

FIS/2014/060 Developing pearl industry based livelihoods in the western Pacific

Facebook Posts 2016-2021



August 2016

Here's exciting insight into how agribusiness research can improve livelihoods. An Islet off the coast of Fiji, Qamea, has entered into a long-term agreement with Civa Fiji Pearls to expand spat collecting activities as part of the region's cultured pearl industry. This outcome is a direct result of ongoing ACIAR-funded pearl research in the Pacific. To read the story, go to: <http://fijisun.com.fj/tag/civa-fiji-pearls-limited/>.



September 2016

The Tongan Mabé Pearl Handicraft and Jewellery Competition was a big success last week with a wonderful diversity of beautifully-crafted entries. A number of entries explored clever and appealing ways to add value through merging traditional design with contemporary craftsmanship.

Prizes were awarded across three categories (pendants, necklaces and jewellery, handicrafts referencing traditional Tongan design and an open category, including mabé shell handicraft).

Artisans competed as 'beginner' or 'experienced'. First, second and third places were determined for each category, with 18 awards overall. An additional special award celebrated 'Big Mama's Blue Lagoon Pearls', as best new Tongatapu farm exhibit.

Tropical Aquaculture Research at #USC, with funding from the Australian Centre for International Agricultural Research, proudly supports the ongoing development of pearl industries across the Indo-Pacific.

October 2016



#Tonga's remote Ha'apai Island was the centre of attention recently when the Australian #Minister for International Development and the #Pacific, the Hon. Concetta Fierravanti-Wells, and Tonga's Minister for Fisheries and Agriculture, Forestry and Food, the Hon. Semisi Fakahau, delivered over 800 #hatchery-reared, juvenile oysters to two remote island villages. A Tropical Aquaculture Research tour and demonstrations showed how Australian Centre for International Agricultural Research -funded projects are providing local communities with improved livelihood opportunities through pearl farming.



October 2016

#Fiji's #Raviravi Village had cause to celebrate last week after their first-ever half-#pearl harvest! This tremendous milestone sets the scene for a promising Fijian industry set to expand across other villages and link in with the production of #jewellery and professional #handicrafts by local women's groups. These advances are made possible by Australian Centre for International Agricultural Research -funded research which is headed by #USC's Tropical Aquaculture Research in collaboration with the Fijian Government (Ministry of Fisheries). The Fiji Times provides further insight at: <http://www.fijitimes.com/story.aspx?id=374038>



October 2016

Tongan flag-bearer at the Rio #Olympics opening ceremony and international media sensation, Pita Taufatofua, was recently spotted relaxing in Tonga wearing a stunning Tongan-made mabé pearl pendant. The pendant was designed and crafted in Tonga, by Australian/Tongan artist, Debra Allan, using a locally-grown #mabé #pearl, set on a tapa bark background. Pita's pendant was one of the prize-winning entries in the recent Tongan Mabé Pearl Handicraft and Jewellery Competition. #USC's #Tropical #Aquaculture #Research proudly supports the development of Tonga's mabé pearl industry



October 2016

A new progress report from Marie Erl, #jewellery designer and trainer working on the project 'Developing #pearl-industry-based livelihoods in the Western Pacific', has highlighted solid progress in recent months. From the Ba Women's Group's building refurbishments, through to new training skills and determining how to progress the best path-to-market for their manufactured pieces, this work is helping to cement the foundations for a successful, local industry. #USC Tropical Aquaculture's pearl and #handicrafts research is made possible by the Australian Centre for International Agricultural Research. We'll give you more insight into Marie's report over the coming weeks.

The Ba Women's Forum in #Fiji have been learning new skills to add to their unique handicrafts repertoire. The Forum members recently were trained in special #macramé methods and have also experimented with producing #beads from alternative, local materials. The women are becoming well known for the amazing mother-of-#pearl pieces that have featured in up-market fashion parades and a recent trade show in Sydney, Australia. Their in-country training and business skills support is part of the Australian Centre for International Agricultural Research (ACIAR)-funded project 'Developing pearl-industry-based #livelihoods in the Western #Pacific'.



November 2016

Jewellery items exclusively made by 'Marama Shellcraft' as part of the 'Ba Women's Forum,' Fiji were recently promoted at Sydney's SHAPIRO'S Gallery during the annual Maketi Ples. The two-week event created strong interest in Australia and resulted in over \$2,000 worth of sales. Profits go directly to the Ba Women's Forum.

The Ba Women's Forum is a partner in an economic development project funded by the Australian Centre for International Agricultural Research and delivered by #USC Tropical #Aquaculture Research (TAR). This year's Maketi Ples is the first time the Ba Women's Forum have presented their items outside of Fiji. And, according to USC TAR's Commercial Development Manager, Theo Simos, the event was a huge success!



November 2016

****MAJOR MILESTONE****

#Fiji's cultured #pearl industry has reached a significant milestone with a new farm now in business. Decsi Pearls (based in Namarai, Viti Levu) recently harvested 3500, high-quality pearls with an excellent colour range. Success and continued growth in this industry means more opportunities for local people and a stronger economy.

Since commercial pearl production began in Fiji in 2000, only three farms have contributed to production, despite international demand exceeding supply. Decsi Pearls will continue to expand their operations and predicts a strong 2017.

The University of the Sunshine Coast Tropical Aquaculture Research, in partnership with the Australian Centre for International Agricultural Research, supports the development of Fiji's pearl industry.



November 2016

****PEARL FARM = BOOST TO FIJI LIVELIHOODS****

With the recent success of the Decsi #Pearl Farm, Fiji, local village communities are set to benefit. To date, Decsi's oysters have been sourced from two local communities and the Fiji Fisheries National Spat Collection Program. And, the demand for oysters is set to increase considerably in 2017 and beyond.

The University of the Sunshine Coast Tropical Aquaculture Research group, in partnership with the Australian Centre for International Agricultural Research, are providing participating communities (Namarai and Nacobau) with more spat collectors to increase spat recruitment and oyster production capacity. The communities are also being introduced to half pearl farming as an additional business skill.



November 2016

Here's a hands-on approach to establishing a #mabé culture trial in New Ireland Province, #PNG! National #Fisheries Authority Technical Officers participated in a recent three-day oyster seeding workshop run by #USC Tropical Aquaculture Research staff. Together, the team successfully seeded over 130 oysters which will be harvested early 2017. This work is proudly funded by the Australian Centre for International Agricultural Research and is part of the USC TAR project: 'Pearl industry development in the Western Pacific'.



November 2016

#Seeded #oysters were deployed on long lines within the New Ireland Province lagoon, PNG, following the recent oyster seeding workshop in Kavieng. This work is focused on equipping local communities to develop #mabé pearl industries in the future and is part of the #USC TAR project: 'Pearl industry development in the Western Pacific' and is funded by Australian Centre for International Agricultural

Research .

February 2017

Stunning handicraft pieces follow successful harvest PNG's Miss New Ireland 2016 recently showcased pearl handicraft jewellery made by local artisans in Kavieng, New Ireland Province. Many pieces produced by the local artisans came from last year's harvest of TAR grown Pteria penguin. Current #PNG pearl production relies on sourcing wild juvenile oysters for grow out.

TAR hopes to ensure sustainable supply and boost local industry potential by further developing oyster hatchery production.

This work is part of USC TAR's research into developing pearl-industry-based livelihoods in the Western Pacific and is funded by the Australian Centre for International Agricultural Research.



March 2017

Marbona Frank is a student at the USC TAR jewellery training workshop on Samarai Island, Papua New Guinea. Marbona, who has four children and a grandchild, sadly lost her husband in 2013. The training provides Marbona with an exciting new livelihood opportunity. And, she has a real flair for jewellery making having already produced beautiful, unique pieces!

Marbona's training is part of the project: 'Developing pearl-industry-based livelihoods in the Western Pacific'. This project is funded by the Australian Centre for International Agricultural Research. USC TAR proudly acknowledges International Women's Day, March 8, 2017.



March 2017

Happy International Women's Day Today the world celebrates the capacity of women to achieve great things. Throughout the #Pacific, there are many strong women who, against the odds, overcome incredible feats. Sineja Susan Lincy (Susan) is one such woman. Susan, a widow from Logea Island, Papua New Guinea, lives one and a half hours by canoe from the #USC TAR jewellery and handicraft classes on Samarai Island (three hours round trip). One morning, on her way to class, Susan noticed her canoe had floated away overnight and was unable to attend that day. The next day she borrowed a canoe to make sure she could continue with the training and proudly displayed the earrings and pendant she had made on her 'day off'. Susan's training is part of the project: 'Developing pearl industry-based livelihoods in the Western Pacific'. This project is funded by the Australian Centre for International Agricultural Research.



March 2017

PNG jewellery and handicraft classes a big success. Scenes from the highly successful, recent #USC TAR jewellery and handicraft classes on Samarai Island, Papua New Guinea. The enthusiastic graduates now eagerly anticipate a tour group of 50 Europeans and a cruise ship to visit the nearby island, Doini both in April.

These classes, which are designed to provide new livelihood opportunities for local people, are part of the project 'Developing pearl-industry-based livelihoods in the Western Pacific', funded by the Australian Centre for International Agricultural Research. A potential follow up marketing class is in the pipeline...watch this space!



March 2017

Thank you!!

USC TAR would like to say a huge thank you to Meriba-May Igara from the Alotau Waterfront Lodge, Milne Bay Province, PNG for hosting the recent jewellery training workshops (covered in our last Facebook post) and to the very talented, Sue McCuaig, who volunteered her time as a creative design trainer through Australian Business Volunteers.

The generosity and professionalism of these women is greatly appreciated. Funding for this work was provided by the Australian Centre for International Agricultural Research as part of the project 'Developing pearl-industry-based livelihoods in the Western Pacific'.

March 2017

Celebrating outstanding women in science

Congratulations to Tracy Aisea for becoming the first female Head of #Aquaculture for the Kingdom of #Tonga. Tracy studied Marine Science at the University of the South Pacific in Fiji and is planning to commence her Masters studies in Japan later this year.

Tracy, who's achievements were officially celebrated on International Women's Day, has been working closely with #USC TAR team members, Sophie Gordon and Max Wingfield, as part of the project 'Pearl Industry Development in the Western Pacific' funded by the Australian Centre for International Agricultural Research.



March 2017

Ha'apai training prepares new pearl farmers for 2018 harvest #USC TAR and Tonga Ministry of Agriculture, Livestock and Fisheries staff recently completed the first training workshops for mabe' pearl farmers in the island group of Ha'apai, Tonga. Participants were taught pearl farm management skills and how to implant oysters to culture mabe' pearls. Attendance was high and workshops spanned the remote islands of Lifuka, Uiha and Uoleva. The oysters seeded during the workshops will form Ha'apai's first pearl harvest and are expected to yield over 70 mabe' pearls in early 2018. This training is part of the 'Pearl Industry Development in the Western Pacific' project funded by the Australian Centre for International Agricultural Research.



April 2017

Scenes from recent USC TAR-run mother-of-pearl jewellery training workshops at Alotau Waterfront Lodge PNG. Twenty artisans attended the workshops and general feedback was very positive. Participants said they left with a range of skills to develop new pieces

that may attract broader interest in their products. Funding for this work was provided by the Australian Centre for International Agricultural Research as part of the project 'Developing pearl-industry-based livelihoods in the Western Pacific'. Workshop material was sponsored by the Direct Aid Program Australian High Commission Papua New Guinea. Training was provided by volunteer Sue McCuaig through Australian Business Volunteers



April 2017

Traditional PNG jewellery producers shine! Producers of traditional ceremonial dance jewellery, Selina Gawi, Paula Mogia and Mary Simaga from the remote Rarbarba Village, Milne Bay Province, PNG, travelled a day by boat to attend a recent USC TARrun jewellery training workshop at Alotau Waterfront Lodge.

This talented group learnt how to incorporate traditional design elements into more contemporary designs for everyday wear. Their motivation to improve livelihood opportunities is inspiring. Funding for this work was provided by the Australian Centre for International Agricultural Research as part of the project

'Developing pearl-industry-based livelihoods in the Western Pacific'.



May 2017

Mabe' pearl x-rays ... new method to measure thickness?

