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Editorial



Bula to our readers and partners!

This year is a special and significant one for the University of the South Pacific (USP) as it celebrates its 50th Anniversary since its inception in 1968 and the recent appointment of its new Vice Chancellor. There have been several anniversary commemorative events held not only in Fiji but throughout the region with more planned for the rest of the year. The most momentous event so far is the unveiling of the Royal New Zealand Air Force's (RNZAF) Monument in March on Laucala campus, attended by the New Zealand Defence Minister and more than 100 ex-5 Squadron servicemen and women from New Zealand. The monument marks the land that was once home to the RNZAF 30 years ago.

On the international front, the fight to reduce plastic pollution has reached critical stages with the World Environment Day and World Oceans Day in early June highlighting the urgent need for everyone to act now and protect the environment. A study published in May 2017, found an estimated 37.7 million items of debris together weighing about 18 tonnes on the World-Heritage listed Henderson Island. The study detailed how the state of Henderson, the most polluted, most remote island in the whole world was indicative of the extent of the plastic pollution problem. Other studies and reports also highlighted that plastic and debris from land-based sources are polluting the human food chain, injuring or killing fish, seabirds and marine mammals. Join the #BeatPlasticPollution campaign now and protect our environment and oceans.

The PIMRIS Coordination Unit in Suva is progressing well with its planned activities for the year. We hope with support from all our partners and colleagues, our targets for 2018 are met or exceeded. We welcome donations and collaborative initiatives for the improvement of marine /fisheries libraries services and collections in our region. Happy reading!

Susana Macanawai, *PIMRIS Coordinator*

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Henderson Island littered with 18 tonnes of plastic. The island is located between New Zealand and Chile. (Image: J. Lavers).

--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.

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New Faces, New Places

Congratulations!

Elizabeth Reade Fong, or Libby as she is known, was appointed the new University Librarian for the University of the South Pacific in December 2017. Libby has been with USP library for more than thirty



Libby Fong

years of which most as the Deputy University Librarian before her new appointment. She takes over from Joan Yee who retired in late 2016.



Reysa Alenzuela

Reysa Alenzuela is the new Senior Librarian at USP's Emalus Campus in Vanuatu. Reysa is from the Philippines and previously worked at the Nazarbayev Univ. Library in Kazakhstan. Reysa spent a week in Suva before travelling to her new home in Port Vila.

Vinaka & Farewell!

Yawen Kang, who joined USP Library as Librarian, Electronic Resources in February 2017, resigned and left in March 2018. Yawen contributed well to technical services and to the upskilling of library staff during her brief time at USP. We wish her well in her future endeavours!



Yawen Kang



Laurel Stewart

Laurel Stewart, a full-time Temporary Junior Library Assistant at the main library, Suva was farewelled with morning tea last month. Laurel resigned to take up a new role at the Munro Leys law firm in Suva. We wish Laurel all the best at her new location.

The United Nations' Global Campaign - #BeatPlasticPollution



A dolphin with a plastic bag in the ocean. (Image: UNFCCC)

In late May this year, the United Nations launched a global campaign to reduce plastic pollution, kicking off with short videos by leaders including the UN Environment head, Erik Solheim and the UN Climate Chief Patricia Espinosa.

The campaign calls on people all over the world to participate via social media, using the new tag '#BeatPlasticPollution' as part of the UN Environment's anti-pollution initiative.

According to the United National Environment Programme website, an estimated 99% of seabirds will have ingested plastic by 2050. Furthermore, an estimated 8 million tonnes of plastic waste enter the world's oceans each year due to inadequate waste management and some carried by rivers.

It has also been found that human activities on land are the biggest sources of marine pollution from littering on beaches, dumping of waste along coastlines and the breakdown of ships.

Global initiatives spearheaded by the UN Environment to protect oceans and the marine environment are not new. Since 1995 the UN Environment's 'Global Programme for Action' for the Protection of the Marine Environment from Land-based activities remains active.

Last year, the #CleanSeas campaign was launched, urging governments to enact policies to reduce the use of plastic and targeting industry on reducing plastic production and consumers on changing plastic use related habits.

