

Newsletter

February 2023



Welcome to Poseidon's 2023 Newsletter

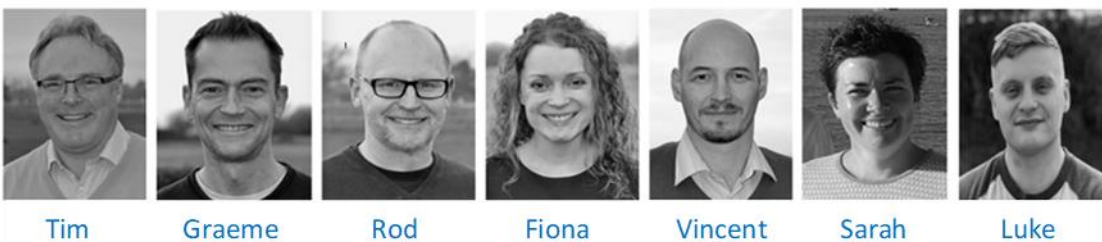
Dear reader,

2022 was an exciting year for Poseidon. We were fortunate to be part of many interesting and impactful projects across the globe, covering a wide variety of sectors and topics from ocean governance, to renewable energy development and new research on blue shark conservation and management needs.

For this year's newsletter we are sharing a brief review of some key projects, which showcase the breadth of work we are involved with.

From all of us at Poseidon, we would like to thank all our clients and our network of consultants working around the world.

Poseidon Aquatic Resource Management Ltd. main@consult-poseidon.com





Renewable energy

Contributing to a green energy future

Reflecting the global drive towards clean, low-carbon energy, it has been a busy year for Poseidon team members. Currently, our staff are engaged in over 30 offshore wind farm projects. Poseidon provides commercial fisheries support to clients across all stages of offshore renewable energy development, with projects in UK and Irish waters and beyond.

Services provided for offshore renewable energy development in 2022 included:

- **Feasibility studies** and appraisals to support optimal site selection for offshore wind farms in the Celtic Sea and in Scottish waters.
- **Environmental Impact Assessment** Scoping for several ScotWind offshore wind farms.
- Leading the **commercial fisheries EIA**, including Five Estuaries, Rampion 2, Morecambe, Outer Dowsing and Irish sea offshore wind sites.
- **Supporting developers** through their examination phase, including Awel y Môr and Sheringham Shoal and Dudgeon Extension.
- **Post-consent support** to offshore wind farm projects entering/in construction, including commercial fisheries monitoring for Neart na Gaoithe and developing the Fisheries Management and Mitigation Strategy for Seagreen 1A export cable.
- **Leading workshops** on strategies to encourage co-existence between commercial fisheries and offshore wind to global renewables development teams in the US, Canada and Asia.

Support from consent to construction and beyond

Since 2018 Poseidon has provided support to the **Neart na Gaoithe offshore wind farm**, located off the east coast of Scotland, consisting of 54 turbines and expected to be operational in early 2024.

Consent for the project was granted in 2018, with construction commencing in 2020. Our team's work has included undertaking the **commercial fisheries EIA** to support consent application, and **post-consent support** has included:

- Ongoing commercial fisheries technical advice, including engagement with the Forth and Tay Commercial Fisheries Working Group.
- Development of a Fisheries Management and Mitigation Strategy.
- Development of a commercial fisheries monitoring strategy and delivery of monitoring.
- Acting as Environmental Clerk of Works, monitoring, and reporting on compliance of construction works with the project consents.

As we move into 2023, Poseidon continues its work in offshore renewables and looks forward to keeping pace with this fast-developing sector.



Blue Economies in the West Indian Ocean

Helping blue economies bloom

Poseidon are working with several national and regional agencies to develop blue economy programmes in the West Indian Ocean.

We are currently leading on the formulation of an EUR 58 million **Regional Blue Economy and Ocean Governance Programme for the West Indian Ocean**, which will cover all continental countries from Djibouti down to South Africa, including the island states. The regional programme will enhance the coordination needed for effective development and management of the blue economy across the WIO, working with several national governance agencies, development partners, IGOs, NGOs and the private sector. This initiative will support and boost sustainable regional ocean governance and management. Our work has included:

- Analysis of interventions in the region, to develop and prioritise the geographic scope and components of the regional programme.
- A situational analysis of environmental, social, and economic sustainability issues, identifying key stakeholders.
- Avoidance of overlaps and building synergies with other existing and planned projects in the region, sub-regions and countries; determining potential implementing partners and modalities.