#USC TAR researchers, with the help of Australian Volunteers for International Development (AVID), recently trialled a novel approach to measuring cultured pearl thickness when they successfully took a range of x-rays of mabe' pearls (also called half pearls) at Vaiola Hospital, Tonga. The team hopes to develop x-ray testing procedures with radiology staff. If successful, this approach could enhance industry capacity to determine product quality. This trial was supported by the Tongan Ministry of Fisheries and the Tongan Ministry of Health. USC TAR pearl research is funded by the Australian Centre for International Agricultural Research.

June 2017



Mother-of-pearl (MOP) shell jewellery and handicrafts offer promising livelihood opportunities for women in PNG. The recent #USC #TAR-run MOP business training workshop on Samarai Island, presented by Mollie Bain - Business Mentor from Australian Business Volunteers Abroad (ABV), was very well received. Topics covered: Identifying market opportunities; Meeting customer expectations; Getting product to market; Pricing; and Record keeping. This work is funded by the Australian Centre for International Agricultural Research and is part of the project 'Developing pearl-industry-based livelihoods in the Western Pacific'.

June 2017

New mabè pearl farm to benefit Fijians



Fiji Broadcasting Corporation recently posted this story about exciting new #mabè' pearl (half-pearl) farm developments in Qamea. Civa Fiji Pearls, #USC TAR, and the Vanua Trust of Laucala, joined forces to establish the farm. <http://www.fbc.com.fj/fiji/51505/half-pearl-farm-to-beestablished-on-qamea>.

This work provides opportunities for women and young people in particular who live in remote areas of Fiji. It transpires from the steady expansion of the local pearl industry thanks to the support of the Fiji Ministry of Fisheries, and funding from the Australian Centre for International Agricultural Research.



June 2017

Video update from Tonga!

Fantastic insight into the work being undertaken by the pearl team in Tonga. In this clip, Sophie Gordon explains how the USC TAR project, 'Developing pearl industry-based livelihoods in the Western Pacific' has been helping pearl farmers in Tonga access spat (juvenile pearl oysters). Sophie's work has been funded by the Australian Centre for International Agricultural Research.



August 2017

Fiji's Natuvu community's first harvest

Awesome pictures from Fiji's expanding pearl industry. Ladies from the Natuvu community are pictured harvesting their first pearls, and the oysters can be seen being cleaned by members of the Ravita community. Both communities' livelihoods stand to benefit through farmed pearls.

These communities are being assisted by USC TAR researchers, in conjunction with the Ministry of Fisheries and Forests, Fiji. This work is part of Australian Centre for International Agricultural Research funded project 'Developing pearl-industry-based livelihoods in the Western Pacific'.



August 2017

Fijian pearl infrastructure receives welcome boost

As of end-August, forty-eight kilometres of pearl oyster spat collectors (242 individual collectors) have been delivered to eight Fijian farms with the last batches sent to J.Hunter Pearls and Maivalili Pearls in Savusavu Bay, Fiji. These will help to maintain oyster supply to Fiji's expanding pearl industry, and to replace infrastructure lost during Tropical

Cyclone Winston.

This initiative, which is being coordinated by USC TAR, is a collaboration between the Australian Centre for International Agricultural Research and Ministry of Fisheries, Fiji.



August 2017

MSF keep creating beautiful products!

Through the [Australian Centre for International Agricultural Research](#)-funded project 'Developing pearl-industry-based livelihoods in the Western Pacific', USC TAR staff are helping the talented MSF team to produce and sell incredible Fiji-made handicrafts and jewellery.

September 2017



USP students to play important role in local pearl research

Three Masters students from the [University of the South Pacific \(USP\)](#) are now working with Prof Paul Southgate and Dr Pranesh Kishore from the [University of the Sunshine Coast](#), local Fijian communities and [pearl farms](#) on aspects of the [Australian Centre for International Agricultural Research \(ACIAR\)](#) funded project 'Pearl industry development in the Western Pacific'. Their research is supported by ACIAR and USP through the ACIAR/USP Scholarship scheme. L to R: Charlene Erasito, John Adams Carreon and Kristina Sankar.



September 2017

Tonga's newest women pearl farmers make their mark

[Ministry of Fisheries - Tonga](#), Fisheries Officer, Siaso Vi and USC TAR PhD Student, Sophie Gordon, recently ran successful [mabé'](#) pearl seeding workshops with pearl farmers in the island group of Ha'apai, Tonga. The talent and enthusiasm displayed at the workshops was outstanding, not to mention Tonga's newest female pearl farmers, Mele and Finau! This work is funded by the [Australian Centre for International Agricultural Research](#).



September 2017

Tonga's Ha'apai community harvests their first mabe' pearls!

The USC TAR team is happy to announce the recent harvest of Ha'apai's very first #mabe' pearls! In conjunction with Ministry of Fisheries - Tonga, and as part of the Australian Centre for International Agricultural Research-funded project, 'Pearl industry development in the Western Pacific', the Ha'apai community is making great progress towards a stronger future



October 2017

MSF activity update

Marama Shellcraft Fiji - MSF has been successfully putting new handicrafts techniques into practice with the guidance of esteemed jewellery designer, Neke Moa. Take a look at their beautiful work which involves the use of specialised engraving, 'four plaits', and unique designs based on 'small turtle'. MSF's work is part of the TAR project 'Developing pearl-industry-based livelihoods in the Western Pacific', and is funded by Australian Centre for International Agricultural Research.



October 2017

Welcome Liza and Mirinda

USC TAR welcomes Liza Coffey and Mirinda Gibson who recently began working with the Marama Shellcraft Fiji - MSF at Ba Women's Forum (BWF) in Fiji. They bring a range of new skills to the group, including marketing and business qualifications. We look forward to working with Liza and Mirinda.

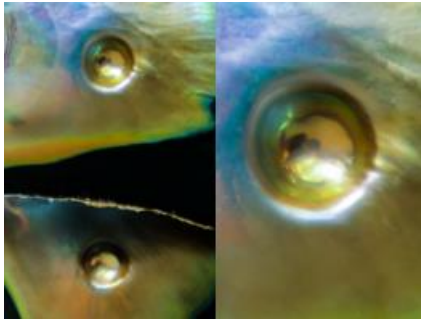
MSF is a initiative that strives to improve the livelihoods of local women and their families. It is supported by the Australian Centre for International Agricultural Research in collaboration with BWF, as part of USC TAR pearl research in the region. This initiative is also supported by Scope Global Fiji.



October 2017

Kasa models 'Vula'

The beautiful Kasa, who works for the [Ba Women's Forum Fiji](#), is pictured recently wearing a fashion wear neckless, 'Vula', crafted by the amazing [Marama Shellcraft Fiji - MSF group](#). Vula is made from #pearl shell and voivoi.



December 2017

Tonga's exceptional pearls

Exceptional mabe' pearls were produced recently by the [Ministry of Fisheries - Tonga Aquaculture team](#) and [USC TAR researchers](#), Max Wingfield and Sophie Gordon. This is made possible by the [Australian Centre for International Agricultural Research](#)-funded project, 'Developing pearl-industry-based livelihoods in the Western Pacific.'

February 2018

Developing a national spat collection program for pearl oysters in the Fiji Islands supporting pearl industry development and livelihoods



Pranesh Kishore^a, Garry Bingnald Vuibeqa^b, Paul C. Southgate^{a,*}

^a Australian Centre for Pacific Islands Research and Faculty of Science, Health, Education and Engineering, University of the Sunshine Coast, Maroochydore, Queensland 4558, Australia

^b Ministry of Fisheries and Forests, Fisheries Department, P.O. Box 3165, Lami, Fiji

ARTICLE INFO

Keywords:
Pearl oyster
Spat collection
Pinctada margaritifera
Pteria penguin
Pearl culture
Fiji Islands

ABSTRACT

Cultured pearl farming in Fiji relies on wild spat collection to supply the oysters used for pearl production. This supply can be inconsistent and a research program was implemented to determine recruitment of pearl oysters to spat collectors at sites throughout Fiji as a basis for developing a national spat collection program to improve reliability of oyster supply to the industry. Twenty-nine sites across Fiji were used in this study. Spat collectors consisted of a 100 m longline from which 310 individual spat collectors were suspended. Spat collectors were deployed for a period of 10–15 months when the number of pearl oyster (*Pinctada margaritifera* and *Pteria penguin*) spat attached to each collector was counted and shell size recorded. A total of 5478 *P. margaritifera* juveniles were collected from all sites with the highest number of recruits (693) and the highest number of recruits per collector (2.10 ± 0.17) occurring at Nacobau (Vanua Levu). The largest mean dorso-ventral measurement (DVM) of *P. margaritifera* at any site was 8.61 ± 0.30 cm while the smallest was 4.26 ± 0.13 cm. Some sites did not record any *P. margaritifera* recruitment during the study and these were generally sites with relatively turbid water. A total of 4224 *Pt. penguin* were collected from all sites, with the highest number of recruits (495) recorded from Namarai (Viti Levu). The mean DVM of *Pt. penguin* ranged from 7.53 cm to 13.62 cm across sites. Results indicate that *Pt. penguin* have greater tolerance of more turbid inshore sites than *P. margaritifera* based on greater levels of recruitment at these sites. Results identified sites supporting high levels of pearl oyster recruitment as a basis for an ongoing national spat collection program, and support better targeting

Our compliments are extended to [Pranesh Kishore](#) and team for their recent publication on the development of a national spat collection program for pearl oysters in Fiji.

Their results will help to identify the best sites for community collection of oysters that support development of the Fiji pearl industry, facilitate community engagement and bring considerable socio-economic benefits to remote coastal communities. The report can be downloaded at: <https://doi.org/10.1016/j.aqrep.2017.12.004>



February 2018

[Marama Shellcraft Fiji](#) - MSF and Ba Women's Forum members and staff, under the guidance of Pranesh Kishore and Neke Moa, recently graded mabé' pearls for use in their jewellery and handicrafts business. These training activities are supported by #USC #TAR research and funded by the [Australian Centre for International Agricultural Research](#)

February 2018

On behalf of the [Tropical Aquaculture Research](#) (TAR) team in Australia and Fiji we would like to thank Liza and Mirinda for their efforts over the past six months with the [Marama Shellcraft Fiji - MSF](#). Liza and Mirinda, who are embarking on further travel, have injected invaluable support and enthusiasm into our activities and built last capacity with MSF. Their input is greatly appreciated, and support for Liza and Miranda by Australian Volunteers for International Development (Fiji) is gratefully acknowledged.



February 2018

[University of the South Pacific- Australian Centre for International Agricultural Research](#) scholarship student, Charlene Erasito, who is working on the [Tropical Aquaculture Research](#) project, 'Pearl industry development in the Western Pacific', was pictured in the field recently during a cleaning and maintenance trip. Charlene is seen here scrubbing pearl oyster panel nets to clean oysters of fouling. More on Charlene's work in the coming weeks.



February 2018

Record Tonga pearl oyster hatchery output

In fantastic news for Tonga, [Ministry of Fisheries - Tonga](#) staff, with the help of USC TAR Scientist, Max Wingfield, have cultured eight million winged pearl oyster larvae to settlement stage. Congratulations Siosi V, Max and the Aquaculture Team in Tonga for making the hatchery run such a success despite the best efforts of Tropical Cyclone Gita!!

This work is funded by the [Australian Centre for International Agricultural Research](#) through the [University of the Sunshine Coast](#) project 'Developing pearl-industry-based livelihoods in the Western Pacific. Resulting winged pearl oysters will be farmed to produce half-pearls or 'mabe' by farmers throughout Tonga.



March 2018

Fiji Ladies' Groups profit from half-pearl sales

Thanks to on-farm training, Fiji Ladies Groups are now farming winged pearl oysters, collecting and selling spat, and successfully implanting oysters for half-pearl (mabé) production. The Raviravi Ladies Group recently achieved their second half-pearl harvest and sold them for \$FJD735. And the Natuvu community earned \$FJD800 from their first half-pearl harvest.



March 2018

Hooray for rural women!

The [Australian Centre for International Agricultural Research](#) (ACIAR) Fisheries team and #USC #TAR scientists came together this week to celebrate empowerment of rural Fiji women.

During a special visit by senior ACIAR staff, Ba Women's Forum and [Marama Shellcraft Fiji - MSF](#) women gave presentations on value adding half-pearls. They highlighted the livelihood benefits the USC TAR training (funded by ACIAR) is providing. A jewellery and handicrafts display showcased their amazing products, which are proving to be commercially successful.



March 2018

Huge livelihood potential for Qamea Ladies!

#USC TAR researchers recently ran training for the Ladies' Group from the newest community (Qamea) to adopt half-pearl farming. The first round was successful, with over 100 oysters implanted.

