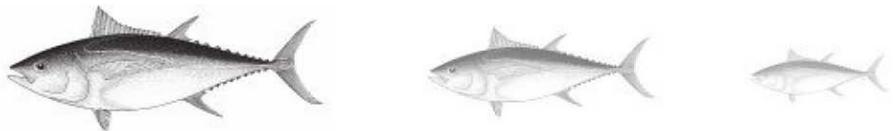


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## Editorial



Season's Greetings to all our partners and friends.

We have reached the end of a very tough, emotionally exhausting and challenging year. We had it all. Cyclones, bushfires, floods and locust swarms affected many worldwide. However, the greatest impact was by the global COVID-19 pandemic which has so far claimed more than one million lives and changed the norm for everyone. Although this health crisis is not over yet we are hopeful that numerous vaccines currently being tested and administered in several countries, will get it under control.

PIMRIS activities this year were also affected by COVID-19 as national governments impose restrictions and measures for the health and safety of everyone. Our Steering Committee meeting was deferred and a virtual meeting was not possible due to various access issues and national government priorities. We acknowledge all contributions to our e-repositories, email feedback and the increase in inter-library loans requests this year. Plans are underway to have our databases moved from Greenstone to ePortfolio next year for improved user access and experience. We will keep you posted.

In this issue, we share news of activities from regional and international partners including COVID-19 related reports and efforts. Congratulations for all achievements during the year and we look forward to stronger partnerships in 2021.

Please be reminded that USP will officially close from 25 December, 2020 – 3 January 2021 but our online resources will be available during this period via the USP [Library website](#) and [PIMRIS website](#).

We, the team at PIMRIS wishes you a wonderful Christmas and safe holidays.

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

### Welcome!

**Lorin**, is the new Coordinator for the Diploma in Library Studies programme at the USP's Pacific TAFE.



Lorin Pai

She previously worked at the Reserve Bank of Fiji library and is currently completing the Masters in

Library & Info. Management from Charles Sturt University. Congratulations & All best!

**Sala**, relocated to PIMRIS from the USP Laucala main library, after its part-time staff resigned in September. This is her second year with USP Library and is studying for the Diploma in Library/Info Studies at USP-Pacific TAFE.



Salanieta Cocker

**Rakesa**, is the latest addition to the USP Laucala main library in Suva replacing Sala Cocker. Rakesa was the library officer at the Holy Trinity Primary School in Suva before her latest appointment.



Rakesa Mataitini

### Vinaka & All best!



Waisale  
Vakaloloma

**Waisale**, the PIMRIS part-time staff has taken up a full-time position (Library Officer) at the USP Savusavu campus (Fiji). We farewelled him with a morning tea in September and wished him well in his new role.

## FAO reports on COVID-19 and its impact on the fisheries and aquaculture sector

The Food and Agriculture Organisation of the United Nations (FAO) has officially released an addendum to the 'State of the World Fisheries and Aquaculture 2020' report published earlier this year, to address the impacts of the pandemic to the sector as the original publication was completed as the pandemic spreads around the world.

According to the FAO website, "the COVID-19 pandemic has triggered a public health crisis followed by an on-going economic crisis due to the measures taken by countries to contain the rate of infection, such as home confinement, travel bans and business closure".

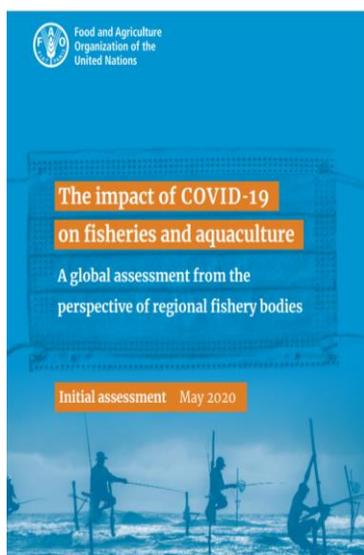
"Even though COVID-19 does not affect fish, nor is it caused by the consumption of fish, the fish sector is still subject to indirect impacts of the pandemic through changing consumer demands, market access or logistical problems related to transportation and border restrictions.

This in turn will have a damaging effect on fishers and fish farmers' livelihoods, as well as on food security and nutrition for populations relying heavily on fish for animal protein and essential micronutrients."

