed to demonstrate competency in every performance criteria in order to gain the qualification.



Students during the competency assessment for the 'Fisheries Enforcement and Compliance' course.  
(Photo: USP)

The facilitators of the assessment were representatives from Pacific Islands Forum Fisheries Agency (FFA), the Australian Fisheries Management Authority (AFMA), New Zealand Ministry of Primary Industries and assistance from USP's School of Marine Studies.

The students who were on FFA full time scholarship included experienced Government employees who work for Ministry of Fisheries.

According to Ms Megan Streeter of FFA, in addition to promoting a learning culture that provides advantages for Pacific fisheries employees in the global work force, FFA is committed to facilitating cost-effective and standardised fisheries capacity development by working with USP.

Ms Streeter added that, "students benefit by receiving quality training/assessing under certification by academic and professional qualification to improve the professionalism of fisheries officers and advance their career aspects."

Mr Hasmukh Lal, Pacific TAFE Director said that the delivery of this programme is an indication of the close collaboration between the two regional organisations. "FFA, a technical regional fisheries agency and USP, a regional human resource development agency has partnered to upskill fisheries in enforcement and compliance," Mr Lal said.

The Director added that this programme directly fills skills gaps raised by Pacific Islands Forum leaders in Papua New Guinea in 2015, relating to economic return from fishing activities. The way forward was to build capacity of fisheries officers with quality assured training and this programme development was a response to that.

Mr Lal said that discussions are underway to explore development of other fisheries related programmes for the region by FFA and USP.

Students from this programme will be graduating in March this year.

(Reprinted from: USP News)

## News from around the Region

### Fiji Ministry of Fisheries conducts tilapia brood stock management training

Several tilapia farmers and aquaculture hatchery and farm development staff from Fiji's Ministry of Fisheries participated in a four-day training on broodstock management at the Naduruloulou Freshwater Research Station and the Pacific Community's (SPC) campus in Nabua in early March.

This training according to the Fiji Times online was funded by the European Union through the 'Increasing Agricultural Commodity Trade (IACT) project.

Facilitated by brood stock expert, and Director of Aquaculture development at the Asian Institute of Technology (AIT), Dr Ram Bhujel

and the Pacific Community's Dr Tim Pickering and Avinash Singh, the training aimed at improving participants' understanding about key biological and technical principles underpinning quality fingerling production of tilapia.

European Union Ambassador to the Pacific, Mr Andrew Jacobs said, the training would strengthen a healthy cycle of tilapia production that would help grow the market.

"The main objective of the brood stock management training is to increase resilience in the tilapia sector by informing participants on how to maintain high-quality tilapia, which produce top quality tilapia fry which has high survival rate," Mr Jacobs said.

Discussions during the training also resulted in recommendations that can address gaps identified in the aquaculture sector.

IACT project leader, Jonathan Landrey said that improving the quality of tilapia and increasing the capacity of tilapia production meant an affordable and healthy option for everyone.

"Although the assistance provided to the tilapia sector is seemingly indirect, the benefits will have lasting impacts. We hope the assistance provided to the tilapia sector in the form of training and supporting the establishment of private hatcheries will act as a catalyst to grow the market," Mr Landrey said.

This tilapia training attended by five (5) tilapia farmers and eighteen (18) aquaculture hatchery and farm development staff from the fisheries ministry is part of the Tropical Cyclone Winston recovery action, an initiative supported by the European Union focusing on strengthening trading activities of commercial enterprises within the agriculture and aquaculture industries.

In Fiji, there are about 303 active tilapia farmers and this number is expected to increase.

(Source: Fiji Times online)



Tilapia. (Photo: Terje Engoe - FIS)

## European Union purse seiners start fishing in the Cook Islands



Purse seine fishing. (Photo: PIReport.org)

One of the purse seine vessels involved in the European Union (EU) fisheries partnership agreement has begun fishing in the Cook Islands economic exclusive zone.

The Cook Islands Ministry of Marine Resources (MMR) confirmed that it had given licenses to two of the four purse seine vessels which are part of the Sustainable Fisheries Partnership Agreement (SFPA).