The second round of training and implanting will be in November and should see this group harvest over a thousand mabe in 2019!

This activity is funded by the [Australian Centre for International Agricultural Research](#) through USC TAR project work. [Civa Fiji Pearls](#) generously donated black lip pearls to the group for the training.



April 2018

Fiji's Raviravi ladies continue to reach new heights!

#Raviravi Ladies Group members, Fiji, are pictured sorting and tying winged pearl oyster spat to chaplets to be cultured for half-pearl production. The ladies recently reported their best spat harvest, with around 3500 spat collected. They are part of ongoing #USC #TAR training within the #ACIAR-funded project, 'Developing pearl industry based livelihoods in the Western Pacific'.



April 2018

The awesome, beautiful team at [Marama Shellcraft Fiji - MSF](#) with their talented trainer, Neke Moa, centre back row.



April 2018

Increasing wild spat collection in Fiji

Masters of Science student, Kristina Sankar, is identifying strategies to maximise [#wild #spat](#) collection in Fiji.

Her research is focused on black-lip pearl and wing oyster in Namarai Bay and Naacobau Bay, North-Eastern Viti Levu. To date, she has investigated the abundance of spat at different water depths and compared numbers. Her goal is to determine the best immersion times for maximum spat collection.

Kristina is a scholarship student funded by the Caribbean Pacific Island Mobility Scheme. She has been working on the [Australian Centre for International Agricultural Research](#)-funded [#USC #TAR](#) project 'Developing pearl industry-based livelihoods in the Western Pacific'. Kristina has completed the data analysis for this work, and is now writing her research papers.



April 2018

More keen students!

[#USC #TAR](#) researchers have kicked off a new round of training for the ladies in the Ravita village, Fiji on how to implant and farm half-pearls. The women used around 153 winged pearl oysters which they farmed, collected and implanted following [#USC #TAR](#) training. The group are predicted to produce 300 half-pearls this cycle, worth approximately \$FJD2500.



May 2018

MSF macrame bracelets incorporate Raviravi mabé pearls

In a show of awesome girl power, jewellery designer and [Marama Shellcraft Fiji](#) - MSF trainer, Neke Moa, and the MSF team have created a beautiful macrame bracelet based on the first #mabe harvest by the local #RaviraviWomen's Group.

While still in its early days, the new product has drawn much positive attention from the general public. This outcome is made possible by an expanding local half-pearl industry and is a great example of the potential to improve women's livelihoods. The MSF team has mastered making the bracelet and is focused on refining production, and marketing. These activities are funded by the [Australian Centre for International Agricultural Research](#) through #USC #TAR's 'developing pearl industry based livelihoods' project.

Journal of Shellfish Research, Vol. 37, No. 1, 79-91, 2018.

ECONOMIC MODELING OF ROUND PEARL CULTURE IN FIJI AND ASSESSMENT OF VIABLE FARM SIZE

May 2018

WILLIAM L. JOHNSTON,^{1,3*} DAMIAN HINE² AND PAUL C. SOUTHGATE³

¹Queensland Department of Agriculture and Fisheries, 47 Mayers Road, Nambour, Queensland 4560, Australia; ²UQ Business School, The University of Queensland, 39 Blair Drive, St. Lucia, Brisbane, Queensland 4067, Australia; ³Australian Centre for Pacific Islands Research and Faculty of Science, Health, Education and Engineering, University of the Sunshine Coast, 90 Sippy Downs Drive, Sippy Downs, Queensland 4556, Australia

ABSTRACT Round pearl culture is an increasingly important industry in Fiji. Significant barriers to entry include high capital outlay and technical requirements, and a high turnover of small to medium size farms has limited industry growth. This study developed a viable-scale farm model for round pearl culture in Fiji to assist new or potential entrants understand costs, risks, and production levels required for success. Major production costs were labor (51%), oyster stock (18%), and pearl nuclei (10%). At steady state, median annual profitability was determined to be \$156,362, but inclusion of price and production risk factors reduced annual profitability to \$29,463. The model farm achieved an internal rate of return of 36% with a benefit-cost ratio of 1.8 and payback period of 5 y. Farms holding 100,000 oysters and producing more than 8,000 pearls are deemed of viable scale. At this scale, farms can attract overseas pearl seeding technicians, apply economies of scale, and invest profits into future development. Given the average rural household income in Fiji is \$5,800, round pearl culture offers significant economic opportunity and delivers socioeconomic benefits for rural communities in upstream (oyster stock supply) and downstream (handicrafts, jewelry, and tourism) activities.

KEY WORDS: Fiji Islands, pearl farming, pearl economics, pearl oyster, pearl farm profitability

Congratulations to #USC #TAR PhD student Bill Johnston, whose recent publication, in the 'Journal of Shellfish Research', outlines the economics of round pearl culture in Fiji.

Bill's research makes it possible for the first time to estimate the minimum viable size for a round pearl farm in the region.

His analysis will assist the Fijian Government in policy development for the pearl sector,

facilitate business establishment and industry expansion, and will help regional agencies and donor research organisations prioritise funding and research activities.

Bill's PhD research focuses on the economics of pearl farming and related activities in Fiji and Tonga and is funded by the [Australian Centre for International Agricultural Research](#).



May 2018

#USC #TAR researchers recently witnessed the incredible sense of pride and achievement experienced by Ratu Jone Maivalili following the first harvest of mabé pearls from his farm in Savusavu Bay, Fiji.

Our congratulations are extended to Ratu Jone and his community for reaching such a significant milestone.

The pearls will be cut from the shells and value-added using artistic carving of surrounding mother-of-pearl, before domestic sale.

Thanks to training organised and funded through the [Australian Centre for International Agricultural Research](#) pearl livelihoods project, six communities and one round pearl farm in Fiji now regularly produce mabé pearls. As a result, income-generating opportunities are improved in remote areas, and Fiji can boast a broader product range within their developing cultured pearl industry

June 2018



Cyclone Gita wreaked havoc across significant areas of Tonga earlier this year. However, thanks to the resilience of the local people, the island nation is recovering well.

Pearl industry research by [USC TAR](#) and local industry, funded by [ACIAR](#), is also back on track. From improving spat production, to assessing suitable sites for pearl farms, through to building production skills and other training, Tonga is actively working towards a productive and sustainable pearl industry.



June 2018

Pearl training in Tonga

The potential to create a prosperous pearl industry is being embraced by farmers in Tonga. This is evident in the support by locals for [#USC #TAR](#)-run workshops on pearl quality and consistent grading. The recent workshop in Vava'u was a big success! Congratulations to all involved.

This activity is part of the [Australian Centre for International Agricultural Research](#)-funded project, 'Developing pearl industry based livelihoods in the Western Pacific'.



June 2018

In an exciting step forward for Tonga's expanding pearl industry, the Pearl Information Centre and Workshop at Vava'u is now open for business.

Established for the Tongan National Pearl Farmers Association by the Ministry of Fisheries and the Ministry of Commerce and Labour, and supported through [#ACIAR](#)-funded, [#USC #TAR](#) research, this new facility provides an outlet for local industry to market their products, and also functions as an education and training facility.



June 2018

Sailosi Hemaloto (Mabe' pearl farmer from Tonga) is pictured recently in Vava'u Harbor checking some experimental spat baskets. The spat in the baskets are part of a trial assessing the feasibility of air-freighting newly-settled spat straight from the Tongatapu hatchery to the Vava'u farms.

#USC #TAR scientists are working with people like Sailosi to enable Tonga's communities to improve their livelihoods through pearl farming activities. Research is funded by #ACIAR.

July 2018

The Marama Shellcraft Fiji - MSF team are back in action after a flood wreaked havoc across their training premises earlier this year. The town centre in Ba was like a river torrent, and the Bure was covered in 10mm silt after being saturated with mud and water.

The team experienced significant damage to books, frames and other materials, but managed to protect their machines. Many enthusiastic helpers joined forces to clean up after the flood. The wonderful, Manjula Dayal (local businesswoman and Ba Women's Forum member) and her workers presented with a water truck and water blaster. The MSF team and their trainers, Neke and Marie, from USC TAR, feel blessed that no one was hurt during the weather event. It is now business as usual!

USC TAR's work with the MSF team is funded by the Australian Centre for International Agricultural Research



Ambio
<https://doi.org/10.1007/s13280-018-1078-z>



RESEARCH ARTICLE

Artisanal, shell-based handicraft in Papua New Guinea: Challenges and opportunities for livelihoods development

Nitya S. Simard, Thane A. Miltz, Jeff Kinch, Paul C. Southgate

Received: 15 February 2018 / Revised: 21 June 2018 / Accepted: 6 July 2018

July 2018

USC TAR researcher, Nitya Simard, recently published 'Artisanal, shell-based handicraft in Papua New Guinea: Challenges and opportunities for livelihoods development' in the journal Ambio. Congratulations Nitya!

The publication examines the artisans' demographics, the socio-economic impacts of the shell-based handicraft sector, and the marine resources used by the livelihood activity. It can be downloaded at:

<https://link.springer.com/article/10.1007/s13280-018-1078-z>



July 2018 Over the coming months, we will profile the members of the awesome [Marama Shellcraft Fiji - MSF](#) team. This week we feature Nagale, Sabreen and Ashweena (pictured L to R with framed MOP shell produced by the MSF team).

Nagale Tekela has three children and lives in Natawarau. She has completed one year training in computing and was previously secretary and treasurer of the local Women's Club. Nagale likes working on the machines cleaning shell.

Sabreen Shahid (Saby) has four children and lives in Namada. Saby has spent the last many years at home minding her children and is very happy about the training opportunities that MSF provides. Saby likes macramé knotting the most.

Ashweena Ashna Khan (Ash) lives in Namada. Ash is computer literate and has a Diploma in Accountancy. She likes working on all the machines and learning macramé techniques.



July 2018

Part two in our series of profiles on the talented team at [Marama Shellcraft Fiji - MSF](#). This week we feature Naazmin Ali and Armila Prasad.

Naazmin (Naaz - pictured front) has two children and lives in Varokoba. Naaz enjoys every aspect of training, making and selling products. She is also our vigilant bookkeeper. Naaz would like to learn computer skills to support her role as secretary and supervisor.

Armila has three children and lives in Ba town. She likes braiding, knotting and cleaning shell, and is an [MSF](#) sales person. She enjoys helping the other trainees and is keen to learn more about computers.

MSF training and development is supported through the [ACIAR](#)-funded [USC TAR](#) project, 'Developing pearl industry based livelihoods in the Western Pacific'.

August 2018



A handicraft artisan from Nusa Lik Island, New Ireland Province, Papua New Guinea, is pictured (along with her pet lorikeet) preparing shells for a necklace. Artisans across New Ireland Province have joined forces with [USC TAR](#) researcher, Nitty Simard, to define the benefits and challenges of an expanding local sector. Their efforts are supported by [ACIAR](#).



August 2018

Great to see the TAR team in Fiji (Nitya Simard and Pranesh Kishore) and the Raviravi women have made it into the local Fiji News.

Thanks to USC TAR training, the women of Raviravi Village in Macuata are now equipped with the knowledge and skills to make pearl-shell-based jewellery. Their training is supported by the [Australian Centre for International Agricultural Research](#).

<http://www.fbc.com.fj/fiji/67673/women-learn-to-make-shell-jewelry-for-better-economic-returns>

August 2018

Part three of our [Marama Shellcraft Fiji - MSF](#) profiles. This week we meet Tema and Lucy.

Temalesi Buadromo (Tema - pictured left) is the mother of three and lives in Vatukoula. She has worked front desk in hotels, for the Narsey plastic industry and in the gold mine in Vatukoula. She knows how to weave voivoi and dye somo. Tema volunteers for the Ministry of Education and wants to eventually become a MSF trainer.

Luisiana Yavala (Lucy) has one child and lives in Vatukoula. Previously, Lucy was a machinist in a garment factory, and worked at front desk in hotels. She is also a volunteer for the Ministry of Education (supervising exams). Lucy likes cleaning shell.



September 2018



In exciting news, jewellery and handicrafts trainer, Marie Erl, is now working with the recently-established 'Nasomo Ra Marama Handicraft Ladies Group', Somosomo, Fiji.

Marie is delighted to be in her new role, and is already moved by the enthusiasm of the ladies and their drive to improve livelihoods for themselves and their local community.

