BLUE GROWTH IN LARGE OCEAN NATIONS

Conclusions from the Large Ocean Nations Forum in Malta, October 2–4, 2017

Hosted by the Nordic Council of Ministers and the Government of the Faroe Islands in close cooperation with the Food and Agriculture Organization of the United Nations (FAO) and the Commonwealth Secretariat on 2-4 October 2017 in Malta, the first Large Ocean Nations Forum brought together delegations from 10 Large Ocean Nations to discuss the potentials of sustainable Blue Growth.

The forum's objectives were to promote greater collaboration and dialogue on successful Blue Growth practices that have spurred development on island nations, and to look to the development of innovative industries and markets where these nations may have a competitive advantage. The forum concluded with a high-level roundtable that provided perspectives on the forum conclusions in light of existing national and organisational work on Blue Growth.

The term "Large Ocean Nations" – in contrast to small island states – was emphasised in the forum to reflect that these nations control vast oceanic areas with corresponding economic and political potential. They share responsibility and commitment to the health of the ocean and are fundamental actors in the emerging international ocean governance agenda. The forum demonstrated to participants that Large Ocean Nations – whether developed or developing, North or South, Western or Eastern Hemisphere – share many of the same challenges and can learn from one another's experiences when pursuing Blue Growth. Participants in the Large Ocean Nations Forum on Blue Growth came from Cabo Verde, the Faroe Islands, Greenland, Grenada, Iceland, Malta, Mauritius, Norway, Papua New Guinea, São Tomé and Príncipe, Seychelles, Vanuatu, and the European Union.

Focusing on context, challenges, and opportunities for sustainable Blue Growth development, this report features country cases, outlines how selected international organisations are engaged, and provides an overview of four key discussion themes: the development of new industries from underutilised marine resources; the establishment of institutional frameworks and structures that support cooperation, innovation, and knowledge exchange; the sale of exclusive seafood to foreign markets; and blue fashion. Arising from these discussions, forum conclusions, including seven policy recommendations with corresponding ideas for action, are presented in the final section of this report.

HOSTED BY:

GOVERNMENT OF THE FAROE ISLANDS

Nordic Council of Ministers

Nordic Atlantic Cooperation

IN CLOSE COOPERATION WITH:

Food and Agriculture Organization of the United Nations

The Commonwealth

High-level panel members

Høgni Hoydal, Minister of Fisheries of the Faroe Islands

Thorgerður Katrín Gunnarsdóttir, Minister of Fisheries and Agriculture in Iceland

Pamela Charlette, Minister of Fisheries and Agriculture in the Seychelles

Stefaan Depypere, Director for International Ocean Governance and Sustainable Fisheries in DG MARE, EU

José Filomeno Monteiro, Ambassador of Cabo Verde to the EU, Belgium, and Luxembourg

Kan Oye Fong Weng-Poorun, Senior Chief Executive of the Ministry of Ocean Economy, Marine Resources, Fisheries and Shipping of Mauritius

Dr. Joao Gomes Pessoa Lima, General Director of Fisheries in São Tomé and Príncipe

Foreword

For the Faroe Islands and other Large Ocean Nations, marine resources are the cornerstone of our economies and cultures. Seafood represents more than 90% of the value of Faroese exports, and our modern economy is built on wealth from marine resources. As such, it is "part of our DNA" as islanders to think of the ocean as an area of plentiful opportunities for growth.

Blue Growth and Blue Bioeconomy are fundamental concepts for Large Ocean Nations to deliver higher value creation from our ocean and create new products and value chains from previously underutilised marine resources. The possibilities are many and diverse: Blue Growth and the Blue Bioeconomy can comprise initiatives such as small-scale high-value seafood production for export, fashion products made from fish skins, seaweed, and much more. However, to be lasting, value creation must go hand-in-hand with sustainability and responsible management of resources.

It is important to emphasise that Blue Growth needs to be addressed equally from the policy and governmental perspective, the business side as well as on the community level. In the end, it is all about what citizens stand to gain from these initiatives. It is the citizens who will have to see and feel the benefits of these agendas. Without their participation, success will not be within reach.

