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Editorial



Bula & Season's Greetings!

It is the end of another remarkable, eventful and successful journey. There have been significant milestones and achievements this year despite internal challenges and international chaos. The quest for better or the best in the world dominated the mainstream media, yet priorities in our region apart from the controversies of politics, remained at getting a fair slice of the tuna fisheries pie, the monitoring of illegal fishing and calls for more action on climate change. Many deals and agreements have been made but their impact on improving everyday life is what we all wish for.

At PIMRIS Coordination Unit, while implementing our annual core activities and planned targets, we also contributed immensely to the Information Research Skills (IRS) programme for the USP library. The IRS is a compulsory requirement for all new USP postgraduate students in 2018 and one of my rostered duties included travel to the Solomon Islands in September to carry out training for USP staff and students. The experience was rewarding and unforgettable.

Additionally, we carried out two mini-surveys (User Distribution & Library Impact) and the response was amazing. Both surveys obtained invaluable data and information for the improvement of our services. Our stock-take undertaken from November to December capped-off another outstanding year and we acknowledge the support of all involved including USP library colleagues, PIMRIS partners and our clients. Vinaka vakalevu!

Have an enjoyable Christmas & a rewarding and healthy New Year!

Susana Macanawai, *PIMRIS Coordinator*

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

Directory

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New Faces, New Places

Farewell & Best Wishes!

Ataban Kapule, the longest serving PIMRIS member from the Ministry of Fisheries and Marine Resources (MFMR) in the Solomon Islands has retired after many years of service. Vinaka vakalevu to Ataban for his contributions and "Happy Retirement!"



Ataban Kapule



Mwaba Raurenti

Mwaba Raurenti, the Library Officer at the Kiribati Fisheries library and member of the PIMRIS network, resigned and left the ministry this year. We thank Mwaba for her contributions and wish her all the best in the future. We will miss her jokes!

Lavenita Frances Gock, a Library Attendant at the USP main library (Laucala) for 5 years, resigned to take up the Assistant Librarian position at the Ministry of Fisheries in Suva. She was farewelled in early December. Congratulations!



Lavenita Gock



Mere Vada

Mere Vada, the PIMRIS Part-Time Junior Library Assistant (PTJLA) has been appointed full-time Junior Library Assistant to be based at the USP Laucala main library. Mere relocated to the main library in early November. Congratulations Mere!

Pacific agencies and governments unite to fight Illegal, Unregulated and Unreported (IUU) fishing



FFA Deputy Director-General and NZ Foreign Affairs Under-Secretary signing the agreement. (Image: FFA)

The Pacific Islands region stepped up their fight against illegal, unreported and unregulated (IUU) fishing this year, with the receipt of a financial grant from the New Zealand government and improved joint annual surveillance and monitoring activities.

In June 29, 2018 in Auckland, the Pacific Islands Forum Fisheries Agency (FFA) and the New Zealand Ministry of Foreign Affairs signed an agreement worth NZD 4.9 million to assist the FFA with a

a project that will enhance tuna fisheries management in the Pacific.

The Deputy Director-General of the FFA Mathew Hooper signed the agreement and accepted the funding support on behalf of the organisation. “FFA members work collectively to effectively manage their Pacific tuna fisheries and this project will support members to access high value export markets while tackling illegal, unregulated and unreported fishing,” said Mr Hooper.

The FFA project will establish and enhance catch documentation schemes for FFA members over the next five years. This ensures all members maintain market access for their fishery products by improving traceability along supply chains, implement electronic reporting and develop technological solutions to strengthen national capacity.

The agreement follows almost two years of preparation and builds on work being undertaken to strengthen port state measures in the Pacific and complementing the existing comprehensive regional monitoring, control and surveillance framework implemented by the FFA members.

Earlier this year the Cook Islands Prime Minister, Henry Puna who chaired the 15th Session of the Forum Fisheries Agency (FFA) Ministerial Meeting in Rarotonga, Cook Islands emphasised that a key priority for the FFA was a strengthened, collective approach to combating the continued threat of illegal, unregulated and unreported fishing in our region.

A similar call was made by the Marshall Islands president Hilda Heine in October while closing the Western and Central Pacific Fisheries Commission’s Technical and Compliance Committee meeting in Majuro, for Pacific nations to agree to abolish illegal, unreported and unregulated (IUU) fishing by 2023.