This research activity is coordinated by the [University of the Sunshine Coast](#), and is supported by the [Australian Centre for International Agricultural Research](#) through the [TAR](#) project, 'Improving pearl industry based livelihoods in the Western Pacific'.



September 2018

Meet the new Nasomo Ra Marama Handicrafts Group from Somosomo, the second such group to be established in Fiji. [Marama Shellcraft Fiji - MSF](#) was the first to be established in conjunction with the Ba Women's Forum. With the guidance and expertise of trainer, Marie Erl, these ladies recently learnt how to polish, clean, cut and drill mother-of-pearl (MOP) shell, essential foundation skills for future MOP handicrafts training. Through the [USC TAR](#) project, 'Developing pearl industry based livelihoods in the Western Pacific', they will progressively develop skills to produce professional jewellery and handicrafts based on MOP.

These livelihood building activities are supported by the [Australian Centre for International Agricultural Research](#).

September 2018



Part four and the final part of our first Marama Shellcraft Fiji - MSF team profiles series. Each profile is visible by clicking on the images directly. Training and research conducted by USC TAR trainers with the MSF team is part of the ACIAR-supported project, 'Developing pearl industry-based livelihoods in the Western Pacific'.

Lietia Lewadrare is the mother of five and is a single mum who lives in Vatukoula. She previously worked at a restaurant in Lautoka. Lietia likes plaiting and knotting and hopes to get a better job through her MSF training.

Ana Baravi is the mother of two children and lives on her farm in Namada and her village, Nausolo. She likes working on the machines and learning macramé. Ana is the group leader. Sisi Tuinasalia lives in Natawaru. Sisi likes braiding and working on the machines and enjoys helping the trainees with the machines.



October 2018

USC TAR researchers, Nitty Simard and Dr Pranesh Kishore, recently ran a series of nine workshops in Fiji teaching basic handicrafts and mother-of-pearl jewellery making skills to women from three local village communities: Raviravi, Korotolutolu, and Vuna.

A range of diverse skills were covered, culminating in design skills for unique pieces which vary in complexity, and can target higher prices.

These activities are coordinated by the [University of the Sunshine Coast](#) and supported by the [Australian Centre for International Agricultural Research](#)

October 2018

Basic handicrafts and mother-of-pearl jewellery making skills were recently taught to a group of women in Fiji from three village communities likely to benefit from related livelihood opportunities.

Run by USC TAR researchers, Nitty Simard and Dr Pranesh Kishore, nine workshops covered numerous skills, including grinding; filling; macramé wrapping; jewellery component necklaces; and business skills.

The students based their creations on six mabé pearls on pearl shell that had been seeded and supplied by their local Women's Club.



The USC TAR team also undertook a survey of the local market to identify demand for products produced by local village groups and engaged with training participants to determine training benefits and future opportunities.

These activities are coordinated by the [University of the Sunshine Coast](#) and supported by the [Australian Centre for International Agricultural Research](#)

October 2018

A team representing the [ACIAR Fisheries program](#) and [USC TAR](#), recently visited the School of Marine Studies, University of the South Pacific (USP), Fiji, where they viewed progress across several innovative research projects.

Visits such as these reflect the collaborative efforts between research entities focused on building capacity in the Pacific for improved food security and better livelihoods



October 2018

Meet the team: Nasomo Ramarama Handicraft Ladies from Somosomo Fiji!

This week we follow-on from the recent 'Meet the team' post with profiles on the remaining members who are now part of training activities in Fiji with [USC TAR Trainer, Marie Erl](#). This is part of the USC TAR project: 'Developing pearl industry based livelihoods in the Western Pacific', which is supported by the [Australian Centre for International Agricultural Research](#).



November 2018

Women's empowerment and the evolution of creative handicrafts sector were central to a recent nine-day training course in Papua New Guinea, run by [USC TAR researchers, De'arne Kershler](#) (workshop co-ordinator) and [Nittyta Simard](#) (handicraft trainer).

The collective talents and efforts of De'arne and Nittyta provided participants with a wealth of new skills and tools for their half-pearl jewellery businesses.

Nine workshops within the course covered the fundamentals of making and selling pearl shell jewellery (eg: cutting, grinding, polishing), macramé, the design of basic and more complex pieces, new product development and business skills. The 20 participants - from Kwato Island and Logea Island - utilised local shell resources of high domestic value, and transformed them into items sought after by consumers, particularly tourists.



Baseline socio-economic research, conducted during the training, highlights how handicrafts skills are used by the communities pre-training, and how new skills and education can boost local livelihoods and empower local women. This activity is supported by the [Australian Centre for International Agricultural Research](#) through the project 'Developing pearl industry based livelihoods in the Western Pacific'.



November 2018

The Fiji Ministry of Fisheries and Forests invited [Marama Shellcraft Fiji - MSF](#) to promote Fijian mabe' pearls and mother-of-pearl (MOP) shell craft at a [World Fisheries Day, 21 November](#) event at Shirley Park, Lautoka, Fiji this week.

World Fisheries Day celebrates island nations, their fisheries' communities, and the links between livelihoods, ocean resources and healthy ecosystems. This year's theme is 'Sustaining our fisheries for sustainable communities.'

A big thank you to the [MSF](#) team for highlighting the potential of handicrafts industries. [USC TAR](#) proudly supports [#MSF](#) through [ACIAR](#)-funded research projects.



December 2018

The fabulous team from [Marama Shellcraft Fiji - MSF](#) has celebrated their graduation, following four years of training in the design and production of premium quality mother-of-pearl shell and half-pearl jewellery and handicrafts. Their ceremony was held this month at the iconic Fiji business 'Tukuni Restaurant' and included a tour of Tukuni facilities prior to an authentic 'Fijian' dinner and graduation speeches.

The event was attended by [Ministry of Fisheries, Fiji](#) staff including Director, Mr Aisake Batibasaga.

MSF is an integral part of USC TAR's 'Pearl Livelihood Development' project focused on supporting Fiji's emerging pearl industry. Based in Ba Fiji, MSF create their unique work from sustainably-grown mela mela and Civa oyster shells farmed and cultured by coastal communities.

During the graduation, MSF workshop supervisor, Nazmin Ali (Nazi), acknowledged many individuals and groups who have contributed to MSF's evolution. Nazi highlighted the unwavering support of MSF's senior trainers - Marie Erl and Neke Moa, Maria President and Manjula, project scientists - Pranesh Kishore and Theo Simos, Ba Women's Forum, the Ba Town Council, and funding body - the [Australian Centre for International Agricultural Research](#).

We wish MSF all the best into the future and look forward to celebrating many more years of success



January 2019

The women's group at Qamea, Taveuni (Fiji), have celebrated their first harvest of mabé pearls made with local black-lip pearl oysters. The resulting pearls had very high lustre, and more than 50% were rated 'A' grade.

This is a major milestone for pearl-based livelihoods in Taveuni. The pearls will be value-added and made into quality jewellery pieces by the women's pearl handicraft group at nearby Somosomo village. Products will target international and domestic markets.

These developments are a direct result of research funded by the [Australian Centre for International Agricultural Research](#) and coordinated by the [University of the Sunshine Coast](#) through TAR.



January 2019

Another Fijian village is making good headway towards improving local livelihoods. The Nacoubau community, which to date has focused on spat collection, has now successfully implanted 217 oysters for mabé production. Quality pearls will be ready for harvest later this year.

The community took part in mabé implanting training in late-2018 run by USC TAR. Oysters used in the training recruited to spat collectors deployed in 2016 as part of the ACIAR/USC research project, 'Developing pearl industry based livelihoods in the Western Pacific'.

Nacoubau currently maintains the existing spat collectors that will provide oysters to be implanted next year.

January 2019



More developments to report from Fiji. The Namarai Youth Group has successfully implanted over 200 oysters for mabé pearl production. Pearls from the oysters will be harvested later this year.

Mabé implanting training was provided to group members in late-2018 where they were taught the procedure to implant for high-quality mabé production. The training focused on implanting oysters that recruited to spat collectors deployed in 2016 as part of the [ACIAR - USC](#) pearl livelihoods research project.

The group also maintain spat collectors that will collect oysters to be implanted for pearl production next year.

January 2019

Basic jewellery production techniques, the use of saws and fine blades, integration of cords instead of metal components, and 'the art of knots', were some of the highlights during [USC TAR](#)-run training in Papua New Guinea (PNG) in mid-2018 as part of the [ACIAR](#) project 'Developing pearl industry based livelihoods in the western Pacific'.



January 2019



Viani is the newest Fijian community to be introduced to mabé farming through [USC TAR](#)-run training which will equip them with skills to farm oysters and the capacity to implant the oysters to produce premium-quality half-pearls.

Lessons to date have focused on culture methods for the oyster species, *Pteria penguin*. Mabé implanting techniques will be taught in the coming months.

Similar to other local villages, the Community Youth Group was previously focused on spat collection. Since training, they have deployed a main line holding over three hundred oysters, with more to follow from twelve spat collectors. The oysters will be implanted later this year.

Earlier [USC TAR](#) research highlighted that Viani Bay has healthy numbers of *Pteria penguin*, making the introduction of mabé farming potentially lucrative for the community.

This work is funded by the [Australian Centre for International Agricultural Research](#) through the project 'Developing pearl industry based livelihoods in the Western Pacific'.



February 2019

The Raviravi Women's Group recently reached the milestone of culturing the highest number of mabé pearls in Fiji, and also successfully implanted over 1,000 *Pteria penguin* oysters in late-2018, setting them up for another successful harvest this year.

The livelihood benefits of their success are becoming apparent, with the group proving to be the most financially successful mabé farmers in the region for 2018.

Mabé culture in Raviravi, under the [USC TAR](#)-run pearl livelihoods project, has been a huge success, and resulted in the [Ministry of Fisheries, Fiji](#) supporting construction of a mabé handicraft and display centre in the village in 2018.

The research behind these developments is funded by the [Australian Centre for International Agricultural Research](#)

February 2019

The **Ravita Women's Group**, Fiji, and their village recently harvested their first, beautiful, high-quality **mabé** (half-pearls) under **USC TAR's** pearl livelihoods project, and will soon profit from their sale.

This fantastic milestone follows the group's participation in implanting training in early-2018, and their adoption of half-pearl culture protocols.

The sense of achievement and excitement at Ravita is high, and we look forward to reporting on more successful harvests in the near future.

USC TAR's research is funded by the [Australian Centre for International Agricultural Research](#).



APPLIED STUDIES



February 2019

Cost-benefit analysis of two culture methods that influence pearl production from the black-lip pearl oyster, *Pinctada margaritifera*

Bill Johnston^{1,2} | Damian Hine³ | Pranesh Kishore^{4,5} | Paul C. Southgate⁵

¹Queensland Department of Agriculture and Fisheries, Agriculture Division, Nambour, Queensland, Australia

²School of Science and Engineering, University of the Sunshine Coast, Sippy Downs, Queensland, Australia

³UQ Business School, The University of Queensland, Brisbane, Queensland, Australia

⁴School of Marine Studies, University of the South Pacific, Suva, Fiji

⁵Australian Centre for Pacific Islands Research and School of Science and Engineering, University of the Sunshine Coast, Sippy Downs, Queensland, Australia

The black-lip pearl oyster, *Pinctada margaritifera*, used for round pearl production in Polynesia, is generally cultured using "ear-hanging" where they are attached to a rope to form "chaplets." In other countries, pearl oysters are cultured using panel (pocket) nets that are more expensive than chaplets but afford more protection to cultured oysters. Prior research has shown panel nets produce pearls of higher quality and value, potentially generating higher profits. This study used cost-benefit analysis to compare pearl production using chaplet-based and panel net-based culture methods. Whole farm data, including gross revenues and annual production costs, fixed and variable, were analyzed. Average production cost per pearl using panel net-based culture was USD 20.47 and for chaplet-based culture was USD

A new publication by **USC TAR** PhD student, Bill Johnston, reports on the annual production costs and gross revenue for round pearl production in Fiji using two oyster culture methods: chaplet (rope)-based and panel-net culture.

The rope-based method is much cheaper to establish but produces poorer quality, lower value pearls than those produced by oysters held in panel nets. Despite much higher establishment costs associated with panel-net culture, cost-benefit analysis showed this culture method to be more profitable, mainly due to lower labour costs during the pearl culture period. These findings will help to inform further development of the cultured pearl industry in the Pacific.