The report titled, 'The impact of COVID-19 on fisheries and aquaculture: a global assessment from the perspective of regional fishery bodies' was published in May and is an initial assessment of an evolving situation. The authors have advised that follow up assessments both at regional and country level will be required to fully understand the impact of COVID-19 on the sector.

The report however has highlighted several areas that have been affected due to the pandemic and related containment measures.

These include the aquaculture supply chain and production, the reduction in fishing activity, adjustments to market demand as well as on management processes and policies for industry development.



FAO initial report on the impacts of COVID-19. (Image: FAO).

Fish and fish products are very important to the livelihoods of many small and developing state communities.

They are also the most highly traded food products in the world, with 38 percent of total fish production entering international trade.

However, the pandemic has disrupted both the domestic and international supply chains with many suppliers and producers forced to sell directly to consumers and households as food services like hotels and restaurants close.

This helps suppliers and producers compensate for lost demand and market.

Processing plants have also been affected as staff face health issues and quarantine requirement due to COVID-19. The labour shortage or loss of experienced staff adds to the industry's struggle as they try to cope with food waste and loss.

Where migrant workers are involved or employed, families at home are left with little or no income as the flow of remittance are reduced or halted.

There are also concerns regarding the possible increase in illegal, unreported and unregulated (IUU) fishing activities due to a reduced or lack of monitoring and enforcement operations in the high seas.

The FAO reports that it has led an unprecedented response to the pandemic through dedicated COVID-9 pages on its website, with targeted analysis and solutions across food value chains etc.

Access Report: <http://www.fao.org/3/ca9279en/ca9279en.pdf>

(Adapted from: <http://www.fao.org/documents/card/en/c/ca9349en>

[END]

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## **COVID-19 Operating Protocols for the Fishing Sector in the Pacific**

Several Operating Protocols have been developed by the Fisheries COVID-19 Protocols Steering Committee, led by Australia's Office of the Pacific (OTP), DFAT, and including the Office of the Parties to the Nauru Agreement (PNAO), the Forum Fisheries Agency (FFA), the Pacific Community (SPC), the Indo-Pacific Centre for Health Security, and MRAG Asia Pacific, to assist and guide the fishing sector, flag States and island state governments manage the health and economic impacts of COVID-19 on the fishing industry in the Pacific Islands region.

These protocols seek to guide practices that prevent the transmission of COVID-19 on and between fishing vessels and at port, and offer protection for both the ships' crew and local populations at port.

The protocols have been divided into two different categories; (i) General COVID-19 Risk Mitigation Protocols and (ii) Activity specific COVID-19 Risk Mitigation and Control Protocols.

These protocols have been drawn from guidance provided by International organisations, including recommendations provided by the World Health Organisation (WHO), the International Maritime Organisation (IMO), the Pacific Community (SPC) and the Pacific Islands Forum.

According to the published document, "these protocols may be used by Members of the Pacific Island Forum Fisheries Agency or flag and coastal states that operate in the region to guide development of national orders related to the fisheries sector under State of emergency legislation or policy related to the COVID-19 pandemic".

However, the document advised that in the event of any differences, national regulations and directions take precedence.

All fishing operations must comply with terms of license and national regulations including directions provided by national authorities in zone, or by flag states and Regional Fisheries Management Organisations (RFMO) in high seas.

(con't next page)

## COVID-19 Operating Protocols for the Fishing Sector in the Pacific

Minimising the risk of transmitting COVID-19 in the fisheries sector at sea and in ports in the Pacific



These Protocols will be reviewed every quarter (commencing on 1 December 2020) by the Fisheries COVID-19 Protocols Steering Committee jointly-led by the FFA and PNAO.

The final draft following each review will be circulated to stakeholders including the FFA members (through the FFA), industry (through the PNA) and health practitioners (through SPC) for a final review prior to finalising.

Several posters have been developed to support the implementation of these protocols and may be used in workplaces, including on board vessels to support practices that mitigate COVID-19 transmission through the Pacific fishing sector.

The posters provide guidelines on protecting yourself and others from getting sick, practice food safety, shipboard

care for people with suspected or confirmed COVID-19, protecting everyone during ship visits etc.