The fisheries agreement between the EU and the Cook Islands that allows the European fleet to fish in Cook Islands waters and catch up to 7000 tonnes per year of tuna and other annual migratory

species for the next four years, was finalised in mid-February by the European Parliament.

The MMR said in a statement that the plenary vote in the European Parliament to approve the agreement was the final formality under the European Commission processes for the SFPA.

The ministry appreciated the support of the European community and its commission, the statement added.

“The vote brings the four year fisheries agreement for principles for cooperation into effect.

“Earlier the European Parliamentary Committee for Fisheries approved the four-year fisheries protocol which specifies terms and conditions for fishing in Cook Islands waters.

“Currently, two purse seine vessels have been licensed by the ministry and one has recently begun fishing in the Cook Islands economic exclusive zone.”

According to the European Parliament, the agreement establishes that a maximum of four European ships will be allowed to fish, of which three will be Spanish and one French.

In exchange, the EU will pay the Cook Islands around \$565,250 in the first and second years, and \$513,863 in the third and fourth.

In addition, around \$565,250 will be paid per year to support the fishing policy of the archipelago, the European Parliament added.

The MMR said that the protocol was a combination of payments by the European commission and the ship owners and would total around \$7.78m.

“Some of these funds will be directed to the fisheries sector. The ministry will be undertaking renovations shortly to upgrade its fisheries surveillance centre,” the ministry said.

*(con't next page)*

“In addition, the ministry expects to be rolling out fuel subsidies for local fishers in the second quarter.”

MMR also confirmed a Cook Islands fisheries observer had been on board the vessel, which had started fishing since departing Ecuador last month.

All purse seine operations are filmed in real time and recordings are submitted to the MMR at the end of the fishing trip, to be analysed by experienced observers in Rarotonga

According to the ministry, they are recruiting some of the best observers from around the Pacific to take on this role.

“The analysis of this video footage is part of the Electronic Monitoring System (EMS) pilot project activity for OPAGAC (Organisation of Associated Producers of Large Tuna Freezers) vessels fishing in the Cook Islands.

Other collaborating partners include the International Seafood Sustainability, Satlink and Digital Observer Services.”

MMR is hoping the EMS will strengthen its capacity to monitor the activity of foreign purse seine vessels licensed to operate in the EEZ, and eventually all licensed local and foreign fishing fleets.

Additionally, it said it would enhance the collection and verification of scientific data and assist in the fight against IUU (illegal, unreported and unregulated) fishing activity, promoting better compliance with national and international obligations.

“The introduction of EMS technology compliments other control measures such as the region’s 100 per cent observer coverage for all purse seiners, on board inspections, and the regional satellite-based Vessel Monitoring System which tracks fishing vessels.”

The controversial Sustainable Fisheries Partnership between the EU and the Cook Islands which was signed by the Prime Minister and Marine Resources Minister, Henry Puna in October last year, was rejected by at least 4000 Cook Islanders who signed the anti-purse seining petition.

The petition, which called for a ban on future purse seine fishing licensing, was put through a parliamentary select committee headed by Finance Minister, Mark Brown.

Prime Minister Puna signed the deal following the release of the purse seine select committee’s report.

Meanwhile traditional leaders and local environmental group, Te Ipukarea Society, have launched a bid through the Cook Islands High Court to request a judicial review on the EU deal.

Crown Law had earlier requested that the application for a judicial review be struck out, but the request was declined by the High Court.

(Reprinted from: Cook Islands News)

## Ha'apai mabe pearl farms show excellent progress

Mabe pearl farmers of the island of Ha'apai, in Tonga completed a three-day training in early February 2017.

The workshop facilitated and organised by the Ministry of Fisheries involved teaching the pearl farmers how to efficiently manage their farms and maintain their oysters.

Attended by more than twenty (20) pearl farmers and community members, the training provided by the Aquaculture section of the Ministry of Fisheries in partnership with the Australian Centre for



Pearl farmers checking out the oysters during the training. (Photo: Ministry of Fisheries, Tonga)

International Agricultural Research (ACIAR) and researchers from the University of the Sunshine Coast.

Communities of Pangai, Felemea, 'Uiha and Uoleva benefitted from the workshops held on location.