The paper was published in the latest issue of the *Journal of the World Aquaculture Society*, and can be viewed at: <https://onlinelibrary.wiley.com/journal/17497345> Bill's research is conducted within a project funded by the [Australian Centre for International Agricultural Research](#).



March 2019

Across Fiji, Papua New Guinea and Tonga, talented hard-working women are involved in USC TAR's project: 'Developing pearl industry based livelihoods in the Western Pacific' to learn how to farm pearls, produce premium quality half-pearl jewellery and handicrafts and run small businesses. This Friday (March 8) is International Women's Day, and we would like to acknowledge the efforts of these women who strive to help improve the livelihoods of their local villages.

Research is supported by the [Australian Centre for International Agricultural Research](#)

March 2019

USC TAR research, education and training in Fiji is enabling local women to create successful half-pearl businesses producing sought-after, locally-made products.

The [Ba Women's Group](#) and [Marama Shellcraft Fiji - MSF](#) are Fiji's half-pearl jewellery and handicrafts business pioneers, and have helped inspire expansion of half-pearl small businesses, with groups now operating in RaviRavi, Ravita, Somsomo and Nacoubou.

From farming spat, to implanting oysters and growing half-pearls, through to developing jewellery production, handicrafts and business skills, Fiji's women are successfully rising to every challenge.

This improving livelihoods research project is funded by the [Australian Centre for International Agricultural Research](#).



March 2019



USC TAR's pearl livelihoods research with the Fisheries Department in Fiji, and the positive community livelihoods benefits it is generating, are highlighted in a recent article published in the [Pacific-Community-SPC' Women in Fisheries Bulletin' #29](#).

The article outlines how pearl oyster spat collection, mabé pearl and pearl handicraft production provide a basis for improved livelihoods options and income generation, and how these activities support women in particular.

The latest Bulletin can be downloaded via the following link. Look for the download just under the table of contents.

March 2019

Fantastic to see Sisia Tuinasalia, from Marama Shellcraft Fiji, comment on the benefits of being trained in mabe' pearl (half-pearl) jewellery and handicrafts design and production. USC TAR research, funded by ACIAR, proudly supports the development of pearl-industry-based livelihoods in the Western Pacific. Sisia Tuinasalia is 45years old and hails from Korovou, Yawe Kadavu with maternal links to Naisisili, Nacula Yasawa. She has been with Marama Shell Craft for the last 5years.

"This program helped me brush up on my attention to detail, thoroughness, and strengthened my ability to work in a group setting. I don't have a lot of recent work experience therefore i am extremely grateful that i can now add the skills I've learned to my resume."



April 2019

USC TAR researchers, Nitty Simard and Dr Pranesh Kishore, recently ran a highly successful, 10-day mother-of-pearl (MOP) shell and half-pearl (mabé) jewellery and handicrafts skills training course for the Ravita community, Vanua Levu, Fiji. This follows Ravita achieving their first half-pearl harvest in late-2018.

The community's own MOP shell and mabé pearls will supply their new jewellery production as well as provide raw materials for the [Marama Shellcraft Fiji - MSF](#) group's work. Fourteen participants (11 women and 3 men) took part in the training and learnt how to use various tools and jewellery supplies to create quality jewellery pieces. Participants were also taught marketing skills for effective sales through market events and Facebook. This activity is coordinated through USC TAR pearl livelihoods research and funded by the [Australian Centre for International Agricultural Research](#).



April 2019

Members of the Ravita community, Fiji, recently took part in their first mother-of-pearl (MOP) shell and half-pearl (mabé) jewellery skills training and workshops. The participants were very motivated to learn fundamental design techniques and an array of jewellery-making skills. Their final 'pieces' promise high potential for their future half-pearl jewellery collections



April 2019

Recent USC TAR training in Fiji, funded by ACIAR, introduced the Ravita community to several jewellery-making skills that will enable them to produce quality, sought-after jewellery using mother-of-pearl shell and half-pearls farmed and harvested by the community.

May 2019

The black-lip pearl oyster used for round pearl production, can be cultured by 'ear-hanging' (oysters attached to a rope/chaplet), or through the use of more expensive panel nets. Prior research has shown panel net culture produces pearls of higher quality and value. This new publication from the USC TAR group uses cost-benefit analysis to compare the two pearl production methods based on whole-farm data.

It reveals that the use of panel nets saves significant labour costs offsetting the greater capital investment. A viable-scale chaplet-based pearl farm generated USD 65,738 in annual profits, compared to USD 88,774 for a panel net-based farm. And, a positive cash flow was achieved one year earlier (year seven) in the latter.

These findings are published in the latest issue of the Journal of the World Aquaculture Society.

APPLIED STUDIES



Cost-benefit analysis of two culture methods that influence pearl production from the black-lip pearl oyster, *Pinctada margaritifera*

Bill Johnston^{1,2} | Damian Hine³ | Pranesh Kishore^{4,5} | Paul C. Southgate⁵

¹Queensland Department of Agriculture and Fisheries, Agriculture Division, Nambour, Queensland, Australia

²School of Science and Engineering, University of the Sunshine Coast, Sippy Downs, Queensland, Australia

³UQ Business School, The University of Queensland, Brisbane, Queensland, Australia

⁴School of Marine Studies, University of the South Pacific, Suva, Fiji

⁵Australian Centre for Pacific Islands Research and School of Science and Engineering, University of the Sunshine Coast, Sippy Downs, Queensland, Australia

The black-lip pearl oyster, *Pinctada margaritifera*, used for round pearl production in Polynesia, is generally cultured using "ear-hanging" where they are attached to a rope to form "chaplets." In other countries, pearl oysters are cultured using panel (pocket) nets that are more expensive than chaplets but afford more protection to cultured oysters. Prior research has shown panel nets produce pearls of higher quality and value, potentially generating higher profits. This study used cost-benefit analysis to compare pearl production using chaplet-based and panel net-based culture methods. Whole farm data, including gross revenues and annual production costs, fixed and variable, were analyzed. Average production cost per pearl using panel net-based culture was USD 29.47 and for chaplet-based culture was USD 118.



June 2019

Meet the handicrafts team from [Taveuni, Fiji](#): 'Nasomo Ra Marama Handicrafts (NRMH)', also known as the Handicrafts Ladies of Nasomo.

They are pictured here following their latest training with [USC TAR](#) trainer, Marie Erl. According to Marie, these talented ladies will soon graduate with a very impressive portfolio of mother-of-pearl jewellery and handicrafts skills. Watch this space!

June 2019

[USC TAR](#) welcomes Michele McGinity, the new Australian Volunteers International (AVI) Business and Marketing Advisor at the [Pearl Information Centre and Workshop](#) in [Vava'u, Tonga](#).

In her new role, Michele will work closely with Tonga's Pearl Farmers Association to build the Centre's capacity, which also encompasses a gift shop and handicraft workshop.

This will link in with Team Tonga and [ACIAR](#)'s research to grow opportunities for Tonga's mabé pearl farmers and artisans.

Michele previously worked on business development in aquaculture (sea urchins, pearls and oysters) at the Abrolhos Islands off the coast of Western Australia. She also has an extensive history of marketing experience in aquaculture, tourism and business development in Australia and the UK.

Pictured at the Information Centre and Workshop, Michele (L) alongside mabé pearl farmer, Naua, who also works in the Centre's shop.



July 2019

Royal Agriculture, Fisheries and Tonga Made Show' kicked off recently on Tonga's main Island and Team Tonga was there to support local mabé pearl farmers and the community.

This year's event is proving to be a great opportunity to display the locally-grown and crafted Tongan mabé pearls cultured by the [Pangaimotu Community Farm](#), an initiative of [USC TAR](#), [ACIAR](#) and the [Ministry of Fisheries - Tonga](#).

The show celebrates local industry and is a way for local farmers, fishermen and craftsmen to display their wares and trade to the community and their King, before selling their stock to the general public.

The event will now travel to Tonga's island groups, stopping at Ha'apai on July 16th, followed by Vava'u, the Niua and finishing in Eua on the 2nd of August.



July 2019

A group of handicrafts and jewellery students excelled during new training in Tonga last month, with a mix of young and old learning machine and other technical skills for working mabé pearl (half-pearl) and other shells.

Headed by USC TAR trainer, Neke Moa, the course enabled each budding artisan to show their creative potential and develop their own designs inspired by the sea, the environment and other elements.

Students also learnt how to use pendant drills, engraving and other advanced techniques.

At the end of the training course, participants were positive about associated employment opportunities, and many expressed interest in further training



July 2019

The winner of this year's 'Miss Tourism Tonga' wore a dress made of beautiful locally-grown mabé pearls (half-pearls) at this year's official Awards Ceremony. Miss Tourism 2019, Denise Vaiolima Hafoka, is pictured wearing the traditional 'taoulunga' created and made by Tongan dressmaker, Manisiu, with mabé pearls grown by Sioeli, a farmer from the Vava'u region. Sioeli built his half-pearl farming business with the support of ACIAR-funded, USC TAR research that resulted in an oyster hatchery close by (Sopu) to supply farmers.

Along with others, Sioeli has also participated in USC-TAR-run half-pearl seeding workshops, oyster culture workshops and carving and designing training.

The industry is benefiting from targeted business and marketing support through the local industry-run Pearl Information Centre, now boosted by the efforts of new Australian Volunteers International (#AVI) marketing specialist, Michele McGinity, who hopes to display the dress to inspire local industry and promote Tonga's amazing mabé pearls to the world.



July 2019

Last week saw a very proud day and a wonderful celebration for the ladies from NaSomo Ra Handicraft Centre, at Somosomo, Taveuni - Fiji, who graduated after almost a year's training to produce high quality mother-of-pearl and mabé pearl jewellery pieces.

This represents successful collaboration between local communities, [Civa Fiji Pearls Ltd](#), the [Ministry of Fisheries, Fiji](#) and the [USC: University of the Sunshine Coast, Australia](#), who work together to generate pearl-based livelihoods that benefit Fiji's communities.

Honoured guests included Joji Vuakaca (Principle Fisheries Officer - Fisheries, Fiji), member of parliament

Dr Antonio Rabici Lalabalavu and Marie Erl, USC TAR handicraft trainer.

Our warmest congratulations are extended to the NaSomo Ra Ladies.

Funding for this research and development activity is provided by the [Australian Centre for International Agricultural Research](#).

The NaSomo Ra Handicraft Centre graduates and Marie Erl at the Graduation. L to R (back) Teca, Stone, Mila, Rocks. L to R (front) Ama, Ma, Ratu, Marie, Josefine.



August 2019

Tongan pearl artisan and farmer, Peni Lolohea, pictured at a half-pearl workshop at the [Vava'u Pearl Centre](#) in Nei'afu. Peni and his father, Havea Lolohea, own one of the original pearl farms in Vava'u. Peni is shown here with some of his pearls that he went on to carve into jewellery. The workshop was funded by ACIAR and co-ordinated by USC TAR and #AVI researchers based in Tonga.



August 2019

Great to see Australia's High Commissioner to Tonga, Adrian Morrison, who this week is experiencing the country's mabé pearl industry first hand. [USC: University of the Sunshine Coast, Australia](#) - Tropical Aquaculture Research-led research proudly supports Tonga's efforts to grow their mabé pearl industry



August 2019

Twenty Tongan mabé pearl farmers and artisans will soon learn new jewellery design skills during a two-week workshop to be led by renowned Tongan artist, *Andrew Motuliki, and internationally-acclaimed Māori jewellery designer, **Neke Moa.

Supported by [Tonga Skills](#) and the [Australian Centre for International Agricultural Research](#) (ACIAR) through [USC: University of the Sunshine Coast, Australia](#) Tropical Aquaculture Research (TAR), the workshop will run from 2 to 13 September at the [Vava'u Pearl Centre](#) in Nei'afu.

ACIAR and USC TAR have been instrumental in developing the local mabé pearl industry, which now has 22 pearl farms situated across Vava'u, Tongatapu and Hai'pai. Training such as this helps to further improve the livelihoods of local farmers.

To find out more, contact Michele McGinity, Australian volunteer development specialist for the Tongan pearl industry via the [Vava'u Pearl Centre](#).



September 2019

Great to see Tonga's pearl farmers and artisans building on their skills during the latest workshop at the [Vava'u Pearl Centre](#), led by esteemed local jewellery maker, Andrew Motuliki, and internationally-acclaimed Māori jewellery designer, Neke Moa.

The workshop is supported by [Tonga Skills](#) and the [Australian Centre for International Agricultural Research](#) (ACIAR) through the [USC: University of the Sunshine Coast, Australia](#) (USC) Tropical Aquaculture Research (TAR).