On June 4th 2018, the Olympic movement joined the CleanSeas campaign and committed to beating plastic pollution by announcing an ambitious plan to eradicate single-use plastics from the organization and its events around the world.

Joining this initiative in cutting plastic waste are sports bodies including, World Sailing, the International Association of Athletics Federations, the International Triathlon Union, the International Ice Hockey Federation, World Rugby, World Golf and the International Surfing Association.

The Executive Director of UN Environment and a member of the IOC Sustainability and Legacy Commission, Erik Solheim stated after the IOC's announcement in Nairobi that this was the



A turtle with plastic around its neck. (Image: Greenpeace)

biggest commitment ever made from sport to address plastic pollution and that this pledge will transform the awareness and use of plastic waste in sport. He acknowledged the actions taken by so many sporting organisations and sponsors.

In addition to its pledge, the IOC is implementing its Sustainability Strategy and will embrace sustainability in its day-to-day operations and reducing its reliance on single-use plastics.

In Fiji, World Environment Day was commemorated on the 5th June in Nasinu and kick-started a month-long observation of the National Environment Day in the country.

The Minister for Environment during the celebrations called on all Fijians to unite against plastic pollution and rethink or make changes to their everyday lives and on the use of single-use plastics.

More than 200 students took part in the event to raise awareness on the importance of taking action against plastic pollution and the need to protect the environment for current and future generations.

Fiji's campaign against plastic pollution in support of this year's global anti-pollution initiative #BeatPlasticPollution was celebrated throughout the month of June.

On Saturday 9th June, Volivoli Beach Resort in Rakiraki organised its Environment Day cleanup initiative with students and teachers of Naria Primary School and local volunteers along the resort's surrounding coastal area, collecting rubbish.

One week later, the town of Ba on the western side of Viti Levu (Fiji's main island) celebrated Environment Day with students from various schools taking to the streets with placards chanting 'Beat plastic pollution'. More activities followed at the Market Grounds in Ba to drive forward the plastic pollution issue and the urgent need to take action now.



Students of Naria Primary School and volunteers cleaning up the Volivoli coastal area during the Volivoli Beach Resort's Environment Day Clean Up Initiative on June 9th in Rakiraki. (Image: Fiji Times)

(Sources: UNEnvironment.org, Fiji Times, Fiji Sun)

USP researchers and partners deploy deep-water temperature monitoring-mooring and surface wave buoy

Researchers and staff from the University of the South Pacific's Pacific Centre for Sustainable and Environmental Development (PaCE-SD) and Institute of Marine Resources (IMR) in collaboration with the Pacific Community (SPC) and the French National Research Institute for Sustainable Development (IRD) carried out the first of its kind oceanographic deployment for Fiji waters in early May.

The historical deployment of this deep-water temperature-monitoring mooring and surface wave buoy was carried out, off the Shangri-La Fijian Resort, Coral Coast, Sigatoka.

Experts from the Fiji Meteorological Services and the Fiji Navy were also involved.

According to Dr Antoine N'Yeurt, a lecturer and marine biologist at PaCE-SD USP, the deep-mooring and surface

buoy will provide ocean researchers, mariners, surfers, forecasters and the public with real time online information about wave conditions, while deep-ocean temperatures down to 200m are being collected each minute by an array of ten precision sensors, in conjunction with two salinity and pressure recorders.

This information is said to be critical to coastal early warning systems and to understanding the impact of global warming on coastal ecosystems such as coral reefs, seagrass beds, and mangroves.