The Faroe Islands rely heavily on a degree of self-governance, including negotiation of their own bilateral agreements and fishing trade agreements. To that extent, we are dependent on international collaboration where shared stakes and interests in the sustainable management of fish stocks and other marine resources are key.

This forum is one of the last in a series of projects under the Faroese chair of the three-year Growth in the Blue Bioeconomy programme under the 2015 Danish Presidency of the Nordic Council of Ministers. The purpose of the forum was to provide an open, free exchange of experiences and ideas, which resulted in a strong set of conclusions and recommendations to continue the work and collaboration initiated in Malta. The Faroe Islands are committed to working towards further meetings of the Large Ocean Nations in the future and we plan to host a side-event at the Food and Agriculture Organization of the United Nations' Committee of Fisheries meeting in 2018 to follow up on the Forum.

Høgni Hoydal

Høgni Hoydal
Minister of Fisheries
The Faroe Islands

Executive Summary

SITUATION AND CONTEXT

The ocean is increasingly at the top of the agenda in international discourse. Blue Growth has a critical role to play for Large Ocean Nations that rely on marine resources and, in contributing to sustainable development, also helps to address major global challenges described by the Agenda 2030, particularly SDG 14, and the Paris Agreement. Blue Growth can create and improve existing marine value chains, while spurring innovation with wider socio-economic benefits. Large Ocean Nations regionally and globally – despite differences in contexts – stand to benefit from growing collaboration and greater formalisation of partnerships, exchange of knowledge, and innovation. The forum aimed to bring case studies from the Global North and the Global South together to inspire a dialogue between Large Ocean Nations and share experience via dialogues of equals on a practical level in the hopes of gaining shared learnings and knowledge.

CHALLENGES

A range of challenges exist for Blue Growth and innovation in Large Ocean Nations, including:

- Difficulty of transport and infrastructure logistics for remotely situated islands
- Relative isolation can limit access to markets
- Limited availability of affordable green energy
- Securing investment
- Navigating standards and regulations
- Opening new product categories and markets
- Net migration of youth
- Lack of gender equality
- Silo-thinking and lack of information-sharing between actors
- Vulnerability to climate change and environmental degradation
- Lack of administrative and technical capacity as well as special skills

OPPORTUNITIES

Many opportunities and possible pathways exist to nurture Blue Growth and innovation in Large Ocean Nations, including:

- Jurisdiction over large ocean areas and marine resources
- Using the unique qualities of islands for branding
- Achievement of SDGs and other international and national commitments
- Digitalisation, data-sharing, and inter-agency cooperation
- Involving and empowering women and youth
- Targeted communication to audiences such as women and youth
- Educational policy attracting and maintaining talent and providing needed skills
- Partnerships and networks for knowledge-sharing
- Translating existing political will into actions
- Targeted capacity building; e.g., bioeconomies
- Building more efficient, innovative, and sustainable ocean product value chains
- Building upon existing sustainability standards and initiatives

Recommendations

FORUM PARTICIPANTS HAVE IDENTIFIED SEVEN RECOMMENDATIONS

1. Foster effective international collaboration and partnerships
2. Use digitalisation and data-sharing policies
3. Encourage structures that nurture Blue Growth
4. Tie Blue Growth to Agenda 2030 and long-term planning
5. Ensure that standards and legal frameworks support Blue Growth
6. Mainstream support for Blue Growth
7. Support Blue Growth Innovators and access to markets

Detailed recommendations on p. 20-21

Blue Growth Intergovernmental Organisations

BLUE INTERGOVERNMENTALS

International organisations are increasingly focused on Blue Growth as a means by which ocean nations can better achieve their socio-economic development goals and tackle Agenda 2030 and the Paris Agreement. Three particularly active organisations have been the Nordic Council of Ministers, the Food and Agriculture Organization of the United Nations (FAO), and the Commonwealth Secretariat. As organisers and partners of this forum, these organisations support sustainable Blue Growth among participating countries and regions.