ACIAR and USC TAR have been instrumental in developing the local mabé pearl industry, which now has 22 pearl farms situated in Vava'u, Tongatapu and Hai'pai

September 2019

Outstanding work by Tongan pearl farmer, Naua (Faka'anaua 'Ahohako), who is capturing widespread attention in Tonga for her beautiful pearl macramé pieces.

Naua, also [Vava'u Pearl Centre](#) Supervisor and single mother of five, started producing pearl macramé products earlier this year that are now so popular, demand is outstripping supply.

Interested in attaining skills outside of pearl carving, Naua sought macramé training from Australian Volunteer researcher, Emma Krusic, who is part of the [USC: University of the Sunshine Coast, Australia](#) TAR-led project: 'Half-pearl industry development in Tonga and Vietnam'.

Naua's beautiful pieces have already put her on the list of Tonga's well-known artisans and are attracting customers to the Pearl Centre. Other pearl farmers are also paying her to weave their pearls.

Naua is a great example of aquaculture research achieving livelihood outcomes in the Pacific, thanks to the support of [Australian Centre for International Agricultural Research](#)





September 2019

Meet Mere Vinaka, from Ba Fiji, the latest Trainee at [Marama Shellcraft Fiji - MSF](#). Mere is 46, a mother of five, and has successfully been making bead jewellery and flower arrangements from home for some time. She is a skilled and motivated individual who is keen to expand her horizons, and as such, has already become an invaluable member of the MSF team.

Training and research for this livelihood activity is funded by the [Australian Centre for International Agricultural Research](#) through the [USC: University of the Sunshine Coast, Australia](#) Tropical Research project 'Developing pearl industry based livelihoods in the Western Pacific'.



October 2019

Meet Sue McCuaig, new handicraft advisor at the [Vava'u Pearl Centre](#), Tonga.

Sue's role, which is supported by 'Australian Volunteers', is to build the capacity of local artisans to produce a range of high-quality marketable mabé and mother-of-pearl products.

Sue will also develop and implement operating procedures that ensure the long-term sustainability of the Centre and its adjoining workshop.

Prior to this role, Sue worked extensively with artisan communities in Papua New Guinea, Vietnam and Laos as a creative designer and handicraft trainer to help them produce attractive and robust products in keeping with their culture and traditions.

Sue's efforts will compliment and add value to local mabé pearl research funded by the [Australian Centre for International Agricultural Research](#) and co-ordinated by the [USC: University of the Sunshine Coast, Australia](#) through the projects: 'Half-pearl industry development in Tonga and Vietnam' and 'Developing

pearl industry based livelihoods in the western Pacific'.



October 2019

Partner communities in the [Australian Centre for International Agricultural Research](#)-funded pearl-based livelihoods project recently convened for a two-day workshop in Savusavu, Fiji, organised by [USC: University of the Sunshine Coast, Australia](#) Tropical Aquaculture Research and the [Ministry of Fisheries, Fiji](#).

The workshop brought together members from partner communities involved in spat collection and those from community mabé pearl farms for the first time.

Seventeen Fijian communities now generate income from spat collection and seven have successfully produced mabé pearls.

The workshop allowed interaction between partner communities and exchange of experiences and ideas, dissemination of new information and procedures, and an opportunity for communities to interact with Ministry of Fisheries and ACIAR project staff.

The current status of each community farm was discussed, and future research, training and capacity needs were identified. We thank all participants and organisers for their valued inputs - vinaka vakalevu!!

Given the success of the workshop, it will become an annual event and we are already looking forward to next year!



October 2019

Recent successful [USC TAR](#) handicraft skills training in Tunnung Island, Papua New Guinea, provided a broad framework for participants (16 women and four men) to evolve their talents.

The training, which emphasised sterling silver jewellery and contemporary designs, was divided into two groups, with the first focused on macramé and components, and the second on shell cutting, grinding, and components. Together, these will enable local people to develop small businesses and tap into emerging new industries.

This training is funded by the [Australian Centre for International Agricultural Research](#).

Economic assessment of community-based pearl oyster spat collection and mabé pearl production in the western Pacific

Bill Johnston^{a,b}, Pranech Kibhore^c, Gary Ringgold Vahuqa^d, Damian Hine^e, Paul C. Southgate^f

^aDepartment of Agriculture and Fisheries, 67 Myers Road, Nauru, Nauru, 999004, 670, Nauru
^bSchool of Ocean and Fisheries, University of Waikato, 320 Rutherford Ave., 3240 Hamilton, 3201, Waikato, 3210, New Zealand
^cAustralian Centre for Pacific Island Research, School of Ocean and Fisheries, University of Waikato, 320 Rutherford Ave., 3240 Hamilton, 3210, New Zealand
^dSchool of Ocean and Fisheries, University of Waikato, 320 Rutherford Ave., 3240 Hamilton, 3210, New Zealand
^eResearch Division, Ministry of Fisheries, P.O. Box 2663, Lauti, FI
^fUniversity of Queensland Business School, St. Lucia, Brisbane, Queensland 4072, Australia

ARTICLE INFO

Keywords:
 Mābé pearl culture
 Pearl oyster spat collection
 Pearl oyster
 Fiji Islands

ABSTRACT

Coastal pearl production and associated activities are of crucial social and economic importance to remote coastal communities in Polynesia and the western Pacific. This study determined the potential profitability of (i) community-based pearl oyster spat collection operations targeting *Pinctada margaritifera*, and the subsequent sale of spat oysters to small pearl farms, and (ii) the use of *Pinctada margaritifera* spat collection from *P. margaritifera* spat collection operations, for mabé pearl production. The spat collection farm modelled in this study completed four 1800 ha longlines supporting 1200 commercial spat collectors, with an estimated capital cost of \$1245 (all figures in USD). The spat collection operation produced 2211 metric tonnes of *P. margaritifera* spat oysters (and in total pearl culture operations) with estimated NPV of \$13,426. The MIRR generated was 12.2%, with a breakeven rate was 1.5, and a payback period of 6 years. The community-based pearl farm modelled in this study completed two 180 ha longlines supporting 2000 implanted *P. japonica* spat oysters with an estimated capital cost of \$7125. Annual production of 100 metric tonnes of mabé pearls generated an NPV of \$60,364. The MIRR and breakeven rate of the modelled mabé pearl farm were 25.6% and 7.25, respectively, with a payback period of 3 years. Integrated production and price risk was the model yielded the expected NPV of the mabé pearl farm to \$207,257. The models developed in this study provide valuable new information for prospective pearl oyster spat and mabé pearl farming community groups, investors, funding bodies and other stakeholders, and provide a valuable baseline and supporting further development of the pearl sector in Fiji and the broader Indo-Pacific region.

Congratulations to Bill Johnston on his latest publication in the January 2020 issue of the international journal Aquaculture. This paper reports on the economic viability and potential profitability of community-based pearl oyster spat collection and mabé pearl production in Fiji.

The paper can be accessed at: <https://www.sciencedirect.com/.../article/pii/S0044848619310592>

The models developed in this study were based on production data collected from existing community spat collection farms and mabé pearl farms in Fiji, established as part of the ACIAR-funded 'developing pearl-livelihoods' project through collaboration between USC and the Fiji Ministry of Fisheries.

The economic models reported in this paper show that spat collection and mabé pearl production can be profitable community enterprises and offer broader livelihood options for remote coastal communities that are compatible with local lifestyles.



October 2019

Seventeen women and men successfully completed handicraft skills training and development last month at the remote Neitab Island, Papua New Guinea. Skills gained from the workshop are likely to increase the local village people's livelihood opportunities.

Coordinated and run by [USC TAR](#) researchers, the workshop focused on creating beautiful pieces based on indigenous influences, including reintroduction of past designs with a contemporary feel, and incorporation of influences from traditional rope-making and national cultural artifacts.

As well as gaining great new skills, the trainees developed a new macramé jewellery product line made from 100% local materials, including traditional handmade rope, coconut buttons, and bamboo as replacements for imported components. Use of imported materials is unsustainable given the island is a three hour banana boat trip from the provincial capital, Kavieng town.

Funding for this training was provided by the [Australian Centre for International Agricultural Research](#).



October 2019

Traditional armbands called 'Titilai', were made at Neitab Island, Papua New Guinea for the first time in an estimated 100 years during [USC TAR](#) handicraft skills training and development last month.

The USC TAR training focused on providing Neitab locals with the skills to design and produce sought-after, unique jewellery and handicrafts using mostly locally-sourced materials.

Titilai is based on waste products from subsistence fishing of *Trochus* for human consumption.

This research and development, which aims to boost livelihoods in the Western Pacific, is funded by the [Australian Centre for International Agricultural Research](#)



October 2019

A highly successful ten-day mabé pearl jewellery and handicrafts training workshop was recently held in Ha'apai, Tonga, for a group of twelve local mabé pearl farmers. The training, which was a first for the island, was conducted at the Fisheries Building in Ha'apai, and attracted farmers from Pangai, Hihifo, Felema and Uiha.

Modules covered included:

- * Macramé finishing techniques with Emma Krusic (AVI volunteer);
- * Introduction to cutting, grinding, sanding and polishing shell jewellery, including machine induction and safety, with De'arne Kershler (USC TAR researcher) and;
- * Professional jewellery design with Sue McCuaig (AVI volunteer).

This training was funded by ACIAR through the USC TAR project 'Developing pearl industry based livelihoods in the Western Pacific'.



November 2019

Sue McCuaig, talented silversmith and AVI volunteer jewellery and handicrafts trainer, based at the Vava'u Pearl Centre -Tonga, is pictured here recently with local mabé pearl farmer, Peni Lolohea. Peni has excelled in making silver settings during USC TAR-run jewellery and handicrafts training this year.





December 2019 “Before I felt like a failure. But now, I feel like I can fly.”

Those were the words of Naua Lakai, Mabé pearl farmer and artisan who visited ACIAR House today talking about the impact an ACIAR-funded project has had on her life and career.

Naua is the Manager [Vava’u Pearl Centre](#) in Tonga and has been involved with an ACIAR-funded project helping develop pearl industry-based livelihoods in the western Pacific. Run through the [USC: University of the Sunshine Coast, Australia](#), the project is helping coastal communities in Fiji, Tonga and Papua New Guinea increase resilience, productivity, community engagement and livelihood opportunities from pearl farming.

Learn more about the project at <http://bit.ly/2YmbWcV>

Journal of Shellfish Research, Vol. 38, No. 1, 499-514, 2019.

OVERVIEW OF THE DEVELOPMENT AND MODERN LANDSCAPE OF MARINE PEARL CULTURE IN THE SOUTH PACIFIC

WILLIAM JOHNSTON^{1,2*}, DAMIAN HINE³ AND PAUL C. SOUTHGATE⁴

¹Queensland Department of Agriculture and Fisheries, 47 Myers Road, Nambour, Queensland 4590, Australia; ²School of Science & Engineering, University of the Sunshine Coast, 90 Sippy Downs Drive, Sippy Downs, Queensland 4556, Australia; ³University of Queensland Business School, The University of Queensland, 39 Blaxell Drive, St. Lucia, Brisbane, Queensland 4067, Australia; ⁴Australian Centre for Pacific Islands Research and School of Science & Engineering, University of the Sunshine Coast, 90 Sippy Downs Drive, Sippy Downs, Queensland 4556, Australia

ABSTRACT. Natural marine pearls were a rare and valuable by-product of a fishery targeting pearl oyster shells for their mother-of-pearl (MOP). This fishery developed around the world throughout the 18th century and increased significantly through the 19th century in Australia and the Pacific Islands. Overriding the MOP industry led to the development of pearl oyster spat (genetic) collection techniques to assist stock replenishment. Although the MOP industry eventually ceased in the 20th century, spat collection provided a basis for pearl culture industries in the Pacific, that used nucleated pearl culture techniques developed in Japan. Today, French Polynesia is the largest producer of cultured round pearls in the South Pacific using the endemic black-lip pearl oyster *Pinctada mazatlanica*. The successful French Polynesian pearl industry was a catalyst for development of pearl culture in other Pacific Island countries such as the Cook Islands and Fiji. As well as significant export income, pearl culture offers livelihood opportunities (upstream and downstream) to coastal communities at a number of levels, including collection of pearl oyster spat (genetic) for on-selling to pearl farms, and jewelry and MOP shell craft production. Despite being compatible with local livelihoods, round pearl culture has significant barriers to entry, including high initial investment, high operational costs, and requirement for a high level of technical skills. Alternatively, significant opportunities for coastal communities exist from production of mabe pearls (half pearls) because although not as valuable as high-grade round pearls, they are cheaper to produce, demand fewer technical skills, and pearls are produced by local people with minimum training. Diversification of round pearl farms into mabe pearl production, or the establishment of stand-alone mabe pearl farms, is increasingly prevalent in Pacific pearl-producing nations, motivated by risk minimization, a broader market base, and a much simpler and less costly industry entry pathway.