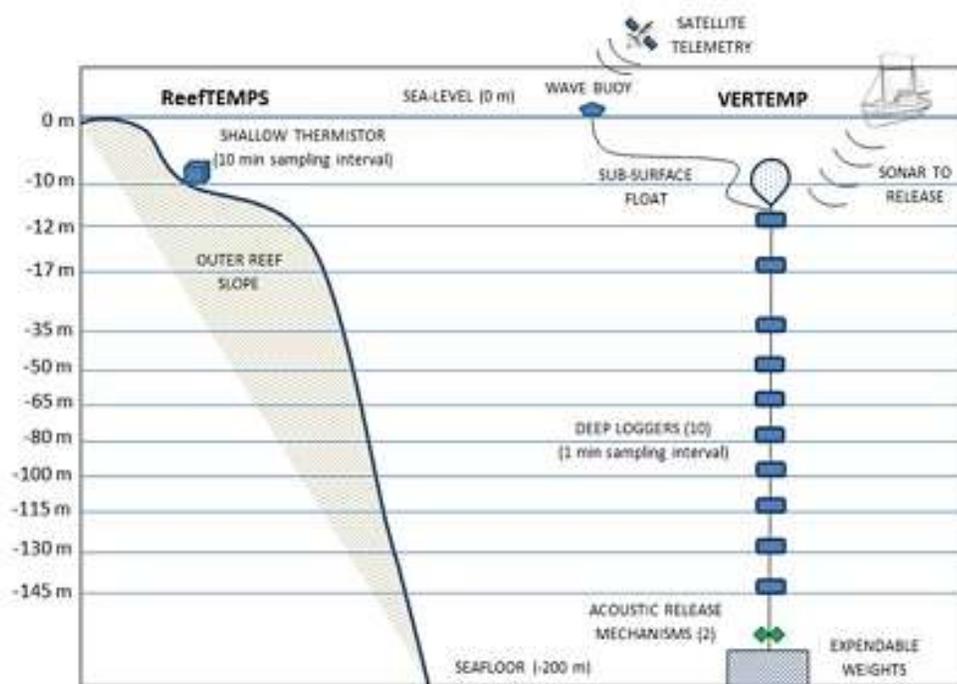
Furthermore, the wave buoy is a key component of the Coastal Inundation Forecasting Demonstration in Fiji (CIFDP) while the subsurface 200m long PVC-coated steel cable and array of temperature and pressure/salinity sensors, is a component of the VERTICAL TEMPERATURE Profiles for Pacific Coastlines (VERTEMP) Project of the JEA Research Team for Coastal Oceanography in the Pacific, Risk and Adaptation (COPRA).

The real-time wave buoy data is provided free of charge via satellite telemetry to the public (<http://www.pacgeo.org/static/wavebuoy/>).

Dr Antoine N'Yeurt also stated that the mooring which will be rotated every six months for data retrieval, is a combination of a surface Sponddrift wave buoy managed by the SPC and the subsurface 200m long PVC coated-steel cable and array of precise temperature sensors managed by USP, in collaboration with IRD in New Caledonia as part of the new research teams associated with the IRD (JEA) programme.



The project team in front of the USP boat, 'Halimeda' at the Shangri-La Hotel jetty. **(L-R):** Mr. Pio Naboseyawa (Fiji Navy Hydrographic Service), Mr. Maleli Turagabeci (SPC-Geoscience), Dr. Antoine De Ramon N'Yeurt (PaCE-SD-USP), Mr. Luke Rogoyawa (IMR-USP), Capt. Timoci Varinava (IMR-USP), Dr. Jérôme Aucan (IRD), Dr. Moritz Wandres (SPC-Geoscience), Mr. Sairusi Bosenaqali (PaCE-SD-USP), Dr. Adrien Lauranceau-Moineau (SPC-Geosciences), Mr. Poate Degei (SPC-Geosciences). *(Image: USP News).*



A schematic overview of the deep-water mooring (VERTEMP project) and its relationship to shallower coastal temperature monitoring (ReefTEMPS project). Both projects are managed by PaCE-SD-USP. (Image: USP News)

“Having data loggers at deeper locations (-50m to -200 m) will enable us to measure very rapid variations in seawater temperature that are linked to internal waves, which occur when masses of deeper waters are moved by tidal forces or stratification over underwater topography such as seamounts,” Dr. N’Yeurt explained.

He added, “these waves travel over several hundreds of kilometres and carry mass, momentum and heat across the ocean.

By affecting water mixing, they can lead to upwelling of bottom nutrients in coastal zones, and can deeply affect climate and biological ecosystems. Very rapid scale changes, within minutes, in deepwater temperature can reveal such internal waves and help to develop more accurate climate models”.

A lot more information will be revealed from the deeper temperature data that will be collected and on knowledge of internal waves obtained from this project.

These will be investigated and will also be helpful in determining the distribution of fish and benthic invertebrates in coastal ecosystems.