President Heine further stated, “IUU has devastating consequences. It is organized crime that affects socio-economic growth and future generations....A five-year target to eliminate IUU fishing by 2023 is bold but the stakes are too high not to be audacious in the goals we set. If we are serious about combating IUU, we need a tougher mindset.”

This call and initiative by the President of the Marshall Islands was supported and welcomed by the Director General of the FFA (Dr. Manu Tupou-Roosen) and the former CEO of the Parties to the Nauru Agreement (PNA), Dr. Transform Aqorau.

One of the ongoing effective and costly measures by the FFA to counter IUU is its annual collaborative monitoring and surveillance operations throughout the region.

In October this year (1-12/9/18), the annual operation to combat illegal fishing (Operation Kurukuru) covered around 21.2 million square kilometres and involved eleven (11) FFA members (Cook Is., Fiji, FSM, Kiribati, Nauru, Palau, RMI, Samoa, Solomon Is., Tonga and Tuvalu) and QUAD partners (Australia, France, New Zealand and USA).



HMNZS Wellington (L) gathering evidence of illegal fishing. (Image: NZDF)

During this year's 'Operation Kurukuru' (OPKK18), history was created when Senior Constable Sepola Tataa Niulakita from Tuvalu, became the first ever female 'Chief of Staff' to lead the joint fisheries and maritime operation.

"It is a great honour to take up this role as a Chief of Staff for Kurukuru 2018 and a good opportunity to experience the role of Chief of Staff (COS) at the FFA Regional Fisheries Surveillance Centre (RFSC) in Honiara," said Constable Niulakita.

Operation Kurukuru sighted 181 vessels with 116 boardings at sea and in port, covering up to 52 hours of aerial surveillance.

The operation also reported several infringements such as unmarked gear and faded vessel identification number in Cook Islands and a vessel misreporting the disposal of bycatch in Palau. Two Fishing Aggregating Devices (FADs) which were found in Palau were also destroyed as they were in breach of the Palau National Marine Sanctuary Act.

There were no illegal fishing boats detected this year, re-affirming the effectiveness of these operations in curbing illegal fishing activities.



Outgoing FFA Director-General, James Movick congratulated Senior Constable Niulakita on behalf of FFA and the OPKK18 team on an outstanding job and her contribution to the success of the operation.

Senior Constable Niulakita thanked all involved for their support especially the two hardworking Operations Coordinators, Phil Rowe and JJ Williams.

Left: Senior Constable Niulakita with staff at the FFA HQs in Honiara during OPKK18. (Image: FFA)

(Adapted from: FFA News, www.radionz.co.nz; <https://www.ffa.int/node/2083>
<http://marshallislandsjournal.com/?p=6265>)

[END]

Palau bans sunscreen products to protect reefs

The Pacific Island nation of Palau is set to become the first country to impose a widespread ban on sunscreen in an effort to protect its vulnerable coral reefs.

According to a BBC report, the government of Palau has signed a law that restricts the sale and use of sunscreen and skincare products that contain a list of ten different chemicals.

The ban comes into force in 2020 when Palau's Responsible Tourism Education Act of 2018 takes effect.



Rock islands in Palau, a UNESCO World Heritage Site.
(Image: iStock).

From 1 January 2020 anyone found importing or selling sunscreen containing any of the banned chemicals faces \$1,000 fine and travelers bringing banned sunscreen into the country will have them confiscated.

A spokesman for the President of Palau stated that Palau's dive sites typically hosts four boats an hour packed with tourists, leading to concerns that a build-up of chemicals could see the reefs reaching tipping point.

"On any given day, that equates to gallons of sunscreen going into the ocean in Palau's dive spots snorkeling places," he said.

The Act prohibits the use of environmental pollutants that threaten juvenile stages of many wildlife species, including corals, fish and microalgae.

For many years, scientists have been raising concerns about the impacts of sunscreen products on marine life and were particularly worried over two ingredients, oxybenzone and octinoxate.

The two ingredients in sunscreen products offer the skin protection from burns and potentially cancer by absorbing harmful ultraviolet radiation from the sun.