The protocol document including posters can be accessed from:

[COVID19\\_OPERATING\\_PROTOCOLS\\_PACIFIC\\_FISHING\\_SECTOR.pdf \(ffa.int\)](https://www.ffa.int/COVID19_OPERATING_PROTOCOLS_PACIFIC_FISHING_SECTOR.pdf)

Examples of Operating Protocols posters:

### COVID-19 Practise food safety

Meat products can be safely consumed if they are cooked thoroughly and properly handled during food preparation



Do not eat sick or diseased animals



Use different chopping boards and knives for raw meat and cooked foods



Wash your hands with soap and water for at least 20 seconds between handling raw and cooked food



### Protect yourself and others from getting sick

When coughing and sneezing, cover your nose and mouth with a tissue or a flexed elbow



Throw the tissue into a closed bin immediately after use



Clean your hands with an alcohol-based hand rub or with soap and water for at least 20 seconds:

- After coughing or sneezing
- When caring for the sick
- Before, during and after preparing food
- Before eating
- After toilet use
- When hands are visibly dirty



Avoid touching eyes, nose and mouth



(Source: Forum Fisheries Agency (FFA))

## Fisheries surveillance operation by the Forum Fisheries Agency and members completed



One of the surveillance teams during Operation Kurukuru 2020. (Image: FFA)

One of the largest maritime surveillance operations in the world, *Operation Kurukuru*, concluded on Friday 30 October, after two weeks of international cooperation by aircraft, ships, and national organisations to target Illegal, Unregulated and Unreported (IUU) fishing in the Pacific.

The Pacific Island Forum Fisheries Agency (FFA) coordinates the surveillance operation which spans 21.3 million square kilometres, the Exclusive Economic Zones of 15 Pacific Island Member states and adjacent high seas pockets.

“It’s a vast area to monitor for IUU fishing. Activities such as *Op. Kurukuru*

2020 underline the importance of our cooperation to ensure we can be effective in conducting surveillance and enforcement,” says FFA Director General, Dr Manumatavai Tupou-Roosen.

“It is a significant commitment by our Members and Partners. We sincerely thank all of those who participated across the Pacific. We work best when we work together.”

There are 12 Guardian Class and Pacific Patrol Boats from Pacific nations operating alongside five French Navy and United States Coastguard vessels during *Op Kurukuru 2020*. Six aircraft from the FFA and Quadrilateral regional partners are providing air surveillance, and trials are being conducted using satellites and other emerging technologies.

Overall, 19 countries are involved in *Op Kurukuru 2020*. Local and regional partners, including Fisheries, Maritime Police, Defence Forces, and other maritime security agencies were encouraged to work closely alongside one another, and the results have been positive according to Surveillance Operations Officer CMDR Robert Lewis, RAN.

“Regional cooperation towards combatting IUU Fishing is really progressing,” says CMDR Lewis. “We’ve seen some excellent examples of organisations working together to share information, and support national priorities during this operation.”

“We’ve already identified several potential vessels of interest, that is, they may be conducting illegal fishing, have inappropriate vessel markings, or be acting unusually. Ships or aircraft have been redeployed to look into these vessels further, and the investigations are ongoing with our FFA Members,” says CMDR Lewis.

The aim of *Operation Kurukuru* is to detect, deter, report and/ or apprehend potential IUU fishing activity but it also works to build capacity of National surveillance initiatives through support and mentoring from the Regional Fisheries Surveillance Centre at FFA.

(More details: [FFA news](#))

## Women in Fisheries Network and partners celebrate World Fisheries Day 2020

The Women in Fisheries-Fiji Network (WiFN) and partners celebrated World Fisheries Day on Friday 20 November at the Novotel Convention Centre in Lami, Suva with a panel discussion and cutting of the cake.

The event was attended by the Minister for Women, Mereseini Vuniwaqa who was also the chief guest, parliamentarian Lenora Qereqeretabua, representatives from non-government and regional organisations, academic institutions and local communities.



Fiji's Minister for Women, WiFN officials and guests at the celebration in Lami, Suva. (Image: Fiji Broadcasting Corporation).

With the theme of 'Celebrating 50 years of Fisheries: a reflection of Fiji and the Pacific', the event was geared towards highlighting interdependence against the rising tide of challenges brought on by the COVID-19 pandemic, climate change through ocean warming and acidification, overfishing, loss of habitat due to economic development and many others.