NORDIC COUNCIL OF MINISTERS

Geir Oddsson, Senior Adviser Fisheries and Aquaculture and Bioeconomy of the Nordic Council of Ministers, presented the work of the Nordic Council of Ministers on the Blue Bioeconomy. With 26 million inhabitants, the Nordics provide 40% of the capture fisheries and aquaculture production in Europe. Blue Growth in Nordic cooperation is to a considerable degree financed by the Nordic Fisheries and Aquaculture Cooperation which has an active portfolio of 50-60 projects at any one time.

The bioeconomy, and specifically the Blue Bioeconomy, has been a political priority of all chairmanship programs of the Nordic Council of Ministers since 2014. The Nordic Council of Ministers is launching a joint Nordic Bioeconomy Program in 2018 with focus on four strongholds – replace, upgrade, circulate, and collaborate – and five principles of sustainability. Under the Finnish presidency of the Nordic Council of Ministers from 2016-2018, the Nordic Roadmap for the Blue Bioeconomy was created, which covers Aquaculture, Aquatic Biomass, Aquatic Resources for Well-Being, as well as Water Technology and Knowhow. High-level Political Priority Programs include "Generation 2030" as well as "Nordic Solutions to Global Challenges." Mr. Oddsson highlighted the need for ongoing engagement and collaboration, as well as the importance of the Blue Bioeconomy for the Agenda 2030 and SDGs.

FAO

Representatives from FAO presented the Blue Growth Initiative (BGI) of the organisation. The initiative aims to reconcile economic growth with improved livelihoods and social equity, and strengthen transparent, reliable, and more secure food systems. The BGI was highlighted as a framework for achieving the 2030 Agenda and several of the Sustainable Development Goals, with a focus on SDG 14: Conserve and sustainably use the ocean. The objectives of the BGI are to create enabling conditions for the transition to Blue Growth; improve governance of aquatic ecosystems; conserve biodiversity and habitats; and empower all stakeholders along the fisheries and aquaculture value chain. The initiative leveraged existing instruments and approaches, such as the Code of Conduct for Responsible Fisheries and related IPOAs, the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries, Ecosystem Approaches to Fisheries and Aquaculture, as well as the Agreement on Port State measures to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated (IUU) fishing. There are many challenges, including building efficient and

sustainable seafood value chains and to diminish fish and seafood losses that continues to remain at a very high level. It was emphasised that Small Island Developing States (SIDS) are to be seen as "Islands of Opportunity," with many transitioning to Blue Growth and adapting the implementation phases to their specific needs. However, strong, genuine, and durable partnerships, in particular with the private sector, are required to foster innovative ways to build efficiency and sustainability.

THE COMMONWEALTH SECRETARIAT

Jeff Ardron, Ocean Governance Adviser from the Commonwealth Secretariat, began by outlining the activities of the Commonwealth Secretariat's Oceans and Natural Resources Division, which works in three main areas: maritime boundaries, ocean governance, and natural resources. Technical support is provided to member states via dedicated governance, legal, and economic advisers, as well as through publications such as the "Commonwealth Blue Economy Series." While recognising the incredible potential of blue economic development, Mr. Ardron also cautioned that there can be potential downsides. If not carried out in a fair and equitable manner, Blue Growth can end up little different than "brown growth"; i.e. pursuing asymmetric arrangements with developers, often at odds with the needs of local communities. To avoid these and other related issues, the Commonwealth Secretariat is launching its "Blue Charter" initiative. The idea is to apply a "blue" lens to the existing Charter of the Commonwealth and its 16 principles, reaffirming that these values also apply in blue economic development. Assuming the initiative is approved at the Commonwealth Heads of Government Meeting, in April 2018, the Secretariat, with partners and "champion countries," plans to develop tools and communities of practice that will encourage taking a principled approach to ocean development

PRESENTATIONS BY:

Ib Kollavik Jensen, Senior Consultant
Henry DeBey, Fisheries Officer
Samson Fare, SIDS Specialist
Zachary Foco, Programme Specialist.