Research published in 2015 showed that the oxybenzone could stunt the growth of baby corals and was toxic to several different coral species as tested in laboratories.

A report on the Ben Gurion University (BGU) website stated that research conducted by the BGU's Professor Ariel Kushmaro indicated that oxybenzone coming from swimmers' skin, municipal sewage discharge and coastal septic systems pollutes coral reefs and caused gross morphological deformities, DNA damage and endocrine disruption which causes corals to close up and die.

The banned substances contain sun protection factor (SPF) chemicals used in sunscreen lotions or fragrances that absorb ultra-violet sunlight and includes octocrylene, 4-methylbenzylidene camphor and parabens in addition to oxybenzone and octinoxate..



Palau has an impressive 400+ hard coral and 300+ soft coral species. (Image: Kecki Stender – oceansociety.org)

The Palau ban follows a similar move by the US state of Hawaii which passed a law earlier this year to ban the sale of sunscreens that contain oxybenzone and octinoxate. The two substances interfere with hormones of corals (endocrine disruptors) and cause them to bleach.

Several other regions have imposed bans, including the island of Bonaire (island in the Leeward Antilles in the Caribbean Sea), and Mexico which banned sunscreens containing the two harmful chemicals in its nature reserves.

It is likely, many other countries will follow suit and replicate the Palau ban although many researchers see the sunscreen impact of a lesser threat than climate change, ocean acidification and algal blooms.

However, as the planet continues to warm, the use of sunscreen will likely increase and coral reefs will be at greater risk of bleaching.

It has been estimated that around 6-14,000 tonnes of sunscreen wash off people and go into the reef areas every year.

Several researchers and scientists have suggested alternatives to sunscreen containing the banned chemicals. These include wearing clothing with built-in sun protection and using mineral-based sunscreen with titanium oxide (TiO₂) and zinc oxide which have yet to be proven harmful.

As expected, many larger corporations are against the ban on sunscreen products including Johnson & Johnson and L'Oreal, saying that the evidence of a detrimental impact on coral is not strong enough.

But many in the industry have already taken positive steps and have come out with what they are calling "Hawaii compliant sunscreen".

It has also been reported that a group of manufacturers have formed what they call the Safe Sunscreen Council and have welcomed the move.

The tiny Pacific island nation of Palau is regarded as one of the world's best diving destinations and has long been a pioneer in marine protection.

They introduced the world's first shark sanctuary in 2009, a move that has been widely adopted.

(Adapted from: bbc.com; time.com; news.com.au; oceansociety.org)

[END]

PIMRIS-Taiwan Project Equipment for Solomon Islands and Kiribati Fisheries delivered

The PIMRIS-Taiwan Project equipment for Kiribati and Solomon Islands fisheries libraries have finally reached their intended destination after many months of email communication between PIMRIS and national fisheries contacts.

In early September, the PIMRIS Coordinator handed over the DELL laptop with bag and the Canon LiDE flat scanner to the Solomon Islands fisheries senior officials at its headquarters in Honiara. The PIMRIS Coordinator was on a one-week trip to conduct Information Research Skills (IRS) training for the USP's Solomon Is. campus students and staff.



Solomon Islands MFMR officials receiving the PIMRIS-Taiwan Project equipment. (Image: PIMRIS)

Although the long serving PIMRIS contact for Solomon Islands fisheries (Mr Ataban Kapule) has retired and his replacement yet to be recruited, Mr Francis Pituvaka (Communications Officer) has been in contact with the coordination unit and made arrangements for the handing over of the equipment. Senior officials present acknowledged the ongoing partnership between PIMRIS and Solomon Islands MFMR library and received the equipment on behalf of the Director and the ministry. The PIMRIS Coordinator thanked Mr Pituvaka for assisting with all arrangements and also acknowledged the contributions by its former long serving local contact, Mr Kapule.

One month later, PIMRIS was grateful to have Ms Ela Qica, the Senior Librarian-Customer Services for the USP library in Laucala Campus, Suva hand-deliver a similar set of equipment for the Kiribati Fisheries Library.

The DELL laptop, Canon LiDE flatbed scanner and laptop bag for the Kiribati Fisheries Library was hand delivered to Frangela Tooto who received them on behalf of the Ministry of Fisheries & Marine Resource Development (MFMRD) Library.