While delivering her official address at the event, Minister Vuniwaqa said that the event was not only to celebrate World Fisheries Day but also to renew commitments to the fisheries industry.

She stressed that, "the fisheries sector must also take into consideration a gender transformative approach that will not only support and empower our women but will also promote the equal participation in decision making within the sector and also give a much-needed recognition and value",

During the celebrations, a discussion panel consisting of representatives from the Fiji Locally Managed Marine Areas (LMMA) Network, the Women in Fisheries Network, the Fiji Fishing Industry Association and the Pacific Conference of Churches shared experiences and ideas relating to their activities and efforts including challenges they faced.

World Fisheries Day is marked on 21 November annually, and this year we celebrate a profession and a way of life that supports millions of people worldwide.

Coastal and inland fisheries are vital to the livelihoods of millions and are a source of food and protein for many more. According to WorldFish, globally the sector employs around 120 million people of which 97% live in developing countries and 90% work in small scale fisheries.

As fishing communities around the world deal with the impacts of COVID-19, all have been urged to work together to ensure minimal disruptions to food sources and markets, tighter controls on illegal, unreported and unregulated fishing (IUU), end human trafficking and forced labour as well as better working conditions in the fisheries sector.

Fiji like all Pacific Island countries rely on coastal and ocean resources for food, livelihoods and for economic development.

(Adapted from: WiFN web, FBC News & WorldFish web)

## The University of the South Pacific launches its first seabin



**From left:** Carl Probert, Dr Chinthaka Hewavtharane, Alex Kwaoga, Professor Ciro Rico and Andrew Paris after the seabin launch at Lower Campus. (Image: SMS-USP).

The University of the South Pacific's School of Marine Studies (SMS) has launched its first seabin at its Lower Campus in Suva recently.

Seabins are essentially floating bins, which provide practical and tangible solutions to reduce the plastics found in our oceans.

Created by Australian surfer and philanthropist, Pete Ceglinisky, a seabin processes 25,000 liters of seawater per hour, removing rubbish and micro plastics and filtering chemical pollutants such as oil.

The seabin was originally purchased by Bing Gibson from Seabin Fiji and is managed by Carl Probert of Fiji World Olympian Association. Mr Probert approached Marine Pollution Masters student, Andrew Paris for collaboration with USP. Fitted to a pontoon, the submerged bin uses a pump to suck rubbish from the sea surface.

The Head of SMS, Professor Ciro Rico launched the seabin and congratulated team.

"This is a great research tool for data collection and we applaud the collaboration between SMS staff, students and the rest of the team that assembled the seabin, including partners from the sporting fraternity," Prof Ciro said. He added that the seabin deployed at the university's jetty would help researchers in the field of ocean pollution, micro plastics, as well as in waste management projects at the university.

Under the supervision of Dr Chinthaka Hewavitharane, Mr Paris and Postgraduate research student, Alex Kwaoga assembled the seabin and pontoon using recycled waste materials.

"Ocean pollution has become a major problem in our region and I am confident that this Seabin Project will be the beginning of a combined effort to amplify the urgent need to save our oceans and seas from all kinds of litter".

"The bin catches everything floating in the water and I check it on a daily basis and use the garbage collected for my research," Mr Kwaoga, the Solomon Island student said.

Dr Chinthaka acknowledged the support and collaboration from the Fiji Surfing Association and the Athletes for the Environment (AFTER) in the lead up to the installation of the seabin.

"The Seabin Project is a prime example of what can be achieved when concerned individuals and academic institutions like USP team up to find innovative solutions to save our planet".

More: [USP News](#)

**Right:** Researcher, Mr Kwaoga explaining the seabin on the pontoon at USP Lower Campus. (Image: SMS-USP)



## News from around the region

### Cook Islands' Mauke residents benefit from fisheries workshop

Forty-one residents of Mauke in the Cook Islands benefited from a 3-day workshop in October organized by the Cook Islands Fishing Association and the Ministry of Marine Resources (MMR).

The workshop which aimed at upskilling local Mauke fishermen, held practical sessions which included engine or outboard motor maintenance, trailer repairs, fishing techniques, rod and reel repairs as well as fish filleting.

Five local women also took part and Mauke's Fisheries Officer Tai George was happy to see women participating actively in the course.