Since 2014, the FAO Blue Growth Initiative has supported the adaptation of improved governance in Africa and the Caribbean for aquatic sectors related to food security and the fight against poverty, the transformation of fisheries production systems, and the adoption of new practices by communities to improve their income and well-being from aquatic ecosystems in a way that ensures their sustainability.

Although they represent less than 1% of the world's population, SIDS are increasingly important on the international stage, as demonstrated by Fiji's Co-Presidency for the UN Ocean Conference and COP23. Blue Growth is also a priority for the Nordic Council of Ministers and the Commonwealth Secretariat, who have dedicated significant resources to advancing on these issues. Despite unique challenges, the political will to develop a Blue Bioeconomy represents an important opportunity for business in all sectors, including tourism. In the context of this conference, three SIDS presented their work on Blue Growth and efforts to help the world achieve SDG 14 (Life Below Water).

CABO VERDE

Represented by *Carlos Alberto Évora Rocha, National Director of Maritime Economy*

Cabo Verde has promoted Blue Growth via several international partnerships and legislative reforms. The country is part of a number of accords including the Declaration of the Indian Ocean Rim Association on enhancing Blue Economy Cooperation for Sustainable Development in the Indian Ocean Region (2015) and hosted the Mindelo Conference Dialogue on Blue Growth and Economy (2017).

In order to grow the archipelago's Blue Economy, focus has also been on developing public-private partnerships. Cabo Verde's first shrimp farm and commercial aquaculture project is a joint venture between Cabo Verde, Brazil, the Netherlands, and the United Kingdom, entering operation in 2018. The sustainable farm, which received a 3.5 million euro investment, aims to be the first aquaculture facility to use 100% renewable energy and produce certified bio shrimp with a low-carbon footprint. The annual production of 200 tonnes of shrimp aims to reduce the archipelago's reliance on imports, while also offering an opportunity to export a high-quality product, creating jobs and promote socio-economic development on the island. Moreover, this collaboration has strengthened ties with nations around the world and promoted knowledge-sharing, an important challenge for small island states.

SÃO TOMÉ AND PRÍNCIPE

Represented by *João Pesoa Lima, Director-General of Fisheries*

São Tomé and Príncipe has given its Blue Growth mandate to the Ministry of Finance, Business, and the Blue Economy. To create an economy around Blue Growth, the government has put in place different strategic governance and legal frameworks in areas ranging from R&D to ecotourism, transportation, food security, and investments.

Collaborations with the Ministry of Defence, Natural Resources and Environment, Fisheries, and Education led to a cross-sectoral approach of the Blue Growth action plan. Having conducted an in-depth analysis of São Tomé and Príncipe's strengths and weaknesses, the government devised a cross-sectoral action plan for its Blue Bioeconomy. Topics included are varied and complementary and cover fishing and agriculture, urban development, scientific research, eco-tourism, commerce and food security, blue energy, maritime transport and harbour development, as well as security and surveillance.

While the country still faces the challenge of putting in place legal frameworks that would promote investments adapted to Blue Growth niches, legislative and governance efforts have also led to a number of opportunities for private actors including in the fishery, tourism, energy, and environment sectors. Moreover, opportunities of knowledge exchange are also possible with other SIDS in the hopes of favouring South/South collaboration.

GRENADA

Represented by *Safiya Sawaney, Policy Adviser, Grenada Blue Network*

Grenada has led many Blue Growth efforts on the national and international front. Focused on preserving its nature and the ocean, Grenada has actively promoted tourism. One of its most innovative projects was to open the world's first underwater sculpture park in Moliniere Bay. The collaboration with the artist Jason deCaires Taylor was named by National Geographic as one of top 25 Wonders of the World.

The country also collaborates with NGOs such as the PangeaSeed Foundation, which acts at the intersection of culture and environmentalism, to further advocate for the conservation of the ocean. In order to reduce and eliminate the amount of plastic that ends up in landfills, Grenada was the first Caribbean SIDS to join in partnership with Parley for the Oceans and adopt their Avoid, Intercept, Redesign strategy.