During the year the PIMRIS coordination unit was informed that Ms Mwaba Raurenti who has been the PIMRIS contact and library officer for the Kiribati MFMRD for more than 8 years has resigned from the ministry. Ms Taati Eria a senior fisheries officer within the MFMRD is our temporary contact until Mwaba's full-time replacement is recruited. She confirmed receipt of the equipment when she returned to Tarawa a week later.

PIMRIS acknowledges the kind assistance of Ela Qica in delivering the equipment and our temporary contacts within ministries in the region who are keeping us informed and updated on the progress of activities and recruitment of official staff locally.

We have a few more sets to be handed-over and are reminding partners who have yet to collect their equipment to do so within the next six months. PIMRIS looks forward to receiving more documents for its e-repositories and other partner submissions in 2019.


[END]

USP DLIS students complete work attachment at PIMRIS-Lower Campus Library



DLIS students (middle) with PIMRIS staff, Caroline (L) and Susana (R). (Image: PIMRIS)

In mid-November 2018, two Diploma in Library/Information Studies (DLIS) students who also worked as Part-Time Junior Library Assistants (PTJLA) at the USP main library on Laucala Campus, joined staff at PIMRIS-Lower Campus Library for two and half weeks of work experience.

Amalaini Naivaluvou, who has been a PTJLA for 7 years and Jillian Serevi for 2 years, had only this work attachment left, to complete and graduate with the DLIS at USP. Both shared their experiences as follows: 

On 20 November, 2018 I began my work attachment at the Pacific Islands Marine Resources Information System (PIMRIS) library which is located at USP Laucala - Lower Campus. This work attachment was a pre-requisite for the completion of the Diploma in Library and Information Studies program offered by USP's Pacific TAFE. The program consists of 8 units with this work attachment being the last unit.



Jillian Serevi

The first few days at the lower campus library was on familiarisation with procedures and policies which was very thorough. Over twelve days, my colleague Amalaini & I were engaged in activities which corresponded with the work attachment learning outcomes.

One of the things I noticed in the first few days was how few of the procedures being carried out at lower campus differed from the main campus library. One of the examples was how assistance given to customers were manually recorded by staff in a book, whereas at the main campus library, staff normally filled in details on an online system. I found this quite appropriate for this setting since only one staff who served at the desk, was required to fulfill various duties at the same time. At the main library however, there was a separate station for assisting customers (Information Desk) and another for issuing items (Issue Desk). Manually filling in details relating to the information query (or request) enabled staff to multi-task and also avoid long queues at the service desk.

Moreover, the work attachment required students to be able to gain knowledge and skills in different types of libraries and settings and therefore we were expected to learn more than what we have experienced before.

Some of the work carried out whilst at the lower campus library included selecting and ordering new materials, data entry using the ASFA system, organizing displays, preparing current awareness bulletins, research and database searching and answering reference queries by telephone, in person and online.

We were also shown how catalogue records are edited on Spydus (library management system), procedures in selecting and ordering new materials, how Greenstone (a digital library

software) records are added and processed, the ASFA data entry system and how to use the ASFA thesaurus (which is ASFA's version of the Sears List of Subject Headings), as well as learning to do a stock-take by assisting PIMRIS-Lower Campus Library with theirs.

Although each activity had its own set of challenges, these were overcome through perseverance, determination and with the helpful guide of the PIMRIS Coordinator and staff members Francis and Caroline.

I really enjoyed the time I spent at the lower campus library. It was a great experience for me and having to learn from one of the best in the field was a bonus. I am also grateful to the management at USP Library for presenting an opportunity such as this which will enable me to complete the programme and graduate with my Diploma in Library and Information Studies.



Amalaini Naivaluvou

It was a privilege for me to be one of the first Diploma in Library and Information Studies (DLIS) students to do the industrial attachment required to complete the DLIS programme this year. My work attachment started on 20 November and on our first day at Lower Campus Library, the PIMRIS Coordinator, Susana Macanawai briefed us about PIMRIS collections, databases, services, procedures and policies.