Secretary of the Mauke Fishing Club, Martina Oti makes a fishing net. (Image: Cook Islands News)

Mr George commented, "It's good more people are showing an interest and the mamas also learned to repair and make fishing nets".

A month earlier, there was a demand for courses on how to repair and make fishing nets, and on how to use and maintain fishing reels, in Atiu.

President of the Fishing Association, Mr Don Beer said that these extra two projects were added to the Mauke workshop and all the supplies such as mesh, floats and weights were provided by the association.

Mr Beer commented on the mamas being good at sewing the nets and that in 3 days they have made a 60 metre net. "They can completely sew and repair fishing nets now, you can send them the mesh and they can do it," he said.

Since Mauke Island has very good stocks of "paru marau" or red snapper, there was a strong interest from locals for electric reels that would make it a lot easier to catch paru marau fish at depths of 250 to 300 metres.

Mr Steve Happ, a well-known local fisherman demonstrated the set-up, use and maintenance of the electric reels.

Several other activities were organized on Saturday, including a kids fishing competition with prizes and a sausage sizzle for the children.

Senior Fisheries Officer, Sonny Taituava said, "It was time to revisit and carry out the training as this is another avenue for the ministry to impart the skills and knowledge to the people, by enhancing traditional fishing knowledge and new methods".

(Source: Cook Islands News)

## Fiji's Ministry of Fisheries receives assistance from the Government of Japan



The Japanese Ambassador to Fiji, His Excellence Mr Omura Masahiro with Fiji's Minister for Fisheries, Mr Semi Koroilavesau during the handing over of equipment.  
(Image: Fiji Fisheries)

The Fiji Ministry of Fisheries and its aquaculture section received a timely boost in the form of equipment from the Government of Japan through its Grants Assistance for Grassroots and Human Security Projects Program (GGP).

The aquaculture equipment worth around FJD 370,000 were handed over by the Japanese Ambassador to Fiji, His Excellency Mr Omura Masahiro at the Naduruloulou Fisheries Service Centre in Kasavu, Naitasiri in early September.

Mr Omura during his speech highlighted that it has been an honour working with the Ministry of Fisheries for the past many years.

"Japan has a long relationship with the ministry especially the Naduruloulou Centre as we have been extending our ties since the 1980s.", Mr Omura said.

"I am certain that with the assistance, Naduruloulou will be able to expand and grow the services it provides especially for people living in communities. Through this assistance, the station will increase its breeding programme and more farmers will be able to stock their ponds." he added.

Mr Omura also commended the Ministry of Fisheries' efforts in growing their Food and Security Programme and that the Naduruloulou Fisheries Service Centre plays a central role in aquaculture development, such as providing technical advice, training and quality tilapia fry for farmers.

On site to receive the assistance was the Minister for Fisheries, Mr Semi Koroilavesau who thanked the Government of Japan through its ambassador to Fiji.

He acknowledged past technical and financial assistance rendered to the Ministry through the Japan International Cooperation Agency (JICA), the Overseas Fishery Cooperation Foundation (OFCF) and its sister programme, the GGP.

Mr Koroilavesau also highlighted that the Naduruloulou Fisheries Service Centre itself is a facility that was funded by JICA and the provision of infrastructure, wet and dry lab facilities, equipment and other technical advice have allowed the Ministry of Fisheries to grow and keep the facility operational to date.

Furthermore, the Fisheries Minister stated that the deployment of JICA aquaculture experts on two year engagements have assisted local staff with prawn, tilapia and carp breeding and stocking and the arrival of the specialized equipment has brought relief to the ministry in addressing food security and especially with the expected impact of COVID-19.

This year the Ministry of Fisheries through its Food Security Programme received a budget of FJD 500,000 to assist subsistence farmers in rural and peri-urban areas.

The arrival of the new tilapia hatchery equipment will also boost tilapia fry production to meet the high demand for re-stocking ponds around Fiji.

It is expected that the new equipment will raise the production of fry from 1.2 million to 2.2. million annually and direct assistance to freshwater farmers around Fiji will be improved.

In another ceremony in August this year, the Japanese government also rendered assistance to the Ministry of Fisheries with the signing of a Memorandum of Understanding with the Overseas Fishery Cooperation Foundation of Japan (OFCF) that will see the ice plant services in the rural and maritime areas of Fiji, improve.