After Hurricane Ivan, Grenada made the decision to build better, and has become a leading advocate for climate action, helping to launch the Caribbean Catastrophic Risk Insurance Fund with the World Bank. Nationally, the country has focused on providing every child with education, protecting marine resources and sea life, preparing coastal resilience, and utilising ecosystem-based adaptation. The government also launched the Blue Growth Coastal Master plan to ensure balanced and sustainable coastal development and encourage new enterprise clusters.

THEME #1: Development of new industries from underutilised marine resources

CONTEXT

As the world sees rising concerns about resource scarcity, the importance of developing new industries around underutilised marine resources and greater resource efficiency has never been greater. In Large Ocean Nations, sustainable Blue Growth requires new approaches to innovation that can bring about the technological advances and business models needed for creating new industries based on our ocean resources.

As such, underutilised marine resources should be understood as both resources that are not yet commercially developed or brought to scale in production, such as different forms of aquaculture, as well as more traditional marine resource waste and by-products that can be upscaled in value (e.g. fish resources). The optimisation of value chains is as much about creating greater efficiency for existing products as it is a chance to innovate and create new non-food products. These can present solutions to challenges such as replacing materials traditionally made from fossil fuels with marine resource by-products that would otherwise be discarded.

CHALLENGES AND OPPORTUNITIES

There are few countries in the world where fisheries and aquaculture development could positively impact the national landscape and opportunities for growth more than in Large Ocean Nations. While Large Ocean Nations have most to gain from Blue Growth in these sectors, they must also acknowledge the fundamental sustainability challenges that make them vulnerable to unregulated development.

Marine resources are often located in or near rural areas where new industries emerging from the ocean present an opportunity to greatly improve the social and economic development of Large Ocean Nations by generating employment and enabling high-skilled jobs development. As such, sustainable Blue Growth is an important step for Large Ocean Nations to create sustainable development and reach the goals set out by the Global Agenda 2030.

However, existing markets for innovative marine products are limited, and private sector involvement and attracting investments can be a challenge. Moreover, lack of market access and consumer acceptability for these new, innovative products is slowing down innovation and limiting their scale. There is a need for top-level political leadership and strategic collaboration across Large Ocean Nations to work strategically on spurring innovation, breaking down trade barriers, and creating incentives for entrepreneurs to develop new ocean products. At the same time, all involved stakeholders need to communicate the narrative that ocean products can help solve global challenges related to health, the economy, and the environment.

CASE: DEVELOPING A SEAWEED INDUSTRY IN MAURITIUS

Case presenter: *Dr. Arjoon Suddhoo, Executive Director, Mauritius Research Council*

In 2010, the Large Ocean Nation of Mauritius embarked on an ambitious endeavour to stimulate the development of an aquaculture industry based on seaweed production in lagoons. In Mauritius, there are 435 different species of seaweed and algae, 45 of which enjoy commercial significance. Focusing on the Gracilaria Salicornia and Ulva Lactuca species, the project has resulted in the production of new ocean products such as seaweed jams, soaps, biofertiliser, and animal feed for pig farming.

Efforts began with a "Seaweed Taskforce," a multi-stakeholder and multidisciplinary approach to developing the island nation's seaweed industry, which built upon the local knowledge of fishermen and other stakeholders at seaweed production sites. The project also included a scientific scoping of the farming potential for different species. Capacity building workshops focus on seaweed farming techniques, followed by a community mapping, to identify the most ideal sites to set up experimental seaweed farms.

As seaweed farming requires scientific and technical knowledge, intensive labour, and constant maintenance, there is a need to create a market for Mauritius' seaweed products, both locally and globally, and shift consumer attitudes toward seaweed in order to create scale and develop private sector interest.