At a national level, our staff are leading a team of experts to design a five-year EUR 30 million blue economy programme for **Mozambique**. The programme is expected to support the creation of a **national blue economy observatory** to act as a knowledge hub on the blue economy and investment opportunities, value chain improvements in selected blue economy sectors, and marine conservation and restoration.

In **Rodrigues**, we have been working as part of a multi-disciplinary team of experts to update the ten-year **Sustainable Integrated Development Plan** for Rodrigues, having special responsibility for the blue economy component.

Our work on these projects will result in agreement over funding, activities, and implementation modalities to support the blue economy in the region over the coming years. This will support conservation, protection, and rehabilitation of the marine environment, as well as growth, innovation, energy transition and the sustainable development of blue economy sectors.



Blue economy investments and synergies in the EU

Over the past seven years, the **European Maritime and Fisheries Fund (EMFF)** has supported development of the EU **Integrated Maritime Policy (IMP)**, a key pillar of which was innovation and new technologies, developed through a grant scheme, to assist small and medium businesses to develop and complete their blue economy projects.

Building the foundation for the success of the blue economy

Working alongside several partners and the European Commission, **Poseidon is evaluating the success of blue economy projects funded under the EMFF**. The assignment aims to measure the impact of these grants, to collect and exchange information on best practices, and to develop synergies with other EU funded projects through a series of themed workshops.

By providing a platform for the exchange of information and evaluation insights the Commission can improve the design of future funding calls and better support future projects.

Our work's contribution to visibility of blue economy projects through the promotion and sharing of success stories and the mainstreaming of results will inspire the work of current and future beneficiaries and so increase their chances of success.

Other Blue Economy projects in 2022

- **Blue Economy Observatory.** The EU Blue Economy Observatory collects, harmonises, analyses and disseminates data and knowledge. Poseidon is part of the team delivering this knowledge platform, conducting market analyses, reports and studies on the EU blue economy.
- **Blue Economy Development Roadmap in Pakistan.** This work for the World Bank included analysing policy and institutional gaps, developing the roadmap, and advising on its successful implementation.
- **Scottish Shellfish Blue Economy Plan.** Poseidon was part of a project team led by Scottish Agricultural Organisation Society (SAOS) to propose approaches for growth of the Scottish farmed bivalve industry by achieving economies of scale and contributing to ecosystem services (blue carbon).



Economic studies

Contribution to the FISH4ACP programme

FISH4ACP is a global programme funded by the EU and BMZ and implemented by FAO. It seeks to enhance the productivity and competitiveness of twelve **fisheries and aquaculture value chains** from African, Caribbean and Pacific countries to maximise their economic returns and social benefits, while minimizing the detrimental effects on natural habitats and marine wildlife.

The programme's objectives are to assess value chain performance and design upgrading strategies.

Support is then provided for the implementation of the strategies.

Poseidon staff played a key role in the analytical and design phase of two projects, leading multi-disciplinary teams of experts to assess value chains and then design upgrading strategies for the **purse seine fishery in the Marshall Islands** and the **mangrove oyster value chain in the Gambia**.

During a one-year design phase in each country, our staff had special responsibility for the economic analyses to model and assess value chain performance, and for the detailed specification and justification of the value chain upgrading strategies.

Poseidon's work contributed to the successful development of robust and evidenced-based upgrading strategies through participatory processes which ensured stakeholder support. We are delighted that the strategies have been endorsed by stakeholders and are now being implemented in both countries.

The Gambian upgrading strategy will increase economic and social benefits to women who represent almost all those working in the value chain, through improved resource management, expansion of new markets and products and support for the development of oyster farming. In the Marshall Islands, the strategy will support the country's ability to export more tuna in containers rather than being transhipped, resulting in value-added benefits to catching sector and shore-based companies.

Our involvement in these two value chains is continuing in both countries during the main implementation phase of the project until 2025, with the provision of **strategic advice in support of implementation** of the strategies in both countries. Many lessons have been learnt during the analysis and design phases about the value chain methodology used by the FISH4ACP programme. Poseidon staff are **also contributing to methodological revisions**, taking the lead on economic aspects of the methodology and related tools. The result will be improved and streamlined methodological guidance documents and tools on how to use value chain analysis when designing project interventions and upgrading strategies.