Mr Shimamoto Kunikazu, the OFCF Resident Representative said during the MOU signing that the OFCF was proud to continue its relations with the Ministry since it established its office in Fiji in 1990.

Mr Kunikazu stated that since its establishment in the country, OFCF have been assisting the Fiji government through technical cooperation, promotion of senior fisheries staff exchange visits as well as the secondment of fisheries experts to support the Fiji Ministry of Fisheries.

He added, “this signing ensures that we start this new financial year with Phase 7 of our fisheries development assistance for Pacific Island nations”.



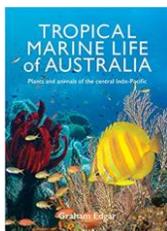
The spare parts for the new ice machines which were recently installed in Nabouwalu, Rotuma, Gau, Cicia, Moala and Kubulau have been provided by the OFCF as well as working tools to boost operations of the Lami refrigeration workshop and a Hiab truck to support the technical service delivery from the Lami Station.

The Minister for Fisheries, Mr Koroilavesau thanked the Government of Japan through its OFCF representative for the current and past assistance to the ministry.

**Left:** Fiji’s Minister for Fisheries and OFCF Rep. after signing the MOU in Suva. (Image: Fiji MoF)

(Adapted from the Fiji Ministry of Fisheries Newsletter)

## New Additions to PIMRIS



**Tropical marine life of Australia: plants and animals of the Central-Indo Pacific** / Edgar, G. Chatswood, NSW: New Holland Publishers, © 2019. ISBN: 9781921517587.

This book is the definitive guide to tropical Australian and central Indo-Pacific marine life, covering over 2,400 species of animals and plants. Groups covered include seaweeds, corals, molluscs, crustaceans, fishes, reptiles and mammals.

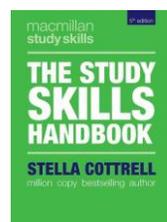
<http://newhollandpublishers.com/tml/>



**Rapid care analysis: report for Navolau and Nakorotubu districts 2019** / Women in Fisheries Network (Fiji). Suva, Fiji: WFN, © 2019.

This report highlights findings of a rapid care analysis carried out in 2019 in the districts of Navolau and Nakorotubu in the province of Ra, Fiji. It informs and raises awareness in Fiji and around the Pacific Islands region that care work can be viewed as paid work.

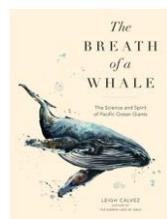
[https://womeninfisheriesfiji.org/wp-content/uploads/2020/07/RCA-Report-for-Nakorotubu-and-Navolau-in-Ra\\_WiFNfiji.pdf](https://womeninfisheriesfiji.org/wp-content/uploads/2020/07/RCA-Report-for-Nakorotubu-and-Navolau-in-Ra_WiFNfiji.pdf)



**The study skills handbook** Cottrell, S. 5<sup>th</sup> ed. London.: Red Globe Press © 2019. ISBN: 9781137610874.

This is the ultimate guide to study skills, written by million copy bestselling author Stella Cottrell. Her tried and tested approach, based on over twenty years' experience of working with students, has helped over a million students to achieve their potential.

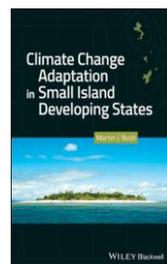
<https://www.macmillanihe.com/page/detail/The-Study-Skills-Handbook/?K=9781137610874>



**The breath of a whale: the science and spirit of Pacific Ocean giants** / Calvez, L. Seattle: Sasquatch Books, © 2019. ISBN: 9781632171863.

The author relates the stories of nature's most remarkable creatures, including the familiar orcas, in the waters of Washington State and British Columbia. The lives of whales are conveyed through the work of dedicated researchers who spent decades tracking them.

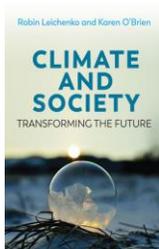
<https://sasquatchbooks.com/books/the-breath-of-a-whale/>



**Climate change adaptation in small island developing states** / Bush, M. Hoboken, NJ: John Wiley & Sons, c 2018. ISBN: 9781119132844.

This book focuses on the challenges posed by climate change impacts on the Small Island Developing States (SIDS). It analyses the impacts of climate change across the Caribbean, the Pacific Ocean, and the African and Indian Ocean regions in order to identify and tackle the real issues faced by *all* the small island States.

