

# PEARL

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China's thriving  
pearl sector  
中国珍珠业蓬勃发展

# Empowering pearl farmers for a **SUSTAINABLE** future

## 赋能珍珠养殖者掌握 可持续未来

The Gemological Institute of America (GIA) and The Nature Conservancy (TNC) teamed up to examine the social and environmental impact of pearling and to add pertinent sustainability data to pearl-origin tracking.

GIA美国宝石研究院与大自然保护协会联手合作,探索珍珠行业对社会和环境的影响,并将相关的可持续发展数据纳入珍珠溯源之中。

| Pierre Fallourd |

**M**olluscs are indicator species. As such, pearls, whether saltwater or freshwater, reflect the journey of the oysters and mussels from which they are harvested.

Temperature, salinity, acidity and nutrient flow influence the formation of nacre – the canvas on which pearl shape, size, colour, lustre and surface are valued. Nacre forms naturally or through human intervention, in which case, pearl farmers' skills and, oftentimes, inspiration can also affect pearl quality. Growth and survival of molluscs, meanwhile, rely on the health of waterways and, generally, on the continued protection of marine and land resources.

Several industry initiatives are underway to better understand sustainability in the pearl trade. The Pearl Commission of CIBJO, the World Jewellery Confederation, aims to provide a sensible definition of sustainability when applied to pearls. Kenneth Scarratt, president of CIBJO Pearl Commission, explained, "CIBJO felt the need to provide an inclusive document to help the industry understand the social, environmental and economic impact of natural and cultured pearls as an introduction to our pearl guide."

The document, scheduled for review and approval at CIBJO Congress in Jaipur, India in October 2023, offers an overview of how pearls impact communities, climate, biodiversity and pollution; and the critical role of pearlers engaged in fishing, breeding and/or farming activities.

### ESG tool for farmers

The Nature Conservancy (TNC) has been promoting the principles of restorative aquaculture – think regenerative agriculture – while running collaborative projects with industry players using an in-house Environmental, Social and Corporate Governance or ESG assessment tool.

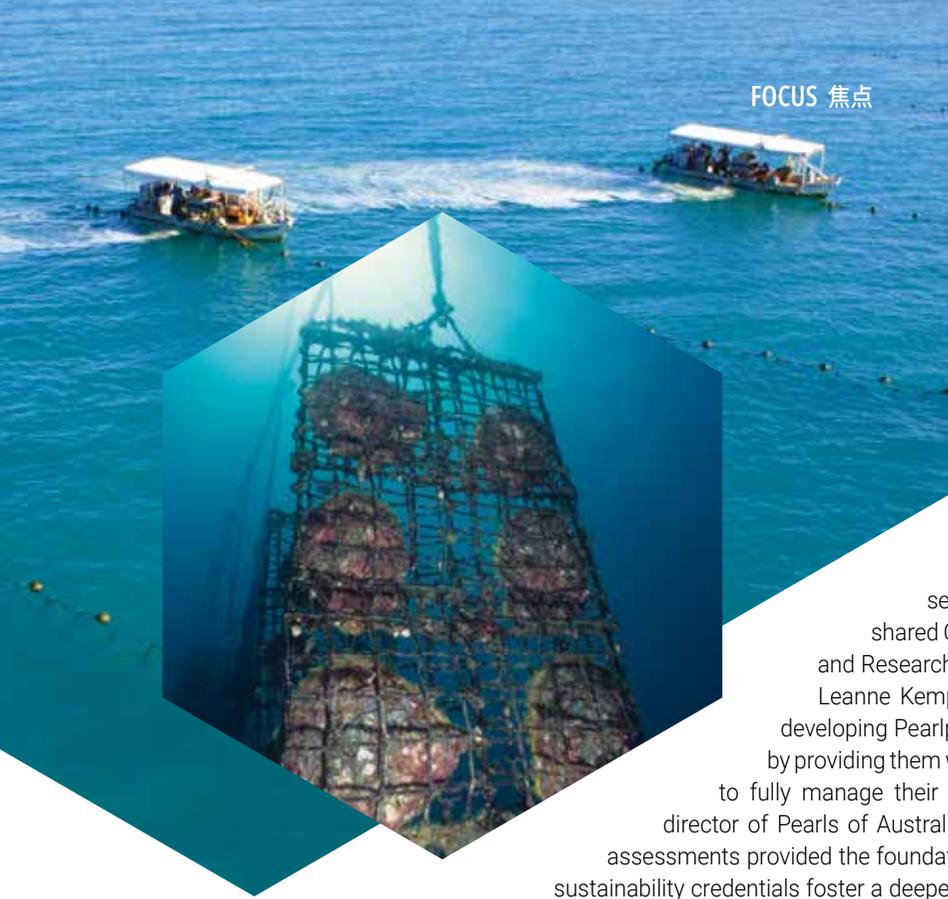
TNC collaborated with the Gemological Institute of America (GIA), which agreed to fund the creation of Pearlpoints, the first-ever open-source self-assessment online tool for pearls. Its initial version was shared with selected pearl farmers for feedback in June 2023 after about six months of development. The project was completed in August 2023. While it does not replace an actual Life Cycle Analysis (LCA) or ESG assessment, the tool, specifically designed for pearl farmers, provides detailed information about emissions, nitrogen capture, restorative aquaculture and indications on data readiness.