Mr Jens Kruger, the SPC manager for Oceans and Coastal Geoscience stated that, there are more than 300 wave buoys around the world, but fewer than one percent are located in the Pacific Islands region. Pacific Islanders are custodians of twenty percent of the global ocean space yet we know very little about our region’s wave climate.

(Adapted from: USP News & SPC News)

USP's Institute of Applied Sciences (IAS) implements Mangrove Reforestation Project in Fiji



Village communities were part of the Mangrove Reforestation activity at Nasau village, Navitilevu, Ra. (Image: USP news)

The University of the South Pacific's (USP) Institute of Applied Sciences (IAS) implemented several of its Restoration of Ecosystem Services and Adaptation to Climate Change (RESCCUE) project activities in February this year in Fiji's province of Ra.

The RESCCUE Project activities implemented between the 5-10 February 2018, included mangrove and coastal tree planting, mapping existing on-ground work as part of the coastal community-based protected areas and other mangrove protection and fisheries management initiatives.

Around 1,362 seedlings of nine (9) species of coastal trees were delivered to ten (10) villages in the Ra province, comprising of native, fruit and exotic species.

In addition, more than 1,800 mangrove seedlings (mainly *Rhizophora* spp.) were planted in approximately 0.45 acres of coastal area involving six (6) villages. These villages are Navuniivi, Nabukadra, Nasau, Nayavaira, Naocobau and Namarai villages.

The project team had noted an increase in the interest of villagers and community members to restore and reforest areas that were affected severely by Cyclone Winston in 2016.

Seedlings provided by the IAS team and RESCCUE project to the communities in Ra will hopefully restore and protect affected its coastal areas as part of the Fiji project's goals.

The RESCCUE Fiji project in Ra has been in operation for the past three (3) years and the community's cooperation and commitment has been acknowledged.

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The RESCCUE Project is funded by the French Development Agency or The Agence Française de Développement (AFD) and the French Global Environment Facility (FFEM) and is implemented in the Pacific region by the Pacific Community (SPC).

The RESCCUE project operates in two French territories (New Caledonia and French Polynesia) and in Fiji and Vanuatu.

Its overall goal is to contribute to increasing the resilience of Pacific Island Countries and Territories (PICTs) in the context of global climatic and environmental changes.

As Pacific Island countries and territories are vulnerable to the effects of climate change, there is a need to increase the capacity of PICTs to adapt and increase their resilience.

RESCCUE aims at supporting adaptation to climate change (ACC) through development and implementing of integrated coastal management (ICM), resorting especially to economic analysis and economic and financial mechanisms.

Lately in May, the RESCCUE project moved to Fiji's Kadavu Island and constructed nurseries in nine (9) tikina (districts) in partnership with the Fiji Ministry of Forests.

The team also carried out nursery training sessions that were attended by men and women of



Part of the RESCCUE project activities in the province of Ra. (Image: Institute of Applied Science).



Planting of mangroves as part of the Kadavu RESCCUE project activities. (Image: IAS).

(Adapted from: USP News & IAS News)

Yawe, Nabukelevu and Ravitaki districts.

A staff from the Ministry of Forests, Mr Saula Bakeirewa, led the training on how to raise seeds and pot plants amongst other activities.

The training and project programme for Kadavu also included an awareness session on the 'Ridge to Reef' concept, highlighting the importance of maintaining and enhancing the biodiversity and ecosystem's goods and services focusing on their sustainable management on Kadavu.

According to Dr Isoa Korovulavula, the Fiji RESCCUE Coordinator and IAS's Environment Unit Manager, 'the ground community based activities such as the building of nurseries is the first step towards re-planting of appropriate native species in degraded or marginal land area near waterways'.

Dr Korovulavula also stated that this project plays an important role in enhancing the resilience of terrestrial and marine ecosystems while also improving the livelihood of Kadavu people.

World Oceans Day 2018 celebrated in Fiji

World Oceans Day was celebrated on 8 June 2018 around Fiji as part of the worldwide annual international commitment to highlighting the importance of our oceans and their protection from the growing threats of pollution, competition for ocean resources and extreme climate impacts amongst many other factors.