During the week, we learned to answer reference queries by telephone, email and in person. For example, an academic requested for an article

on Yadua Island but the only copy available was located at the Pacific Collection of the USP main library. A colleague requested Pacific Collection staff via phone for the article to be scanned and sent via email to our supervisor. I was sent to update the requestor that we were expecting the scanned copy before close of business. However, this request was met within two hours and the requestor not only acknowledged its receipt by email, but also how fast the service was.

Other tasks carried out included bibliographical searches in print and electronic formats. We were given a topic and were asked to locate relevant books to answer an assignment question on the topic using the catalogue (Spydus), journal articles from different databases (eg. ProQuest, JSTOR) and reports from the SPREP website. This exercise ended with the creation of a bibliography for all sources located using the APA referencing style.

We also discussed the PIMRIS or Lower Campus Library manual which covers both PIMRIS network and Lower Campus Library processes etc. At this library, users who wish to use library computers are required to sign the PC log-in book at the service desk before and after using computers, which is different from the practice at the main library.

We learned about the Aquatic Sciences and Fisheries Abstracts (ASFA) database and the data entry system used by PIMRIS as an international partner and member of the FAO ASFA Board.

At Lower Campus Library all suggestions for book orders are processed using the pink card or via email. We were shown the websites of some publishers (eg. Routledge, Academic) and how to search them for new publications or to double check details of titles suggested. We also learned about library displays and prepared a newsletter article based on our work experience.

As PIMRIS was carrying out its stock-take at this time of the year, it was my first opportunity to learn more about it. Materials on the shelves were checked against a printed list and we found some books that were not listed, listed but not on shelves and call number labels with errors.

To conclude, I thank my supervisor Susana and colleagues for their support during this work experience.

(Articles by Amalaini Naivaluvou & Jillian Serevi. Images by PIMRIS)

News from around the region

New sea level monitoring station boosts Tonga's resilience



Officials at the commissioning of the sea-level station in Nuku'alofa, Tonga. (Image: SPC)

A new Pacific Sea Level and Geodetic Monitoring station which will provide high quality sea level, climate, and positioning information to support better coastal planning and preparedness was officially commissioned by the Prime Minister of the Kingdom of Tonga, Honourable 'Akilisi Pohiva at Tonga's Vuna Wharf.

"Resilience in the face of a changing climate is a consistent theme and a declared priority for all Pacific Islands nations," said the Honourable Prime Minister.

"This station is a concrete example of Tonga's commitment to Pacific Resilience. I am confident that the data it captures will help the Tongan people be better prepared the future."

The new station was financed by the Australian Government under the Climate and Ocean Support Program in the Pacific, and its installation was managed by the Australian Bureau of Meteorology and the Pacific Community (SPC). It is one of 14 such stations in the Pacific Sea Level Monitoring network and replaces the existing project station installed on Queen Salote Wharf in 1993.

Speaking at the commissioning event, Australian High Commissioner Andrew Ford said, "Australia is very pleased to provide this kind of practical assistance in Tonga. An understanding of the tides is important for local shipping, tourism, disaster preparedness, rural livelihoods, and a whole range of other activities. We're also proud of Australia's long term investment in sea level monitoring across the Pacific and the role the tide gauges play in helping us all understand the impacts of climate change."

Installed in June of this year, this station is the newest and most technologically advanced in the network. It features the traditional acoustic sensor used to monitor sea level around the world, as well as two radar sensors and a pressure sensor to simultaneously measure changes in water level. It includes an in-built Automatic Weather Station, measuring barometric pressure, air temperature, wind speed and direction and water temperature and sends the data every minute via satellite communications so it can be viewed in real time online and via direct link to the Fua'amotu Weather Forecasting Center.



Sea level monitoring station 1. (Image:SPC)

(Reprinted from [SPC website](#))

Savusavu tilapia fish farmers gear up for increased production

Fish farmers in the Savusavu Tilapia Farmers Cluster took receipt today of gear and equipment used for breeding and nursing baby fish. The equipment will help support new fish stocks as they are introduced into ponds and help ensure they are able to grow to harvest size.

On hand to present Cluster Leader Mr. Graeme Hynes with the fish breeding equipment, which included brood stock nets, fish harvesting nets and gear for handling, counting and size-grading fish fingerlings, was Fisheries Technical Officer (Brackish Aquaculture) Mr Anand Prasad and District Officer Tukavesi Mr. Samuela Saumatua.