Other economic studies conducted in 2022

- Global estimation of the volume and value of legally reported **tuna transshipments** for Pew Charitable Trusts.
- **Value for Money Assessment** of the proposed dredging and installation of pontoons at Ardglass fishery harbour, Northern Ireland.
- **Brexit Adjustment Reserve Scheme Evaluation** for substantial seafood capital investments in Ireland.



Aquaculture

Supporting ambitious aquaculture developments in Rwanda

Poseidon has been working in 2022 and 2023 with our colleagues in Gatsby Africa to assist the Ministry of Agriculture and Animal Resources (MINAGRI) and the Rwanda Agriculture and Animal Resources Development Board (RAB), in the development and drafting of a **National Aquaculture Strategy for Rwanda** (NASR). This is a medium term (2023 – 2035) sector strategy that will guide Rwanda towards a thriving aquaculture industry. NASR aims to increase the **long-term productivity and sustainable growth of the aquaculture sector**, by developing feed and fingerling production through research, increasing capacity development, and interventions to modernize the sector.

Poseidon's experts in aquaculture value chains are supporting the development of NASR, through extensive research and analysis of Rwanda's aquaculture sector, identifying and consulting national stakeholders to obtain input on the constraints, opportunities for Rwandan aquaculture and to obtain feedback to incorporate into the development of the Strategy. Our consultancy aims to provide the planning necessary to guide the evolution of the sector by exploiting opportunities, minimising risks, attracting investment, boosting development, and ensuring the long-term economic, environmental, and social sustainability of the sector.

Our work includes;

- Extensive reviews and appraisals of all existing aquaculture strategies within Rwanda, to draw lessons from pre-existing and prior aquaculture development programmes to improve NASR;
- An in-depth analysis of the status, characteristics, and dynamics of the Rwandan aquaculture sector, including market demands, consumption trends, and the potential for regional export markets; and
- Assessing the viability of the infrastructure and suitability of Rwanda's key water resources for commercial aquaculture and key skills gaps in aquaculture management.

Our work will help MINAGRI/RAB to have a clear understanding of the constraints and opportunities faced by aquaculture businesses, understand the optimal aquaculture farming systems, approaches, and locations with the highest potential for growth and understand the major constraints to this growth. This will help to ensure that NASR implements the optimal management models to enable the aquaculture industry to develop and meet national and international market demands, tackle sector weaknesses and gaps, and is supported by technological innovation, in a plan that reflects the national planning ambitions but is a but realistic target for the growth of the Rwanda aquaculture industry.

At present, our team has generated some very encouraging findings, with our analysis indicating that just under 105,000 tonnes of fish could be produced by Rwanda by 2035, with around 78,500 tonnes produced from aquaculture. The team have worked to provide the suggested support actions required to facilitate such growth, such as significantly increasing planning and environmental management to ensure aquaculture in lakes does not exceed the carrying capacity and increasing Rwanda's research capacity.

Other aquaculture projects in 2022

- Poseidon continues to support sustainable aquaculture development. Over the past year we have again worked for Europe's **Aquaculture Advisory Council**, preparing an important publication on climate adaptation and mitigation in aquaculture.
- We also worked with the EU's Maritime Spatial Planning (**MSP**) Platform to evaluate the extent to which aquaculture has been included in Member State MSPs and how this can be improved.
- In the UK Poseidon has been working with the University of Exeter on identifying 'tipping points' for the better **management of shellfish farming**.
- Poseidon director continues work with the Irish and Northern Ireland aquaculture sectors, supporting the re-formed **NI Aquaculture Representative Group** (ARG).



Evaluation

Improved regional fisheries governance in western Africa (PESCAO), Mid-Term Evaluation.

In 2018 the EU agreed to fund **the PESCAO programme**, for the fifteen Member States of the Economic Community of West African States (ECOWAS) and Mauritania. With a budget of EUR 15.7 million and running for 5 years from 2018 to 2023, the programme aims to improve regional fisheries governance in Western Africa through better coordination of fisheries policies and enforcement activities by national and regional stakeholders, and to enhance the contribution of fisheries resources to sustainable development, enhance food security and increase poverty alleviation in West Africa.