This year, the Pacific Community (SPC), in partnership with the Secretariat of the Pacific Regional Environment Programme (SPREP), University of the South Pacific (USP),



Chief Guest and Fiji's President at the World Oceans Day 2018 celebrations in Suva. (Image: SPC)

and others organised a day-long symposium at the Grand Pacific Hotel (GPH) in Suva, Fiji to celebrate this year's World Oceans Day.

The Chief Guest at the celebration was Fiji's President Major General (Ret'd) Jioji Konusi Konrote who officially opened the symposium and highlighted on the need to take a combined and united effort to protect and save our oceans.

President Konrote also highlighted on the importance of the struggle for our survival, and for the protection of our oceans for current and future generations.

It was also revealed during the chief guest's speech, that next month Pacific leaders will gather in Suva for the Climate Action Pacific Partnership event and a Pacific Talanoa Dialogue as a prelude to the Talanoa Dialogue that Fiji will preside over with Poland at COP24 in December.

President Konrote also officially launched the Pacific Ocean Portal which was developed by oceanographers, ICT and communications specialists from the Australian Bureau of Meteorology in consultation with a wide range of Pacific Island users.

The portal brings together high quality, open-access ocean data from a variety of sources and displays information visually on dashboards, maps and graphs that can be easily cut, pasted, and shared.

Meanwhile, World Oceans Day was also commemorated at the USP's Lower Campus. A day of demonstrations and display was organised by the School of Marine and was witnessed by invited nearby primary school students (Years 5-9).

Displays and demonstrations on the day highlighted the importance of the ocean to our everyday life and on this year's action focus of 'Preventing Plastic pollution and encouraging solutions for a healthy ocean'.

World Oceans Day this year is connected to the World Environment Day's theme, 'Beat Plastic Pollution'.

(Adapted from: SPC news, Fiji village)

News from around the region

Ocean and Tides Workshop conducted to build ocean science capacity in Samoa



Some workshop participants during the training in Samoa. (Image: Pacific Community (SPC))

A week-long training and consultation workshop focusing on ocean data applications was conducted in Apia from 21-25 May 2018.

Developed in collaboration with the Samoa Meteorology Division, and facilitated by ocean experts from the Pacific Community (SPC), University of the South Pacific (USP) and the Australian Bureau of Meteorology, the workshop was aimed at increasing technical capacity and knowledge as well as understanding and application of ocean science for improved decision making and disaster preparedness.

The workshop was attended by staff from the Samoa Meteorology Division, the Ministry of Works, Industry and Transport, the National University of Samoa's Maritime School, Samoa Ports Authority and ocean stakeholders from the Samoa Fisheries Division.

Participants received training on marine meteorology and an introduction to ocean data tools including tide calendars, real-time data from Samoa's tide gauge, and on the Pacific Ocean Portal.

The Pacific Ocean Portal is a website that brings together high quality open access ocean data (ie. ocean temperature, waves, sea level, key forecast maps and graphs etc.) from many online sources that can be easily shared.

This is the ninth Ocean and Tides workshop delivered under the Australian funded 'Climate and Oceans Support Program in the Pacific (COSPPac) which also provided a platform for the Samoa Meteorology Division to showcase and present their work on storm surges, tsunamis, sea level analysis and traditional knowledge to national colleagues and participants.

The Director of the Samoa Meteorology Division Mulipola Tainau Ausetalia Titimaea praised the timely provision of such training and the cooperation and dedication of workshop participants.

The SPC's team leader for Ocean Literacy and Maritime Capacity, Molly Powers-Tora highlighted the fact that, 'most weather services in the region have limited oceanographic capacity, but through exposure to training, tools, and practical applications of ocean data, the SPC project has been able to identify priorities and opportunities to support Samoa Meteorology to continue to grow in this area'.

She acknowledged the proactive approach taken by the Samoa Meteorology Office in requesting and organising the workshop.

(Adapted from: SPC news)

Tonga launches National Strategy on Aquatic Biosecurity

The Ministry of Fisheries in Tonga recently launched its National Strategy on Aquatic Biosecurity for 2018-2022 at the Tanoa International Dateline Hotel in Nuku'alofa.