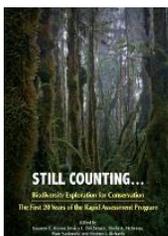
<https://www.wiley.com/en-us/Climate+Change+Adaptation+in+Small+Island+Developing+States-p-9781119132844>



**Climate and society: transforming the future** / Leichenko, R & O'Brien, K.  
Cambridge: Polity, c2019. ISBN: 9780745684390

This book presents current and emerging thinking on social dimensions of climate change. It introduces key concepts and frameworks for understanding the multifaceted connections between climate and society.

<https://www.wiley.com/en-us/Climate+and+Society%3A+Transforming+the+Future+-p-9780745684383>



**Still counting... Biodiversity exploration for conservation: the first 20 years of the rapid assessment program** / edited by Alonso, L. et. al. Arlington, WA: Conservation International, c2011. ISBN: 9781934151440.

The Rapid Assessment Program surveys have been a highly effective conservation tool for Conservation International and a multitude of partners. This book outlines the inception, history & achievements during its first two decades, 1990–2010.

<https://press.uchicago.edu/ucp/books/book/distributed/S/bo12388471.html>



**Manual on anchored fish aggregating devices (FADs): an updates on FAD gear technology, designs and deployment methods for the Pacific Island region** / Sokimi, W.; Blanc, M.; et. al. Noumea, New Caledonia: SPC, c2020. ISBN 9789820013216.

This manual updates on the SPC 2005 FAD manual by drawing on experience and lessons learned by FAD practitioners across the Pacific over the past decade. Practitioners include individuals from regional organisations, national and provincial....

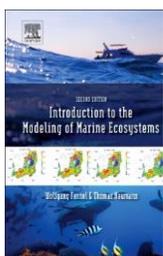
<https://press.princeton.edu/books/hardcover/9780691181202/timefulness>



**Women in Fisheries Information Bulletin #31** / Pacific Community., Noumea, New Caledonia: SPC, c2020.

This 31st issue of the Pacific Community's Women in Fisheries Information Bulletin includes eighteen original articles from Fiji, Indonesia, Palau, Papua New Guinea, Republic of Marshall Islands and Solomon Islands. Topics covered include tuna, roles of women as fishers and sellers in small-scale fisheries etc.

<https://coastfish.spc.int/en/publications/bulletins/women-in-fisheries/510>



**Introduction to the modelling of marine ecosystems** / Wolfgang, F. & Neumann, T.  
2<sup>nd</sup> ed. Amsterdam: Elsevier, ©2015. ISBN: 9780444633637.

This second edition provides foundational information on the construction of chemical and biological models - from simple cases to more complex biogeochemical models and life cycle resolving model components.

<https://www.sciencedirect.com/book/9780444633637/introduction-to-the-modelling-of-marine-ecosystems#book-description>

## Conferences, Workshops & Events Jan – Jun 2021

- 11 – 12 Jan. **International Conference on Coastal and Marine Spatial Planning (ICCMSP 2021)**, Singapore. Web: <https://waset.org/coastal-and-marine-spatial-planning-conference-in-january-2021-in-singapore>
- 11 Feb. International Day of Women and Girls in Science 2021. Web: <https://www.un.org/en/observances/women-and-girls-in-science-day/>
- 22 – 23 Feb. **13<sup>th</sup> World Congress on Aquaculture & Fisheries – ‘Sustainable Development in the field of Aquaculture’**. Webinar: <https://aqua.conferenceseries.com/abstract-submission.php>
- 24 – 25 Mar. **15th International Conference on Aquaculture and Marine Biology**. Paris, France. **‘Sustainable Aquaculture– New Challenges & Strategies’**. Web: <https://aquaculture-marinebiology.conferenceseries.com/>
- 19 – 21 May. **TUNA 2021 – Bangkok. 16<sup>th</sup> INFOFISH World Trade Conference & Exhibition**, ‘Sustainability, Technological Innovation & Marketing.’ Shangri-La Hotel, Bangkok, Thailand. Web: <http://tuna.infofish.org/>
- 8 Jun. **World Oceans Day 2021 – ‘The Ocean, Life and Livelihoods’** (Virtual Event). Web: <https://unworldoceansday.org/>