CASE: OCEAN RAINFOREST, THE FAROE ISLANDS

Case presenter: *Ólavur Gregersen, Managing Director, Ocean Rainforest, Faroe Islands*

The Ocean Rainforest is a Faroese company producing marine biomass from seaweed in open ocean cultivation installations. Thanks to an innovative seaweed installation suited for the harsh conditions of the open ocean, Ocean Rainforest has deployed approximately 20,000 metres of seaweed lines in the Faroe Islands, where continuous current and stable sea temperatures provide the perfect condition for seaweed farming. As of 2016, Ocean Rainforest is the largest producer of seaweed in the world operating in a deep open-sea environment and sells seaweed for food and cosmetics production in the European market.

With up to 10 times higher growth rates than land-based plants, seaweed can provide a stable source of marine biomass for food, feed, cosmetic, pharmaceutical, nutraceutical, and energy products, all without the use of fertiliser or being in competition with other food production. Private funding from the co-founders, together with research and development grants, enable national as well as international interdisciplinary collaborations on research projects, have been key enablers in developing Ocean Rainforest and the critical biological and biochemical operation related to cultivation, harvest, and processing. Furthermore, Ocean Rainforest has put effort into creating interest for this emerging industry among private and public stakeholders.

THEME #2: Establishing institutional frameworks and structures that support cooperation, innovation, and knowledge exchange

CONTEXT

As the Blue Growth agenda gains prominence around the world, it has become increasingly clear that Large Ocean Nations need both favourable policy conditions and structures that nurture access to research and knowledge for sustainable marine resource applications. However, while significant progress has been made, Large Ocean Nations may not yet have fully developed institutions and structures that sufficiently support cooperation, innovation, and knowledge exchange. Building these is crucial for Blue Growth.

CHALLENGES AND OPPORTUNITIES

The successful establishment of institutions and knowledge communities holds a big promise for Blue Growth projects that go beyond the traditional ocean product markets, such as fisheries. Collaborative initiatives allow marine resources to be the backbone of a number of high-value industrial applications, for instance in the health industry. As such, research cooperation and knowledge infrastructure is key for marine resources to move up in value on the biomass cascading pyramid.

However, Large Ocean Nations seem to be struggling with sharing information across all relevant actors from industry to academia. Moreover, entrepreneurs are not always supported sufficiently by institutions to navigate the myriad regulations and other challenges inherent to the creation of new markets and industries. Institutions can more strongly support Blue Growth entrepreneurs. In order to achieve this and provide a nurturing environment, long-term political and economic plans need to be put in place. This can only be done by challenging the status quo and breaking down the barriers that continue to exist both within government and across stakeholders and formalising continuous exchange.

A strong focus on partnerships and new digital ways of sharing data present opportunities to improve the knowledge level both within the individual Large Ocean Nations but also across the world. As such, there is a need to disrupt the ways in which Large Ocean Nations collaborate on Blue Growth, such as through digitalisation guidelines for institutional setups at all levels. Communication to social groups that traditionally do not engage as much with the ocean (youth, women, etc.) can help anchor the importance of the Blue Economy in solving present sustainability challenges.

CASE: NATIONAL POLICIES AND INTERNATIONAL RESEARCH COLLABORATION IN PAPUA NEW GUINEA

Case presenter: *Dr. Jeffrey Noro, Director of Policy, Science, and Technology Secretariat of Papua New Guinea*

With more than 50% of the population living in rural coastal and maritime communities, sustainable development for much of the population in Papua New Guinea is highly dependent on Blue Growth. Therefore, the country has approached its ocean governance in a comprehensive manner via a suite of strategies, plans, and international laws. Most importantly, the Papua New Guinea Science and Technology Secretariat has developed a Science, Technology, and Innovation Plan that targets four Knowledge and Innovation Programs: national endowment, research governance, research discovery and innovation, and commercialization and uptake. Under the national endowments, the secretariat has identified Blue Science as one of the key research and development investment priority areas to focus on value chain management of marine resources as a strategy for promoting Blue Growth. This is in line with the PNG Vision 2050 and National Strategy for Responsible Sustainable Development.