Savusavu Tilapia Farmers cluster (Fiji) receiving equipment from the Pacific Community & Fiji Fisheries officials.
(Image: SPC)

“The focus of Government fish-breeding is assisting new fish farmers to get established, and food-security for subsistence farmers” said Mr. Prasad.

“We expect those who turn fish farming into a business to become self-reliant. We have been working with the Aquaculture Section of SPC to train advanced farmers to do their own fish breeding, and take the pressure off government hatcheries which face a big demand to supply Fiji’s tilapia farmers with enough fish fingerlings”.

For several months the Savusavu Tilapia Cluster members have received training from SPC and Ministry of Fisheries in the basics of breeding and rearing tilapia fish in nursery ponds, and handling them properly for distribution.

With the items of equipment handed over today, they can scale-up their fish breeding activities, and get better control of the level of income they can expect from their fish ponds each year.

“Supply of baby fish for pond stocking has been the main thing holding us back in our fish farm businesses” said Eliko Gonelevu and Tekope Toka of Savudrodoro village near Savusavu. “Being able to breed our own fish here in the Savusavu district is a big step forward for us”.

The equipment was provided by Government of New Zealand through the Pacific Sustainable Aquaculture project administered regionally by the Pacific Community SPC, and implemented in Fiji jointly with the Ministry of Fisheries.

The Savusavu tilapia cluster has a total farming area of 12,000m² and based on the Pacific Community economic research, the farms are only producing 15% of their full capacity because of factors like short supply of fish fingerlings.

Read more: [Savusavu Tilapia Cluster equipment](#)

(Partly reprinted from the SPC website)

Fiji Fisheries spawn endangered giant clam species



Fiji Fisheries staff carrying a 'Tevoro' clam on Makogai Island in early August. (Image: Fiji MoF).

In August this year, the Fiji Ministry of Fisheries transferred one of the three 'Tevoro' clams that were spawned in tanks for more than a year on Makogai Island, to the ocean. The three giant clams, originally found in Namuka-i-Lau, were transferred to the Ministry of Fisheries' mariculture site on Makogai Island for conservation purposes.

According to the Acting Fisheries Principal Research Officer, Saras Sharma, the 'Tevoro' species which is considered the largest clam species discovered, was re-introduced to Fiji from Australia in 2000 as part of a joint

Australian-Fijian project to breed these massive creatures in captivity.

Clams or 'vasua' is a delicacy in Fiji. In some places where it once was in abundance, some species of clam are slowly becoming extinct.

Ms Sharma further stated that the 'tevoru' species became extinct in Fiji due to overharvesting for consumption and for shell trade.

Furthermore, the ministry spends an estimated FJD 20,000 for the spawning cycle which takes around seven (7) months. The clams are then transferred to cages and taken out to sea or distributed to resorts for conservation purposes and to further enhance eco-tourism.

The marine biologists in selected resorts have been trained to look after the clams by cleaning and feeding them before they are given to the communities around the area. Tavarua Island Resort and Mana Island Resort are two of several resorts working in partnership with the Ministry of Fisheries on this programme.

The Fiji Ministry of Fisheries' mariculture site on Makogai Island was developed in 2014 as a Marine Protected Area (MPA), catering for the spawning and breeding of giant clams.

The clam rehabilitation programme on Makogai and Wakaya Islands started soon after Tropical Cyclone Winston in 2016, which devastated both islands and other parts of the Fiji group.



Fiji Fisheries staff with one of the 'Tevoro' clams off Makogai Island this year. (Image: Fiji Sun)

(Adapted from: Fiji Times, Fiji Sun)

New species of Nautilus discovered in Fiji

A new species of Nautilus was discovered in Savusavu, Fiji in July this year by marine scientists from the United States of America.

The new find has been named, Nautilus Vitiensis. Marine Biologist Professor Gregory Barord stated that the new discovery is part of their 5 year project in Fiji which started in 2013, to study nautiluses.

According to Fiji's Director of Fisheries, Aisake Batibasaga the four nautiluses found in Savusavu are different from other species of nautiluses found in Vanuatu and

Samoa. All have been marked and placed back in the ocean.

Mr Batibasaga further added during a press conference for the new discovery, that there is a domestic regulation in place that protects the nautilus under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) governed and administered by the Ministry of Environment.