The first version of Pearlpoints, which can be accessed through [pearlpoints.io](https://pearlpoints.io), focuses on saltwater pearls, but the same approach can be applied to freshwater and natural pearls. A summary of the outcome of the pilot LCA and ESG is available on Pearlpoints and indicates a competitive level of emissions per pearl (CO2 Eq) as well as the potential for responsible pearl operations to drive ecosystem restoration.

The assessment consists of a series of 30 questions on pearl farming operations, specifically energy consumption,



Pearls of Australia's Cygnet Bay Pearl Farm 天鹅湾珍珠养殖场



water origin and other operational elements. There is also a section on management and compliance systems. Assessment results provide key metric estimates and access to relevant resources to provide guidance on responsible practices.

Heidi Alleway of TNC explained that pearling was a great opportunity to test TNC's framework on a global industry facing diverse challenges. The initiative also complements GIA's education and pearl services and will help project these into the future, shared GIA Executive Vice President and Chief Laboratory and Research Officer Tom Moses.

Leanne Kemp of Everledger, which also played a key role in developing Pearlpoints, said the main goal is to empower farmers by providing them with necessary frameworks and digitised systems to fully manage their sustainability efforts. James Brown, managing director of Pearls of Australia whose pearling operations and LCA and ESG assessments provided the foundations for Pearlpoints, stated that provenance and sustainability credentials foster a deeper connection with customers.

软体动物是重要的指标物种。无论是海水或淡水珍珠，都反映了其珍珠贝的生长历程。

温度、盐度、酸度和养分流，都对珍珠质的形成有所影响，而珍珠质就是建构不同珍珠形状、大小、颜色、光泽和表面品质的画布，透过自然或人工程序形成，在后者的情况下，珍珠农的技术以至思维都会影响珍珠的质量。与此同时，软体动物的生长和存活率亦有赖水质健康，以及海陆资源的持续保育。不同的机构正推出多项举措，以更深入探索珍珠行业的可持续性。

国际珠宝首饰联合会(CIBJO)辖下的珍珠委员会，旨在为珍珠的可持续发展给予合理的定义。CIBJO珍珠委员会主席Kenneth Scarratt解释说：“CIBJO认为有必要发表一份全面性的文件，帮助行业了解天然和养殖珍珠对社会、环境和经济的影响，作为本会珍珠指南的入门资讯。”

2023年10月在印度斋浦尔举行的CIBJO大会上，将进行该文件的审批工作。它概述了珍珠如何对社区、气候、生物多样性和环境污染构成影响，以及从事采集和养殖活动的珍珠农的关键角色。

## 为珍珠农打造ESG工具

大自然保护协会(TNC)一直致力推广恢复性水产养殖方案(其概念有如再生农业)，同时采用自家开发的环境、社会和企业治理(ESG)评估工具，与业者共同开展合作项目。

GIA美国宝石研究院同意资助创建TNC的Pearlpoints项目，实现首项为珍珠而设的开源在线自我评估工具。经过约六个月的研发，于2023年6月向特选珍珠养殖户提供初始版本，以收集其反馈意见。该项目于2023年8月完成。

虽然该工具未能取代生命周期分析(LCA)或ESG评估工作，但胜在专为珍珠养殖者而设计，能够提供有关排放、氮捕获、恢复性水产养殖的详细信息，以及显示数据准备程度。

评估的内容包括一系列有关珍珠养殖操作的问题，特别是能源消耗、水源和其他操作因素，共30道问题。还有一部分涉及管理和法规系统。评估结果将提供关键指标估算，亦

为农民提供有关负责任实践的相关资源和指导。Pearlpoints的初始版本集中于海水珍珠范畴，但同样的模式也适用于淡水和天然珍珠。现可在pearlpoints.io浏览该版本。LCA和ESG试点结果的摘要已于Pearlpoints上发布，当中每颗珍珠的排放(二氧化碳当量CO<sub>2</sub>Eq)处于竞争性水平，并显示责任珍珠企业在推动生态系统恢复方面的潜力。

TNC的负责人Heidi Alleway解释说，在面临各种挑战的全球行业中，珍珠业是测试TNC框架的理想范畴。

GIA执行副总裁兼首席鉴定和研究官Tom Moses表示，该项目亦与GIA的教育工作和珍珠服务相辅相成，并有助规划其未来发展。

Everledger公司的Leanne Kemp在开发Pearlpoints的过程中也发挥了关键作用，她指Pearlpoints的主要目标是为农民提供必要的框架和数字化系统，以全面管理他们的可持续发展工作。

Pearls of Australia的养珠业务、LCA及ESG评估为Pearlpoints奠定了基础。该公司的董事总经理James Brown表示，原产地和可持续发展证书有助于加深与客户的联系。

## About the author 作者简介

Pierre Fallourd worked with golden South Sea pearl specialist Jeweller from 1998 to 2013, helping elevate the coveted golden pearl to greater heights. He then managed Atlas Pearls from 2014 to 2019. He is now a purpose-driven consultant on a mission to transform the way people view and appreciate pearls while promoting pearl provenance. Pierre Fallourd在1998至2013年间，与南洋金珠专家Jeweller合作，将本已极受欢迎的金珠推向新高峰。而在2014至2019年，他负责管理Atlas Pearls。他目前是一名以目标为导向的顾问，以改变人们观赏珍珠的方式及促进珍珠溯源为其当前使命。