The national strategy was launched by the Minister for Fisheries, Hon. Semisi Fakahau.

A representative from the Pacific Community (SPC), Ruth Garcia was also present during the launch and highlighted that aquatic biosecurity deals with the management of diseases, pests, quarantine, import and export standards, access to new markets etc.

Ms Garcia also assisted the ministry with putting together the strategy and had explained during the launch the components of the document and how it would help further the development of the aquaculture sector in Tonga.

Furthermore, the Tonga National Strategy on Aquatic Biosecurity published in 2017 explained that the strategy will provide the overarching framework for better management of biological risks to the aquatic environment.

A similar strategy for the Cook Islands was published this year with assistance from the SPC and the New Zealand Aid Programme.

The Aquatic Biosecurity strategy formulated for Pacific Islands countries should be seen as a



The Minister for Fisheries, Hon. Semisi Fakahau (front centre) with officials at the launch. (Image: Tonga Fisheries)

set of standardised protocols and measures to deal with biological risks in the aquatic environment, such as pests and diseases, invasive species etc.

It should also serve as a roadmap for setting national standards for building national capacities and infrastructures on aquatic biosecurity and regulate the import and export of live aquatic animals.

The aquaculture sector in Tonga is still in its infancy, but it contributes to a certain extent to improving food and nutrition security and contributes generate income.

The Hon. Minister for MAFF & Fisheries, Semisi Fakahau and Fisheries CEO, Dr. Halafihi at the launch. (Image: Tonga Fisheries).

(Adapted from: Tonga Fisheries News, Matangi Tonga)

World Turtle Day celebrated on Fiji's Treasure Island

Fiji celebrated 'World Turtle Day' on 23 May 2018 with the release of five (5) Hawksbill turtles on Fiji's Treasure Island by Fiji's Minister for Agriculture and Acting Minister for Fisheries then, Hon. Inia Seruiratu.

Since 2000, World Turtle Day has been commemorated on Treasure Island annually and this year is no difference. The resort has so far released hundreds of turtles back into the wild so far and has also incorporated this annually as part of their guests' activities.

The turtles released at the event on the island this year, were part of the resort's ongoing programme on the protection of turtles which have been listed as endangered species.

Hon. Seruiratu as chief guest during the celebrations, acknowledged the contributions and efforts of various organisations, communities and individuals who have worked tirelessly through the years to keep turtles healthy and safe.

He also highlighted the greater need to address threats posed on turtle populations by foreshore developments, pollution, unsustainable and illegal fishing practices and many others.

Furthermore, Minister Seruiratu stated that three other turtle species that make their homes in Fiji are also endangered. These are the Pacific leatherback (Vonu Dakulaca), the Loggerhead turtle and the green turtle (Vonu Dina).

Acknowledging the impact of the government's moratorium placed on harvesting of turtles, Hon. Seruiratu said that encouraging results have so far revealed an increase in both feeding and nesting grounds for turtles giving fresh hope for the survival of turtle populations in Fiji's waters.

Fiji's 'Turtle Moratorium' on molesting, taking or killing of turtles came into effect on March 2004 and expires on December 31, 2018.

Treasure Island has a dedicated team who manage the Hawksbill turtle conservation programme amongst other projects on the resort.



Fiji's Minister for Agriculture, Hon. Inia Seruiratu releasing Hawksbill turtles on Treasure Island during Turtle Day celebrations. (Image: FBC news)

(Adapted from: FBC news, WWFPacific)

Campaign to protect 'kawakawa' and 'donu' in Fiji gains more support

The local campaign to protect 'kawakawa' (camouflage grouper) and 'donu' (red salmon cod) in Fiji has gathered more support, and this time from the Ministry of Fisheries and its Minister, Hon. Semi Koroilavesau.

The 4FJ campaign which started in 2014 raised awareness on the declining stocks and fish landings over 30 years and encouraged people across Fiji to refrain from buying, selling and eating 'kawakawa' and 'donu' during their peak breeding season which is from June to September.



Fijian fishermen fishing close to shore. (Image: Fijivillage.com)

In April 2018, the Fiji Times reported that the Ministry of Fisheries has proposed to legally ban the commercial fishing and sale of kawakawa and donu during their peak breeding season from this year.