Around twenty-two (22) oysters were seeded and are expected to yield more than seventy (70) mabe pearls in February 2018, as the first harvest for Ha'apai farmers.

During the course of the training, the Ministry of Fisheries staff also inspected the health of mabe pearls throughout the Ha'apai islands. From this inspection, the ministry staff found mabe pearl oysters to be exhibiting excellent growth and survival across all farms.

The exceptional results found from this visit indicated the good progress made by the Ha'apai pearl industry, a great sign of potential this industry could provide to the Ha'apai communities in terms of income and improved livelihood.

The Tonga Ministry of Fisheries acknowledges the strengthened partnership and support of the ACIAR and the University of the Sunshine Coast for the ministry and its pearl industry.



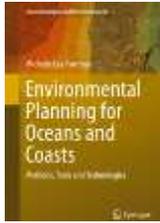
Participants during the training in Ha'apai. (Photo: Tonga Fisheries Ministry)



All eyes on details, during the training. (Photo: Tonga Fisheries Ministry)

(Source: Tonga Fisheries)

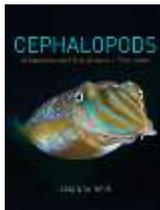
## New Additions to PIMRIS (Lower Campus) Library



**Environmental planning for oceans and coasts: methods, tools and technologies** / Portman, M. E. Switzerland: Springer International, c2016. ISBN: 9783319269696.

This book is about oceans and coasts from an environmental perspective - about what is needed for planning and management of these unique environments.

<http://www.springer.com/gp/book/9783319269696>



**Cephalopods of Australia and sub-Antarctic territories** / by Reid, A. Clayton South, VIC: CSIRO Publishing, c2016. ISBN: 9781486303939.

This is a comprehensive and illustrated guide covering 226 species of cephalopods, including biological and fisheries information. This book includes keys, species descriptions, full colour illustrations and distribution maps etc....

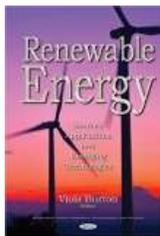
<http://www.publish.csiro.au/book/6526/>



**Science for human security and sustainable development in the Pacific and rim: 12<sup>th</sup> Pacific Science Inter-congress, 8-11 July** / by The University of the South Pacific. Suva, Fiji: USP, c2015. ISBN: 9789820109384.

This publication contains papers of presented during the 12<sup>th</sup> Pacific Science Inter-Congress held in Suva, Fiji in 2013.

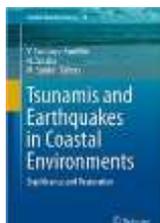
<http://www.pacificscience.org/congress2013.html>



**Renewable energy: sources, applications and emerging technologies** / edited by Viola Burton. New York, NY: Nova Science Publishers, c2016. ISBN: 9781634856515.

This book provides current research on the sources, applications and emerging technologies of renewable energy.

[https://www.novapublishers.com/catalog/product\\_info.php?products\\_id=59125&osCsid=9ff496fd1af1c113668f31bfc0bfd88](https://www.novapublishers.com/catalog/product_info.php?products_id=59125&osCsid=9ff496fd1af1c113668f31bfc0bfd88)



**Tsunamis and earthquakes in coastal environments: significance and restoration** / edited by V. Santiago-Fandino [et al.]. New York, NY: Springer, c2016. ISBN: 9783319285269.

This monograph is a compilation of a number of research studies presented in fourteen chapters dealing with the impact and restoration of coastal environments that have been affected by earthquakes and tsunamis.

<http://www.springer.com/cn/book/9783319285269>



**Global sustainable development report 2015: climate change and sustainable development** / The Energy and Resources Institute. New Delhi, India: Oxford Uni. Press, c2015. ISBN: 9780199459179.

This publication offers the most comprehensive study of climate change as it is related to sustainable development.

<https://global.oup.com/academic/product/global-sustainable-development-report-2015-climate-change-and-sustainable-development-9780199459179?cc=fj&lang=en&>



**Satellite-based applications on climate change** / J. Qu, A. Powell, M. V. Sivakumar (eds). London: Springer, c2013. ISBN: 9789400799882.

