



RESPONSIBLE PEARL FARMING:  
protecting the marine environment and supporting local pearl communities.

[www.SustainablePearls.org](http://www.SustainablePearls.org)



## Summary

---

Producing beautiful, high-quality marine cultured pearls requires exceptional environmental conditions and skill. Pearl oysters are remarkably sensitive organisms. A pristine and thriving ecosystem offers pearl oysters the nutrients, water quality and shelter they need for healthy growth. Many cultured pearl farms are located in areas of the Pacific that boast the greatest marine biodiversity on the planet. In building sustainable businesses, pearl farmers can positively influence their communities and the surrounding environment.



Pearl farming is unique because improved environmental management is not just about preserving vulnerable ecosystems. It is also about producing high-quality pearls. Two goals –environmental and economic- are inherently merged. It has the potential to offer unique opportunities in terms of employment opportunities and marine conservation. With this research project on black cultured pearls we want to examine how the supply chain could support these positive environmental and socio-economic benefits. Our goal is to be able to encourage the further emergence of responsible cultured pearl farming.





## The context

---

Black cultured pearls are worth over US\$ 100million in value at a production level. They are currently produced in French Polynesia, the Cook Islands, Fiji, Mexico and Micronesia. French Polynesia continues to dominate production with over 90% of pearls produced. The key to economic sustainability in cultured pearl farming is producing high-quality pearls. Producing high-quality pearls demands a long-term vision, sound environmental stewardship and responsible farming practices. Sustainability thus already is a core aspect of the pearl production cycle. Our goal is to investigate certification metrics that could meet the realities of pearling by enabling economic sustainability for pearl farmers and provide meaningful differentiation to end jewellery consumers.

Coral reefs play an important role in the life cycle of pearl oysters: they are substrates for reproduction, sources of nutrients for oysters and home to many fish and other organisms that play an important role in maintaining oyster health. As other livelihood sources are threatened through climate change what adaption strategies does cultured pearl farming offer?

Our research project focuses on black cultured pearls. The reason is that this part of the industry presents an ideal case study across several countries with endangered coral reefs, where production and trade can be ideally examined. However, our research results will become applicable to other parts of the marine cultured pearl industry.



## Pearls as sustainable jewels and supporters of marine conservation

---

If the coastal reef ecosystems where most marine oysters are bred deteriorate in quality, the livelihood of pearl farmers also diminishes. Pearl farming grounds can offer a level of protection to fragile reefs. In collaboration with local communities they could be far greater actors of marine conservation. Could pearl production and pearl consumers generate income for communities that live in the vicinity of a pearl farm and also engage in environmental conservation? Win-win relationships can exist between pearl farmers, local communities, the supply chain, and the environment. We want to understand how these can be promoted.

Yet scant attention has been paid to understanding these synergies and developing a plan for improving the sector's positive development imprint. We have assembled an international team of academics, pearl farmers and traders to tackle these important questions of vital importance to island and coastal economies. It is clear that in areas adapting to environmental change pearl farming can greatly contribute to both marine conservation and community development.





## Project aims

---

- Prepare a comprehensive study on and of sustainable resource management strategies in the black cultured pearl industry.
- Devise a set of sustainability standards in collaboration with pearl farmers.
- Find ways of promoting responsible black-pearl farming through ecological and social monitoring (including the prospective design of a certification program)
- Investigate the potential market acceptance of responsibly produced cultured pearls
- Investigate how pearls could be traced from producer to consumer
- Research the sustainability of nuclei production
- Examine how cultured pearl farming could play a larger role in marine conservation and community development
- Design value chains to support cultured pearl farming's positive environmental and socio-economic impacts



## Collaborative research: get involved

---

We aim to contribute to these questions of sustainability in looking not only at production of cultured pearls but also at the trade and retail level of this renewable resource. In collaboration with others, we want to find out how the mentioned positive factors and impacts can be brought together in lasting ways. The project is based at the University of Vermont but carried out with partners in Switzerland, the US, Japan and the Pacific region. This project is complementary to others by cutting across disciplines and working at all levels of the supply chain.

If you would like to get involved in any way please contact us. We want to collaborate and learn from pearl farmers, traders, jewellers, consumers and scientists with the aim of encouraging responsible pearl farming.

For more information, please contact:

**PROF. SALEEM H. ALI**

Institute of Environmental Diplomacy and Security (IEDS), University of Vermont, USA  
[saleem.ali@uvm.edu](mailto:saleem.ali@uvm.edu)

**LAURENT E. CARTIER**

Project scholar, IEDS, University of Vermont, USA  
PhD candidate, University of Basel, Switzerland [laurent.cartier@unibas.ch](mailto:laurent.cartier@unibas.ch)

**JULIE NASH**

PhD candidate, University of Vermont, USA [julie.nash@uvm.edu](mailto:julie.nash@uvm.edu)

[www.sustainablepearls.org](http://www.sustainablepearls.org) Follow us on Twitter: [@thepearlproject](https://twitter.com/thepearlproject)



*All images copyright Laurent Cartier.*