Professor Peter Ward from the University of Washington stated that for the first time, they were able to get international protection for Nautilus shells based on the Convention on International Trade in Endangered Species (CITES). The much needed international protection came after the species was threatened by trade due to the increasing demand for its beautiful shell.



Nautilus Vitiensis, caught and tagged in Savusavu, Fiji in July 2018. (Image: Fijivillage.com)



Professor Peter Ward researching the population number and extinct risk of Allonautilus. (Image: Fiji Times)

CITES is an international agreement between governments and aims to ensure International trade in specimens of wild animals and plants does not threaten their survival (www.cites.org).

According to a report on sci-news.com, 'Nautiluses are shelled cephalopods and are distant cousins of squid and cuttlefish. These marine animals are slow-moving predators that feed mainly on small fish and crustaceans, which are captured using their tentacles. They occur in the tropical waters of Pacific and Indian oceans, near the coast of Japan, Fiji, New Caledonia and Australia.'

(Adapted from: Fiji Times, Fiji Sun, Fiji Village web, www.cites.org)

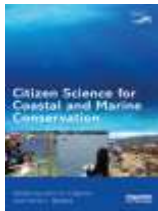
New Additions to PIMRIS (Lower Campus) Library



Living with the sea: artisanal fisheries and the future of our oceans / edited by M. Brown & K. Peters. New York, NY: Routledge, c2018. ISBN: 9781138062078.

This book offers insights from spatial planning, architectural design, geography, educational studies, anthropology and cultural studies.

<https://www.routledge.com/Living-with-the-Sea-Knowledge-Awareness-and-Action/Brown-Peters/p/book/9781138062078>



Citizen science for coastal and marine conservation / edited by J. A. Cigliano and H. L. Ballard. New York, NY: Routledge, c2017. ISBN: 9781138193222.

The book demonstrates the utility and feasibility, as well as limitations, of using marine and coastal citizen science for conservation,...

<https://www.routledge.com/Citizen-Science-for-Coastal-and-Marine-Conservation/Cigliano-Ballard/p/book/9781138193222>



Women's participation and leadership in fisherfolk organizations...: a review of evidence on enablers, drivers and barriers / edited- FAO. Rome: FAO, c2018. ISBN: 9789251302453.

This paper identifies positive examples and lessons learned, pointing to the drivers that have helped in fostering increased women's participation and leadership....

<https://www.amazon.com/Participation-Leadership-Fisherfolk-Organizations-Collective/dp/9251302456>



Improving the performance of tilapia farming under climate variation: perspective from bio-economic modelling / Cai, J. [et al.]. Rome: FAO, c2018. ISBN: 9789251301623.

This paper presents the methodology and results of the model. The results reveal the mechanisms and extent by which aquaculture performance.

<http://www.fao.org/3/i8442en/i8442EN.pdf>



Coastal wetlands: alteration and remediation / edited by C. Finkl & C. Makowski. Cham, Switzerland: Springer, c2017. ISBN: 9783319561783.

This book Offers a unique purview and understanding of the state of coastal wetlands based on a multidisciplinary fusion of geology, biology, engineering, and geospatial sciences...

<https://www.springer.com/gp/book/9783319561783>



Indigenous Pacific approaches to climate change: Pacific island countries / Bryant-Tokalau, J. Switzerland: Palgrave-MacMillan, c2018. ISBN: 9783319783994.

This book explores how Pacific Island communities are responding to the challenges wrought by climate change—most notably fresh water accessibility, the growing threat of disease, and crop failure.

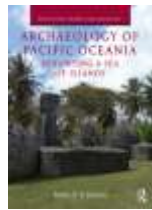
<https://www.palgrave.com/fr/book/9783319783987>



A critical approach to climate change adaptation: discourses, policies and practices / edited by Klepp, S. & Chavez-Rodriguez. New York: Routledge, c2018. ISBN: 9781138056299.

This edited volume brings together critical research on climate change adaptation discourses, policies, and practices from a multi-disciplinary perspective.

<https://www.routledge.com/A-Critical-Approach-to-Climate-Change-Adaptation-Discourses-Policies/Klepp-Chavez-Rodriguez/p/book/9781138056299>



Archaeology of Pacific Oceania: inhabiting a Sea of Islands / Carson, M. New York: Routledge, c2018. ISBN: 9781138097179.