Poseidon were tasked with conducting an in-depth, **mid term review (MTR) of the PESCAO programme** early in 2022. The main objectives were to provide the European Union, interested stakeholders and the wider public with:

- An overall independent assessment of the past performance of the PESCAO programme.
- Key lessons learned, conclusions and related recommendations to improve current and future interventions.

The MTR considered the performance of the programme against standard evaluation criteria and examined the assumptions underpinning the programme design, the programme processes, and emerging programme impacts.

Poseidon's evaluation concluded that PESCAO was highly relevant in addressing the need for a consistent policy framework to support the implementation of the fisheries and aquaculture component of the ECOWAS policy for agriculture at regional and national levels. Even in its mid stage of implementation, we found that PESCAO had contributed to:

- an understanding of fisheries and aquaculture issues within the ECOWAS Commission which many stakeholders indicated did not exist before PESCAO.
- policy dialogue and implementation of a Western Africa fisheries and aquaculture policy by ECOWAS Member States.
- exchanges of good practices for the collection of scientific data and analysis between a network of research institutions in the EU, ECOWAS Member States and Mauritania.

From our evaluation, we drew several generic lessons essential to the success of fisheries management programmes:

- That leadership, ownership, and engagement by relevant regional organisations is essential for regional fisheries management initiatives to be successful.
- National authorities and donors need to commit to working and engaging at a regional level to enable the success of regional fisheries management initiatives.
- Large, complex regional projects implemented through different components and partners, require significant and sufficient resources and implementation efforts to support coordination,

monitoring, evaluation, and communication.

Poseidon also proposed recommendations, carefully tailored to different stakeholders, for improving PESCAO's implementation and increasing the potential of the programme to achieve its stated objectives.

Other Evaluation Projects completed in 2022.

- **Global Fisheries Transparency Review**, on the status of data transparency in fisheries. The outcome set a baseline for future monitoring of transparency efforts.
- **Five-Year Independent External Evaluation of EFCA** for the period 2017-2021; Poseidon staff provided overall guidance and peer review of outputs prepared by Ipsos Mori.
- **Potentials to increase added value contributions of EU SFPAs in third countries.** This study is exploring the potential to generate increased levels of value-added from more landings and processing in third countries of catch made by EU fishing vessels fishing under SFPAs. The study focussed on countries in Africa with SFPAs.
- **Multiple ex-post and ex-ante evaluation of the implementing Protocol to the Sustainable Fisheries Partnership Agreements (SFPAs)** between the European Union and various partner nations such as Morocco, Cabo Verde, Guinea-Bissau, and Côte d'Ivoire.



Improved Fisheries Governance

A big year for blue shark

In 2022 Poseidon produced an **economic valuation of the global market for blue shark products and an interdependent policy analysis for sustainable management and trade of blue shark products for OCEANA**. The report is the first to quantify the global catch and economic value of blue shark products and maps the global trade networks of major importers and exporters of blue shark products.

Official shark catch and trade data is often not very robust, with the underreporting of traded products such as fins and the misreporting of species landed. Blue shark stock status is mostly informed by catch

data, which does not accurately present the true status of global blue shark stocks. Multiple reports detail the decline of blue shark populations in recent years, which prompted the need to improve our understanding of blue sharks, both in terms of their true value to global fisheries and the threats and pressures facing the species.

Our analysis found that **blue shark is a highly valuable species** that is subject to targeted fishing, and not simply as a bycatch of tuna fisheries. In 2019, blue shark landings accounted for US \$411 million in first hand sales, exceeding the landed value of Atlantic, Southern and Pacific bluefin tuna that year. The reconstructed landings of 189,783 tons, equates to between 7- 10 million blue sharks, mainly from targeted longline fisheries by large-scale commercial fleets, with 74% of catches attributed to distant water fleets. Of all blue shark landings in 2019, 53% were from the Pacific Ocean, with the Atlantic and Indian Oceans accounting for 34% and 13% respectively. In some ocean basins, blue shark was the dominant catch and species such as tuna were in fact secondary; in the Atlantic Southwest, 5 tonnes of blue shark were caught for every 1 tonne of tuna.