KEY WORDS: pearl farming, mother-of-pearl, Pacific pearl industry, pearls, mabe pearls

[of.../10.2983/035.038.0301.short](https://doi.org/10.2983/035.038.0301.short)

January 2020

Our congratulations are extended to Bill Johnston on the publication of his overview of marine pearl culture in the south Pacific in the December 2019 issue of the 'Journal of Shellfish Research'. This paper provides detailed information on the history and development of the pearl oyster fishery in the south Pacific and the subsequent development of pearl culture in the region. Bill's paper covers, for the first time, the development and current status of the mabé pearl sector in Tonga, and the latest production information for round pearl production in French Polynesia, Cook Islands and Fiji, as a basis for Bill's broader research focus on the economic feasibility of community-based pearl farming in the region.

This research is funded by the [Australian Centre for International Agricultural Research](#) under the USC TAR project: 'Developing pearl-based livelihoods in the western Pacific'.

To download, go to: <https://bioone.org/.../Overview->

January 2020

A huge welcome to Nittyta Simard (pictured left) who joins our team as the newest PhD student! Nittyta's study is supported by a USC scholarship, and will focus on generating an improved understanding of the socio-economic impacts of introducing shell-based handicraft development to coastal communities in Papua New Guinea and Fiji.

Nittyta is not new to our group, having been involved for some time in community handicraft training and organisation in ACIAR projects in PNG and Fiji. Nittyta's research will contribute to ongoing ACIAR efforts to develop livelihood opportunities from pearl and pearl shell handicraft production in the Pacific.





January 2020

The Kavieng Craft Market Committee, Papua New Guinea, hosted a very successful 4th 'Mini Show' at the end of last year, with over 20 vendors, special activity stalls and popular local musicians, 'The Sea Horse String Band'.

Show vendors displayed an array of arts and crafts, including shell jewellery and shell valuables.

For the first time, the show was funded by PNG's New Ireland Tourism Authority, who recognised the role the event plays in promoting artisans from the region.

The show's success highlights the potential for livelihood benefits from professional artisan activities, with vendors generating 260 per cent more revenue than money invested in the show.

The Craft Market was established by local women in 2017 to provide a professional outlet for New Ireland artisans to sell hand-made arts and crafts, and to promote PNG

traditions and culture to the thousands of international tourists who visit the region every year.

Local USC TAR research, funded by the [Australian Centre for International Agricultural Research](#), supports the development of the Market through ongoing training of local artisans, customer surveys and marketing advice. USC TAR researcher, Nittyta Simard, is an adviser on the Craft Market Committee

February 2020

In wonderful news for Fiji's Raviravi community and the country's mabé pearl sector, high quality mabé pearls from 750 oysters were harvested by the community at the end of 2019.

The harvest also resulted in a good supply of quality mother-of-pearl shell. The mabé pearls and mother-of-pearl shell will be used to produce value-added jewellery and handicraft items.

These developments are supported by the ACIAR-funded USC TAR project 'Developing pearl industry based livelihoods in the Western Pacific'





February 2020

[USC TAR](#) is happy to support the development of shell-based handicraft livelihoods in New Ireland Province, Papua New Guinea, and to see the high-quality products from Neitab Island. Nobeting, Josephine, and Jevina are from Neitab Island, which is a three hour boat drive from Kavieng town, New Ireland Province. They have received training in creating and selling shell handicrafts through an Australian project. They are the masters of natural rope making and macramé in their community. Each [Bilas Design](#) product with natural rope has been made by their hands.



February 2020

Some of the faces behind Raviravi's first successful mabé pearl harvest in late-2019. Thanks to the efforts of the community's women, quality mabé pearls were harvested from 750 oysters.

After grading, mabé pearls are used to make jewellery and handicraft items with profits staying in the community. Raviravi is one of a number of community mabé pearl farms established in Fiji to support local livelihoods and women's empowerment. This outcome is the result of ACIAR-funded USC TAR research in the region.



March 2020

[USC TAR](#), with ACIAR funding, proudly supports handicrafts training in PNG. It is fantastic to see [Bilas Design](#) and PNG women continuing to produce beautiful, authentic pieces.



March 2020

The first Pearl Branding Working was held at the Vava’u Pearl Centre in March for Farmers and Artisans.

The Workshop, co-funded by the Ministry of Fisheries and the Australian Centre for International Agricultural Research (ACIAR), was held to enhance the marketing skills of pearl stakeholders and to initiate building the Tongan Mabe Pearl brand.

Incorporating modern marketing and the vision for the Tonga mabe pearl industry into this two-day training, the sessions covered various elements of marketing such as; developing the local pearl brand, redefining the value chain, e-commerce, customer service and more.

USC TAR is proud to be working with the [Ministry of Fisheries - Tonga](#) in developing the country's mabè pearl and pearl livelihoods sector.



April 2020

The Ravita Women’s Group recently implanted 554 oysters for mabé pearls with, on average, three nuclei per oyster.

This is a big increase in the number of oysters from past years, indicating success of pearl research and training in the region.

The oysters were harvested from spat collectors monitored by the group and included a significant number of black-lip oysters that they sold to local round pearl farmers. The mabé will be harvested in January 2021.

These activities provide solid returns for the women and their families, and invaluable livelihood opportunities for the village.

Marie and Ateca, the Ravita Women’s Group's leading mabé implanters: pictured - Marie with the yellow headband and Ateca

the blue -were trained in recent years through the ACIAR-funded USC TAR pearl livelihoods project in partnership with the [Ministry of Fisheries, Fiji](#).



April 2020

The Drodromulua Women's Group (Ravita) was delighted to receive a billboard presented recently to their village in Fiji outlining their involvement in the ACIAR-funded, USC TAR pearl livelihoods project, operated in partnership with the [Ministry of Fisheries, Fiji](#). This project develops and supports pearl-based livelihoods through spat collection, mabé pearl production and handicraft training.

Group members from left are: Ateca, Nau, Maria and Kelera with others from their community in front of their new billboard



April 2020

Fiji's women continue to embrace skills training and new work opportunities in the half-pearl sector as part of the ACIAR-funded, USC TAR pearl livelihoods project in the region.

Earlier this year, the Na Somo Ra Women's group in Taveuni advanced their pearl shell handicrafts skills during engraving and polishing training. Lessons focused on practicing and refining skills and exploring new designs. Those who acquire confidence in their preferred skill go on to mentor their colleagues.



May 2020

The Na Somo Ra Women's group in Taveuni has established bookkeeping and sales procedures to support their pearl handicrafts business and now sell directly to locals and tourists. As part of their new business skills, the women have learnt how to host customers, run workshop tours, and explain their products.

During the recent holiday season in summer 2019/20, tourists visited the Na Somo Ra Women's Groups' workshop and sales room every day. Many were delighted to be able to buy locally-made souvenirs and meet the artisans in person.



May 2020

Fiji's 'Viani Youth Group' recently successfully completed their first mabé pearl implanting training under the USC TAR pearl project: 'Developing pearl industry based livelihoods in the Western Pacific'.

Several members of the group excelled in the training and will continue to evolve their pearl implanting skills in the coming months.

The Youth Group was taught fundamental oyster husbandry in 2017, when they harvested their first oysters. They subsequently cultured the oysters for two years to implanting size, with the support and supervision of USC TAR researchers.

This research and training is funded by the [Australian Centre for International Agricultural Research](#) and supported by the [Ministry of Fisheries, Fiji](#)



June 2020

One of Tonga's up-and-coming pearl farmers, Naua Lakai, has successfully completed her first pearl oyster harvest and production of over 20 beautiful mabé pearls and premium mother-of-pearl shell for use in sought-after, locally-made jewellery and handicrafts.

As a single mother with five children, Naua strives to increase her qualifications and experience to help provide for her family. Naua is a natural artisan, who transitioned seamlessly into the pearl handicraft sector in early-2019 after she attended her first mabé pearl handicraft workshop at the [Vava'u Pearl Centre](#)

Soon after her first workshop, Naua registered to become a pearl farmer, and 12 months later, successfully harvested her first dozen pearl oysters.

Naua's commitment to the mabé pearl sector was recognized in late-2019 through her employment as the Vava'u Pearl Centre Supervisor. Most recently, she seeded 50 oysters for harvest in early 2021.

Congratulations Naua Lakai!

Naua's training is provided through the USC TAR, [Australian Centre for International](#)

[Agricultural Research](#)-funded pearl livelihoods in the western Pacific project, in partnership with the Ministry of Fisheries Tonga.



June 2020

The Viani Youth Group, the second mabé pearl farming trainee group to receive a project billboard in Fiji in recent months, is delighted to display their new billboard to help nearby communities become more aware of the mabé pearl farming initiative.



July 2020

The Navatudia Women's Group (Raviravi) and their community were pleased to unveil a billboard presented recently to their village in Fiji outlining their involvement in the [ACIAR](#)-funded, [USC](#) TAR pearl livelihoods project, operated in partnership with the [Ministry of Fisheries, Fiji](#). This project develops and supports pearl-based livelihoods through spat collection, mabe pearl production and handicraft training.

Fiji's Prime Minister, the Hon. Frank Bainimarama, is pictured at the billboard unveiling, along with members of the Women's Group



Australian Centre for International Agricultural Research

July 10 at 6:05 AM · 🌐

#ICYMI -- in a pearler of a good news story for your Friday, cheque this out...the women of Navatudua Women's Group in Fiji who, in partnership with us at ACIAR... See More



FJISUN.COM.FJ

Navatudua Women Score \$20K Oyster Harvest

The money is the women's earnings from their oyster harvest that t...

July 2020

Congratulations to the women of the Navatudua Women's Mabè Group in Raviravi Village, Vanua Levu, Fiji on the sale of their latest crop of beautiful mabè pearls. The women were presented with a cheque from the sale by the Prime Minister of Fiji, Honourable Josaia Voreqe Bainimarama. [USC TAR](#) is proud to be working with the Navatudua Women's Mabè Group, and we look forward to continued collaboration with them into the future.

This research was funded by the [Australian Centre for International Agricultural Research](#).

https://fjijun.com.fj/2020/07/03/navatudua-women-score-20k-oyster-harvest/?fbclid=IwAR1eMOWLo-Adj2eiZKu0A_tjdDidsrL6J7iw9M53VS1_WZNA6lj9oP1gl4



July 2020

This beautiful neck piece, by esteemed Tongan artisan and pearl farmer, Estimoa Kuilboer, is a rare example of three AAA (premium quality) mabè pearls on the one shell. The pearls were grown and harvested on Estimoa's family farm.

Unique pieces like these are sold locally and to customers across the world. Sales contribute to improving the livelihoods of the artisans and their families.

Estimoa has been a keen participant in ACIAR-funded, USC TAR research, training and education since she began mabé pearl farming with her husband in 2014.

 **Australian Centre for International Agricultural Research**
June 25 · 🌐

A recent economic study has shown how valuable pearl farming has become to coastal communities in Tonga.

The study, conducted by an agricultural economist at the [USC: University of the Sunshine Coast, Australia](#), has found pearl farmers can achieve double the average national income by growing unique mabé pearls to produce jewellery through handcraft production.

The findings stem from ACIAR-funded research supporting the expansion of community-based pearl farming in Tonga and Vietnam.



ACIAR.GOV.AU
Ocean Jewels: Tonga's Mabé Pearls a potential economy booster

July 2020

Full link: https://aciarc.gov.au/media-search/news/ocean-jewels-tongas-mabe-pearls-potential-economy-booster?fbclid=IwAR2gGpMSK92WfTsCtxmxyrOUC5q2WRHUstPunY2w29YXg-lxvCtG5zRP_s



August 2020

Fiji's Raviravi community recently recorded a healthy spat fall with larger-than-average sized Pteria penguin spat harvested from collectors deployed in October 2019.