This proposal follows a survey conducted along the Suva-Nausori corridor found 93% of respondents in support of the campaign and the need to protect these fish species.

The survey was conducted by a communications non-government organization, cChange whose founder also developed the 4FJ campaign.

Mr Radway the founder of cChange is quoted, "These fish are critical to the food and livelihood needs of the Fiji communities and letting them breed each year ensures we have more of these fish for the rest of the year."

The Ministry of Fisheries is committed to banning the sale of these fish species this year after



The Fiji government team on their way to the Yasawa Islands in May 2018. (Image: Fiji Sun)

a pledge made at the United Nations Ocean Conference last year, which Fiji co-hosted.

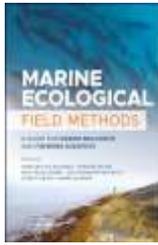
Late last month, the Minister for Fisheries also shared the same message with communities in the Yasawa islands.

During a talanoa session at Yalobi village, Minister Koroilavesau stressed the same message and why communities need to protect kawakawa and donu during their peak breeding months.

The short-term sacrifice is for the long-term gain for all in Fiji.

(Adapted from: Fiji Times, Fiji Sun)

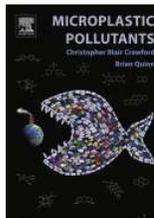
New Additions to PIMRIS (Lower Campus) Library



Marine ecological field methods: A guide for marine biologists and fisheries scientists / edited by A. Salvanes, [et. al]. Hoboken, NJ: Wiley Blackwell, c2018. ISBN: 9781405180702.

This is a comprehensive resource that offers the most relevant sampling methodologies for quantitative and qualitative studies of mesopelagic, demersal, littoral, and soft-bottom organisms, as well as relevant physical parameters.

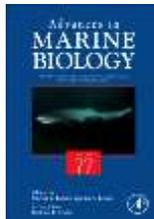
<https://www.wiley.com>



Microplastic pollutants / C. B. Crawford & B. Quinn. Netherlands: Elsevier, c2017. ISBN: 9780128094068.

This book introduces the reader to the growing problem of microplastic pollution in the aquatic environment and is the first ever book dedicated exclusively to the subject of microplastics.

<https://www.sciencedirect.com/science/book/9780128094068#book-description>



Northeast Pacific Shark Biology, Research and Conservation. Part A / edited by S. Larson [et al.]. London: Academic Press, c2017. ISBN: 9780128118313.

This volume highlights the biological attributes of, and the conservation efforts targeted at, populations of vulnerable sharks in the Northeastern Pacific Ocean.

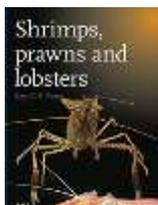
<https://www.elsevier.com/books/northeast-pacific-shark-biology-research-and-conservation-part-a/larson/978-0-12-811831-3>



Maritime clusters and the ocean economy: an integrated approach to managing coastal and marine space / P. B. Myles. London: Taylor & Francis, c2017. ISBN: 9781138182882.

This book shows how the cluster concept can be usefully applied to the study of maritime activities.

<https://www.crcpress.com/Maritime-Clusters-and-the-Ocean-Economy-An-Integrated-Approach-to-Managing/Myles/p/book/9781138182882>



Shrimps, prawns and lobsters / G. Poore. Melbourne: Museum Victoria, c2015. ISBN: 9780980381344.

This guide includes a description of each animal accompanied by a colour photograph with information about each animal's behaviour, diversity and ecology.

<https://www.publish.csiro.au/book/7509/>



Biodiversity and climate change adaptation in tropical islands / edited by C. Sivaperuman, A. Velmurugan, A. Singh & I. Jasankar: London: Academic Press, c2018. ISBN: 9780128130643.

This book provides comprehensive information on climate change, biodiversity, possible impacts, adaptation measures and policy challenges to help users rehabilitate and preserve the natural resources of tropical islands.

<https://www.elsevier.com/books/biodiversity-and-climate-change-adaptation-in-tropical-islands/sivaperuman/978-0-12-813064-3>



What a fish knows: the inner lives of our underwater cousins / J. Balcombe. New York: Scientific American, c2016. ISBN: 9780374288211.