Our study found that Taiwan was a major trader of blue shark, accounting for roughly 25% of all blue shark caught in 2019. Hong Kong remains the world's top exporter of shark fins, with blue sharks accounting for ~50% of fin exports, which mainly go to other Asian and mainland Chinese markets.

Perhaps surprising to those outside the region, the largest net importer and consumer of both shark and blue shark meat globally was Brazil. Its consumption coincides with extensive mislabelling and misleading information. Shark meat is often sold under a generic name commonly know as *Caçãõ*, often in a mix of different fish. Consequently, **many Brazilians are unaware that they are eating shark meat** at all.

Despite blue sharks being one of the most abundant and resilient shark species, their populations are thought to be decreasing, largely due to the continued fin trade and the growing demand for shark meat. Blue shark accounted for 60% of all reported shark catch, 36% of all traded shark meat and 41% of all traded shark fins, presenting a clear need for effective management and conservation of this species. Although the International Union for Conservation of Nature (IUCN) now categorizes the global population of blue sharks as "Near Threatened" and the Mediterranean population as "Critically Endangered", our study found that the global blue shark fishery has minimal management compared to other significant fisheries, such as tuna. There is no RFMO specifically dedicated to the conservation and management of sharks. Three major RMFOs already have mandates that would allow them to engage more directly in the management of oceanic sharks.

Poseidon provided wide ranging recommendations that OCEANA used to encourage RFMOs to increase direct management of blue shark fisheries and to improve conservation and protection of blue shark

fisheries.

As a result of the efforts of organisations including OCEANA, several shark species including blue sharks, were recently added as **Appendix II CITES** species. This is a significant step in ensuring the protection and conservation of blue sharks globally. Additionally, following the CoP19 summit, the US House of Representatives made a landmark decision to implement a **total ban on the buying and selling of shark fins** in the United States, securing a crucial win for shark conservation. efforts.

OCEANA's report and press release can be found here:

Press Release: <https://oceana.org/press-releases/new-oceana-analysis-finds-tuna-fisheries-are-masking-usd-411-million-blue-shark-industry/>

OCEANA's report: <https://oceana.org/reports/bycatch-no-more-blue-shark-is-a-411-million-fishery-that-deserves-proper-management/>

Fisheries & Governance: other projects in review

- in 2022 we finished a 3-year project to provide **technical support to the National Fisheries and Aquaculture Authority (NaFAA) Liberia** on behalf of the EU, to improve the institutional capacity of NaFAA, to deliver on its national and international fisheries sector governance obligations as a regulator, supervisor, and coordinating agency.
- Poseidon staff assisted in the development of a **Harvest Strategy Policy and Management Standards for fisheries in the Seychelles**.
- We worked alongside NRC to provide consultant services to produce a Best Practices Guide and hosted a Stakeholder Workshop to address **Abandoned, Lost or Discarded Fishing Gear** APEC Region.
- We completed a **cross-cutting evaluation of SFPAs** between the EU and third countries on behalf of the European Commission.
- On behalf of the German Ministry of economic cooperation and development we are researching how to **increase the benefits of SFPAs** to African countries, and in particular their small-scale fisheries sectors.
- We continued our work to address **ocean plastic pollution** and reducing the impact of fishing and aquaculture gear on the marine environment.

Environmental certification and Fisheries Improvement Plans (FIPs)

Poseidon remains very active with **Marine Stewardship Council (MSC)** fishery assessments, re-assessments, and surveillance audits, benchmarking and scoring fisheries against the standard. Work in 2022 included:

- A brill and rays pre-assessment (Southwest Channel, North Sea and West of Scotland)
- Re-assessment of Dutch Razor clam (Dutch

coastal zone)

- Scottish & Shetland Mussel reassessment (Scotland)
- Herring and sprat (Baltic Sea)
- Brown Crab MSC Pre-assessment (Northern Ireland)

Our recent and ongoing work on **Fisheries Improvement Plans (FIPs)**, often a pre-cursor to MSC-certification, includes:

- Lemon sole & plaice (North Sea)
- Crab & lobster (Southwest channel)
- Monkfish (Southwest channel)
- King scallop (English Channel, North Sea, West of Scotland and Irish Sea)
- Nephrops (North Sea, West of Scotland and Irish Sea)
- Thornback ray (France / channel)