An average size of 78 mm allowed harvested spat to be set up directly onto Cord Technical Nakasai rearing systems - which provide an immediate substrate for byssal attachment of oysters - then placed into protective chicken wire meshing.

This new oyster crop will be used in an experiment to determine optimum stocking density and mesh wire size for best growth rates of Pteria penguin spat.

The latest crop will be cultured for another year before the oysters reach appropriate seeding size, around end-2021, for the production of more stunning mabé pearls.



Civa Fiji Pearls

August 2 at 6:20 PM · 🌐

It takes about 4 years to farm a pearl. In 4 years from now, people will be back. "In crisis, there is opportunity." or like my brother slangs it: "Never waste ... [See More](#)

August 2020

Great news on the sale of pearl oyster spat by the women's group at Ravita, to our research collaborators at Civa Fiji Pearls. USC TAR and the Ministry of Fisheries Fiji have worked in partnership to establish several spat collection enterprises in Fiji, including at Ravita, that supply oysters for production of high-quality round pearls.



August 2020

Meet talented artist and carver, Andrew Motuliki, a regular and integral face at Tonga's Vava'u Pearl Centre.

Son of the late master carver, Leonatie Motuliki (senior), creativity and craftsmanship are in Andrew's blood. Since 2019, he has been a trainer at the Pearl Centre where regular education and support are provided for the local half-pearl industry.

In late-2019, Andrew and New Zealand designer, Neke Moa, co-trained a workshop in Vava'u focused on Kupesi (traditional design from Tonga), carving and producing jewellery sets for sale. The aim was to build the capacity of pearl farmer-artisans as well as up-skill Andrew as a future pearl handicraft trainer in Tonga.

Working alongside Neke, it is hoped that after COVID19, Andrew will continue to conduct handicraft workshops in Tonga and teach artisans to produce beautiful and unique pearl jewellery.

Education and training provided at the Pearl Centre is funded by Tonga Skills and the Australian Centre for International

Agricultural Research through the USC TAR pearl livelihoods project.



August 2020

Mabè pearl implanting was explained in detail recently by the Navatadua Women's Group (Raviravi, Fiji) to Fiji Prime Minister, the Hon. Frank Bainimarama, who went on to successfully complete the process under close supervision by the women's group. The PM's oyster is now being farmed to help culture some of Fiji's finest mabè pearls.

USC TAR pearl livelihoods research in the region, funded by ACIAR, aims to help women like those from the Navatadua Women's Group, improve their livelihoods.



September 2020

Recent mabé pearl (half-pearl) grading training at the coastal villages Namarai and Nacoubau, Fiji, focused on equipping local farmers with the skills to determine the quality of their pearls allowing them to achieve maximum returns on pearl sales.

USC TAR post-doctoral scientist, Pranesh Kishore, taught the pearl farmers how to rate pearls for quality and a range of other marketing and business skills.

Expansion of the half-pearl sector in Namarai and Nacoubau is helping to create diverse employment and livelihood opportunities. This training is part of ACIAR-funded, USC TAR-coordinated research in the region.



October 2020

Tonga's recent [mabé' pearl](#) carving and training workshop, led by Vava'u artisan and carver, Andrew Motuliki, and jointly funded by [ACIAR](#) through the [USC TAR](#) pearl livelihoods and [Tonga Fish](#) pathway projects, taught local pearl farmers how to design and carve half-pearl jewellery and pearl shell for commercial sale, incorporating Kupesi motifs, the traditional method of storytelling.

According to Motuliki, the workshop, which was held on one of the main islands in Ha'apai, was a big success, enabling confident use of professional production approaches. Participants enjoyed incorporating local history and utilising their pearls' magnificent colours in a range of eye-catching products.



November 2020

[Mabè pearl](#) farming is now being trialed on one of [Tonga's](#) most remote islands, Niua Toputapu, by the [Ministry of Fisheries - Tonga](#) (MoF) in conjunction with local farmers. Located approximately 300km north of Vava'u and 240km south west of Samoa, [Niua Toputapu](#) was identified several years ago by MoF as a prime location for the introduction of mabé pearl farming. To ensure that proven farming procedures and technologies are successfully transferred to Niua Toputapu, MoF organised for Fisheries Officer, Patelo Tavaka, to spend two years working with local pearl project and Aquaculture staff. Patelo recently returned to the island with 240 hatchery-produced Pteria penguin pearl oysters. The precious oysters were swiftly taken from the Niua Toputapu airport to the island's wharf to be processed by Patelo and a team of eager trainees. They were then drilled, secured to ropes, and transferred to a new demonstration pearl line that will be monitored and managed by the trainees.

The largest 20 oysters will soon be ready for seeding, and then Patelo will demonstrate how to implant the oysters with nuclei.

All going well, we will be able to report on Niuva Toputapu's first harvest of mabé pearls in 2021! This research is supported by [ACIAR](#) through the [USC TAR](#) pearl project.



February 2021

Resilient Fijians are rebuilding their lives and businesses following the powerful Category 5 storm, [Cyclone Yasa](#), which hit the region in December 2020.

Among the communities involved with [USC TAR](#) pearl livelihoods development research, Ravita and Raviravi were most affected, with major damage to mainlines holding juvenile and adult oysters, and spat collectors. Infrastructure, such as a handcraft showroom and workshop, were also damaged in Raviravi.

Together with local [Ministry of Fisheries, Fiji](#) staff and USC TAR researcher, Pranesh Kishore, these villages are now in the process of deploying new mainlines and preparing for the deployment of new spat collectors in the next spawning session (October to December). Fiji has reported increasing numbers of severe storms in recent years, and strategies to manage and recover from these natural disasters are becoming increasingly important.

USC TAR will continue to provide ongoing half-pearl farming and handicrafts business advice, research and

support to the people of Fiji in the year ahead. We look forward to reporting on their successes.

USC TAR's work in the region is funded by the [Australian Centre for International Agricultural Research](#).



March 2021

Collaborative research efforts across Fiji are unlocking the true potential of Pacific mabé pearls. Seven village communities are now advancing this sustainable industry, from spat collection, through to juvenile oyster farming, mabé pearl farming and the design and production of beautiful half-pearl and mother-of-pearl pieces. The livelihood benefits for women and their communities are tremendous.

This research is coordinated through USC TAR pearl livelihoods research projects.

View this video at: <https://www.youtube.com/watch?v=WDFajQZt3mw>



March 2021

Informing [Pacific](#) artisan [pearl](#) and pearl-shell [handicraft](#) production for the cruise tourism market through intended purchase behaviour analysis, is the topic of a newly-published article by [USC TAR](#) researchers.

The open-access article can be downloaded at:

<https://doi.org/10.3727/154427320X15958571868603>

Handicraft sector development strategies in the region are constrained by limited information guiding what products to produce, which product attributes are important, and appropriate pricing for the cruise tourism market.

Using structured interviews, USC TAR's research evaluated cruise passenger preferences and intended purchase behaviour towards a range of mabé pearl and mother-of-pearl (MoP) handicrafts.

This study was conducted in a newly-emergent cruise destination, Papua New Guinea, where cruise passenger demand for handicrafts, purchased as souvenirs, is largely unmet. The majority of cruise passengers expressed interest and willingness to purchase mabé pearl and MoP handicrafts.



April 2021

Good news from Fiji's mabé pearl industry!

Fiji's Ravita community recently donated 300 juvenile *Pteria penguin* oysters to the Raviravi community after their main oyster line was lost following Cyclone Yasa in December 2020. This generous donation will help fast track re-establishment of the successful Raviravi farm.

And in another collaborative industry effort, 600 juvenile *Pinctada margaritifera* were retrieved by the Ravita community and members of the [Ministry of Fisheries, Fiji](#) team from a line that sunk during the cyclone. The resulting juvenile spat were sold to a round pearl farmer from Taveuni.

Congratulations to all involved! 🙌😊😊😊

*Image: Ateca from Ravita Village, Fiji, helps retrieve *Pinctada margaritifera* spat to be transferred to a round pearl farm in Taveuni.*



May 2021

Fai'ana is a successful [mabé pearl](#) farmer and artisan who gained an interest in pearl farming through her love for sea jewellery.

Fai'ana started her own pearl farm in November 2018 with the help of the [Ministry of Fisheries - Tonga](#) and [USC TAR](#) researchers. She attended her first handicraft workshop at the [Vava'u Pearl Centre](#) in February 2019, and in 2020, seeded 30 oysters which she will harvest this June.

Fai'ana is renowned for her professionalism, always working to keep her pearl oysters healthy and regularly cleaning her pearl lines, which are visible from her home on Ofu Island.

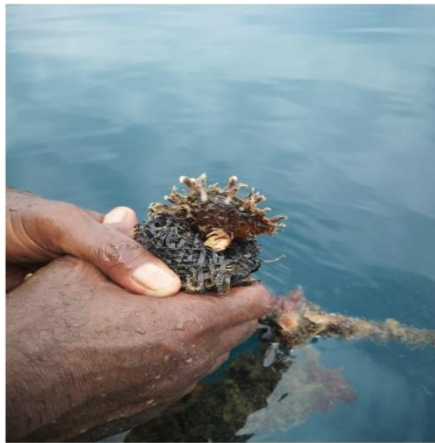
Forever keen to share her love of the industry, Fai'ana regularly extends her knowledge with her loved ones and with visitors to Ofu Island.

Her goal is to excel at pearl farming, so she can be independent and earn additional income for her family, and to employ young people on her farm to help improve local livelihoods.

Prior to becoming a mabé pearl business woman, Fai'ana studied for three years at the [Pacific Adventist University](#) in PNG

graduating with a Bachelor of Arts (Major in English, Minor in Business).

Looking ahead, Fai'ana hopes to sell her jewellery to tourists at her family-owned-and-operated resort on Ofu Island, and through the Vava'u Pearl Centre.



June 2021

[Ministry of Fisheries, Fiji](#) staff have reported continuing progress among young pearl farmers, following the devastating impacts of Cyclone Yasa early this year.

Most recently, the [Viani Youth Group](#), who participate in regular [USC TAR](#) pearl farming training, have retrieved the main line that sunk after the Cyclone. The line holds healthy oysters implanted

with mabé pearls that are due for harvest mid-year. This will be their first mabé pearl harvest since they began culturing pearl oysters in 2019. The group have also reported healthy pearl oyster spat recruitment, due to be harvested in July.

This progress not only reflects the resilience of Fijian communities such as Viani, but also their motivation to improve their livelihoods through mabé pearl farming.

Research is funded by the [Australian Centre for International Agricultural Research](#) in partnership with the [Ministry of Fisheries, Fiji](#).



June 2021

Meet Kinisimere (Kini), President of the '[Raviravi Women's Group](#)', and pearl business woman extraordinaire. Kini works with an amazing group of women from the Raviravi village helping to build livelihoods through mabé pearl culture and associated activities. Together, the Raviravi women are changing history!

Kini's has a life-long love of mabé pearl culture, having grown up in Raviravi witnessing the women in her village working with mabé pearls to earn a living. She says the opportunities arising from the [ACIAR/Ministry of Fisheries, Fiji](#) project, managed by the [USC TAR](#) pearl team, have made it possible for the Raviravi women to turn their lives around.

Since taking up her role as President seven years ago, the Raviravi group has reached several amazing milestones, including the highest volume of pearl oysters cultured in Raviravi, and the highest income earned from mabé pearl sales. They have also produced the highest pearl oyster spat recruitment under Kini's leadership, and successfully completed a

professional pearl handicrafts workshop.

All of these achievements are backed by solid, small business foundations based on business management and financial transparency. According to Kini and the Raviravi Women's Group, the future looks very bright indeed!



June 2021

Tonga's [mabé](#) pearl farmers and artisans have secured a valuable contract for online product sales in Hawaii following a COVID19 impacts marketing workshop, run by the [Ministry of Fisheries - Tonga](#) and the [World Bank Pacific](#) in late-2020.

According to the [Vava'u Pearl Centre](#) Supervisor, Naua Lakai, a quarterly five-year mabé pearl product sales contract was signed in February 2021 with [Jewels of Polynesia](#) (JOP), and since then, Tonga's mabé pearl businesses have thrived.

Collectively, they exported 200 designed and value-added mabé pearl pieces in February and another 100 in May, with the next product shipments due in August and November.

The contract, secured with the support of fellow Tongan and JOP Founder, Melanie Halapio Sunia, is providing much-needed livelihood benefits, including greater income security and the ability to purchase essential items. Tonga's half-pearl community is very grateful