This book integrates a region-wide chronological narrative of the archaeology of Pacific Oceania.

<https://www.routledge.com/Archaeology-of-Pacific-Oceania-Inhabiting-a-Sea-of-Islands/Carson/p/book/9781138097179>



Towards an effective legal framework for marine protected areas in Fiji: policy and law discussion paper / Fiji Environmental Law Association. Suva: USP Press, c2017. ISBN: 9789820109650.

The purpose of this paper is to support the development of a comprehensive legal framework for the establishment and management of an effective network of MPAs in Fiji which is based on science and suited to the Fiji context.

<https://pipap.sprep.org/content/towards-effective-legal-framework-marine-protected-areas-fiji>



Flora of the Cook Islands / Sykes, W. Hawaii: Nat. Tropical Garden, c2016. ISBN: 9780915809073.

This is a complete account of plants found wild in the Cook Islands and plants common in cultivation. Descriptions and keys are provided for 108 fern and 567 flowering plant species.

<https://www.amazon.com/Flora-Cook-Islands-W-Sykes/dp/0915809079>



Underwater Eden: saving the last coral wilderness on Earth / edited by G. S. Stone & D. Obura. Chicago: Univ. of Chicago Press, c2013. ISBN: 9780226775609.

This book tells the story of how the editors succeeded, against great odds, in making a dream come true, with the establishment in 2008 of the Phoenix Islands Protected Area (PIPA).

<https://www.press.uchicago.edu/ucp/books/book/chicago/U/bo12262476.html>



Aquatic pollution: an introductory text / Laws, E. A. New Jersey: 4th ed. Wiley & Sons, c2018. ISBN: 978111304500.

This edition covers every aspect of pollution associated with urban runoff, acid rain, sewage disposal, pesticides, oil spills, nutrient loading, and more.

<https://www.wiley.com/en-us/Aquatic+Pollution%3A+An+Introductory+Text%2C+4th+Edition-p-978111304500>

Conferences, Workshops & Events Jan – Jun 2019

- 10 – 12 Jan **International Conference on Aquatic Resources and Aquaculture for Sustainable Development (ICAR-AQUA 2019)**. Hawassa University, African Hall, Hawassa, Ethiopia. Web: <http://www.hu.edu.et/aquaconf/>
- 28 Jan – 8 Feb **Forum Fisheries Agency (FFA): Assessment of Cohort 5 – MCS Certificate IV Course**. Web: <https://www.ffa.int/calendar>
- 11 – 15 Feb **Forum Fisheries Agency (FFA): Regional Observer Coordinators Workshop (ROCW 19)**, Port Moresby, Papua New Guinea. Web: <https://www.ffa.int/calendar>
- 25 - 28 Feb **Forum Fisheries Agency (FFA): Fisheries Licensing Officers Workshop (FLOW 19)**, FFA Secretariat, Honiara, Solomon Islands. Web: <https://www.ffa.int/calendar>
- 4 – 8 Mar **Forum Fisheries Agency (FFA): Regional Port Monitoring Workshop**, Honiara, Solomon Islands. Web: <https://www.ffa.int/calendar>
- 7 – 11 Mar **AQUACULTURE 2019**–Aquaculture, New Orleans, Louisiana. Web: <https://www.was.org/meetings/default.aspx?code=AQ2019>
- 21 – 22 Mar **Forum Fisheries Agency (FFA): Regional Information Management Workshop**, FFA Secretariat, Honiara, Solomon Is. Web: <https://www.ffa.int/calendar>
- 26 – 28 Mar **Pacific Community (SPC) Final RESCCUE Workshop** (Lessons Learned). Noumea, New Caledonia. Web: www.spc.int/taxonomy/term/1442
- 29 – 30 Apr **13th World Congress on Aquaculture & Fisheries (Aquaculture Fisheries 2019)**, Courtyard, Marriott, Seoul, South Korea. Web: <https://aqua.conferenceseries.com/>
- 30 Apr – 10 May **Forum Fisheries Agency (FFA): Annual FFC110**, Pohnpei, Federated State of Micronesia. Web: <https://www.ffa.int/calendar>