This publication draws on the latest science to present a fresh look at these remarkable creatures in all their breathtaking diversity and beauty. It offers a thoughtful appraisal of our relationships with fish...

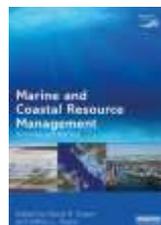
<https://oneworld-publications.com/what-a-fish-knows.html>



Breaking the shell: voyaging from nuclear refugees to people of the sea in the Marshall Islands / J. H. Genz. Honolulu, HI: Uni. of Hawaii Press, c2018. ISBN: 9780824867911.

This book presents the journey of Captain Korent Joel, who, having been forced into exile from the near-apocalyptic thermonuclear Bravo test of 1954, has reconnected to his ancestral maritime heritage...

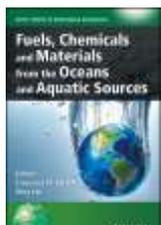
<http://www.uhpress.hawaii.edu/p-9905-9780824867911.aspx>



Marine and coastal resource management: principles and practice / edited by D. Green & J. Payne. Oxford: Routledge, c2017. ISBN: 9781849712897.

This book provides a comprehensive overview on marine and coastal resource management including case study applications.

<https://www.routledge.com/Marine-and-Coastal-Resource-Management-Principles-and-Practice/Green-Payne/p/book/9781849712903>



Fuels, chemicals and materials from the oceans and aquatic sources / edited by F. Kerton & N. Yang. Chichester : John Wiley, c2017. ISBN: 9781119117162.

This is a valuable reference which provides a holistic view of fuels, chemicals and materials from renewable sources in the oceans and other aquatic media.

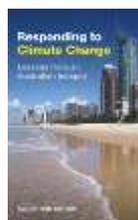
<https://www.wiley.com/en-us/Fuels%2C+Chemicals+and+Materials+from+the+Oceans+and+Aquatic+Sources>



Participatory mangrove management in a changing climate: perspectives from the Asia-Pacific / edited by R. DasGupta & R. Shaw. Tokyo: Springer, c2017. ISBN: 9784431564799.

This book outlines the performance and management of mangroves in the changing climatic scenario of the Asia-Pacific region and draws examples and lessons from the national and community-driven mangrove conservation programs.

<https://www.springer.com/gp/book/9784431564799>



Responding to climate change: lessons from an Australian hotspot / edited by P. Burton. Melbourne: CSIRO, c2014. ISBN: 9780643108615.

This publications describes the challenges confronting a rapidly growing coastal region that is vulnerable to climate change. It brings together the results of cutting-edge research from members of the Griffith Climate Change Response Program, showing how best to respond to anticipated changes etc.

<https://www.publish.csiro.au/book/7014/>

Conferences, Workshops & Events Jul – Dec 2018

- 03 – 06 Jul **Intergovernmental Oceanographic Commission (IOC), Fifty-first Session of the IOC Executive Council**, Paris, France. http://www.ioc-unesco.org/index.php?option=com_oe&task=viewEventRecord&eventID=2200
- 30 Jul – 03 Aug **3rd Regional Programme Steering Committee Meeting for the 'Ridge to Reef' Programme**, Townsville, Australia. www.sprep.org/event/
- 08 – 16 Aug **Western and Central Pacific Fisheries Commission (WCPFC) 14th Scientific Committee Meeting**, Busan, South Korea. <https://www.wcpfc.int/meeting>
- 20 – 24 Aug **Joint Pacific Community (SPC)/Forum Fisheries Agency (FFA) Data Collection Committee Meeting**.
- 30 – 31 Aug **11th World Congress on Food Chemistry & Food Microbiology – Exploring the Recent Advances in Food Microbiology and Food Chemistry**, Dubai, UAE. <https://www.eventbrite.com/e/11th-world-congress-on-food-chemistry-food-microbiology-tickets-47155053033>
- 26 Sept – 2 Oct **Western and Central Pacific Fisheries Commission (WCPFC) – 14th Regular Session of the Technical and Compliance Committee**, Republic of the Marshall Islands. <https://www.wcpfc.int/meeting>