This book presents the latest advances in satellite-based remote sensing applications and research for monitoring the earth climate change – ranging from applications in climate and atmospheric science to hydrology, oceanography etc.

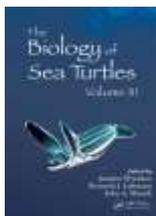
<http://www.springer.com/la/book/9789400758711>



**Marine and coastal ecosystem valuation, institutions, and policy in Southeast Asia** / Olewiler, N.[et al.]. New York, NY: Springer, c2016. ISBN: 9781439873076.

This book is a compendium of case studies illustrating how economic tools and techniques can be used to address a wide range of problems in the management and conservation of marine and coastal ecosystems in a developing country context.

<http://www.springer.com/in/book/9789811001390>



**The biology of sea turtles** / edited by J. Weineken (et a..]. Boca Raton, Fla.: CRC Press, c2013. ISBN: 9781486301942.

This book examines the biology of all sea turtles species, the behavior, distribution and ecology. It also describes new research techniques and syntheses spanning genetics to morphology....

<https://www.crcpress.com/The-Biology-of-Sea-Turtles-Volume-III/Wyneken-Lohmann->



**Ocean Yearbook 30** / edited by A. Chircop. Boston : Brill Nijhoff Publishers, c2016. : ISBN: 9789004321595.

Devoted to assessing the state of ocean and coastal governance, knowledge, and management, the *Ocean Yearbook* provides information in one convenient resource. As in previous editions, articles provide multidisciplinary expert perspectives on contemporary issues.

<http://www.brill.com/products/book/ocean-yearbook-30>



**SPC Fisheries Address book = Repertoire des peches** / prepared by the Division of Fisheries, SPC . Noumea, New Caledonia: SPC, c2017. ISBN: 9822035322.

This address book is the latest version of annual editions of this publication produced and published by the Pacific Community (SPC).

[http://www.spc.int/coastfish/doc/coastfish\\_docs/Address\\_book.pdf](http://www.spc.int/coastfish/doc/coastfish_docs/Address_book.pdf)



**Te matau a Māui : fish-hooks, fishing fisheries in New Zealand** / Paulin, C. & Fenwick, Honolulu, HI: University of Hawaii Press, c2016. ISBN: 978047332869.

This book describes traditional Māori fish-hooks and fishing, the development of commercial fisheries and the impact on conservation and management of New Zealand's fisheries resources since European settlement and the Treaty of Waitangi.

<http://www.uhpress.hawaii.edu/p-9565-9780824866181.aspx>

## Conferences, Workshops & Events

- 24 - 27 Jul **Asian-Pacific Aquaculture 2017, 'Transforming for market needs'**, Putra World Trade Centre, Kuala Lumpur, Malaysia. <https://www.was.org/meetings/pdf/APA2017RegBro.pdf>
- 13 – 14 Sept **Pacific Tuna Forum 2017 – 6<sup>th</sup> Regional Tuna Industry and Trade Conference**, *'Fostering greater social, economic, and financial benefits through sustainable tuna management and development'*. The Stanley Hotel, Port Moresby, Papua New Guinea. <http://www.spc.int/events/pacific-tuna-forum-2017/>
- 2 - 4 Oct 8<sup>th</sup> International Conference on Fisheries & Aquaculture, **'New era in Fisheries & Aquaculture'**. <http://fisheries.conferenceseries.com/>
- 26 – 28 Oct **International Conference Aquaculture Indonesia 2017, 'Feeding the work and making prosperity through sustainable aquaculture'**. <http://fisheries.conferenceseries.com/>
- 6 – 17 Nov **UNFCCC COP23: 23 Session of the Conference of the Parties to the UN Convention on Climate Change**. Organised by Fiji, hosted at the headquarters of the UNFCCC Secretariat in Bonn, Germany. <http://sdg.iisd.org/events/unfccc-cop-23/>
- 27 – 28 Nov **8<sup>th</sup> International Conference on Food Safety, Quality & Policy**, Dubai, United Arab Emirates (UAE). <http://foodsafety-hygiene.conferenceseries.com/middleeast/>