The government efforts also include the strengthening of interagency partnerships within the government and the development of key partnerships between universities, industry, government, and people. Moreover, developing international partnerships and collaboration for innovation has proven successful particularly within marine research, where several international universities and research institutes have been engaged.

One of the success stories from Papa New Guinea's focus on Blue Growth is the establishment of the company ESSA pharmaceuticals, which has been created under a partnership with the University of British Columbia and the University of Papua New Guinea to develop an anti-prostate cancer drug. Moreover, a seaweed farming project on Bourgainville island of PNG has managed to grow from 800 farmers in 2014 to 4,500 farmers in 2015.

CASE: THE ICELANDIC APPROACH TO APPLIED MARINE RESEARCH

Case presenter: *Sveinn Margeirsson, CEO, Matís Ltd., Iceland*

The bioeconomy plays a significant role in the Icelandic economy with marine resources from fisheries as well as aquaculture and agriculture. To answer a need to create public access to cutting-edge research in this field, the Icelandic government created Matís in 2007, a government owned, non-profit, independent research company specialising in value creation within the bioeconomy and the development of policy and infrastructure.

Today, Matís employs about 100 people in offices, laboratories, and Food Innovation Centres in eight locations around Iceland, and has published 164 scientific publications and 86 technical reports since 2012. Research at Matís is applied in the industry, and several employees hold associate positions within Iceland's universities, while Ph.D. students conduct their research at Matís in collaboration with the industry both in Iceland and abroad. As such, reports and papers from the research carried out at Matís is targeted for practical application to achieve the highest possible impact.

An example of Matís' work is its efforts to reduce waste created as a result of improper handling of products along the value chain, which is one of the biggest problems in the fisheries industry today. Such work can be seen by the start-up Kerecis, which uses cod skin, a waste resource, for medical uses such as bandages. Apart from working on waste reduction, Matís focuses on new technological development including big data, biochemical and enzyme extraction, and industry value chain data, which it believes will have a large impact on the industry.

THEME #3: Exclusive Seafood to Foreign Markets

CONTEXT

With more efficient fisheries management, and better enforcement and control, capture fisheries have maintained stable volumes globally. Even more stringent adherence to sustainable levels of fishing, via FMSY and fishing rules, may further reduce catches. The limitations in growth in volume presents a serious challenge for employment and growth in many Large Ocean Nations and puts fishing communities under pressure.

These challenges mean industries must find new and innovative ways to maintain or possibly increase the value derived from their living marine resources base to secure livelihoods and long-term sustainability. Across Large Ocean Nations, entrepreneurs increasingly innovate to add value to their products in new ways by, for example, targeting more exclusive niche markets where quality is more important than quantity. This may be a critical strategy for fisherfolk and seafood producers in more isolated areas of the world to make their businesses relevant in the future.

CHALLENGES AND OPPORTUNITIES

Producers of exclusive seafood in Large Ocean Nations are highly dependent on international trade and access to markets to sell their products, which can be a challenge for countries not connected to large trade regimes or markets. Moreover, challenges of acquiring internationally recognised sustainability and quality certification also hinder some businesses that rely on exports of exclusive seafood.

With many of the producers of exclusive seafood being small- and medium-sized niche businesses, entrepreneurs cannot create the necessary economies of scale domestically and often feel burdened by administrative requirements, such as official food controls. In parallel, access to capital remains difficult for SMEs, who rely on leveraging personal networks. However, customer trends towards sustainable, traceable, and high-quality products increasingly favour producers able to market their products towards these consumer segments and thereby tap into the increasing demand.

Large Ocean Nations face similar challenges and barriers to exports, and as such can collaborate on a number of different levels. Opportunities for RD&I cooperation on issues such as access to credit and inter-island investment and credit mechanisms can help provide the funds needed to foster Blue Growth business and entrepreneurship and create economies of scale.

In addition, collaboration opportunities exist around regional trade agreements to help facilitate exports and share access to markets such as the EU, across small nations. As demand shifts, exporters of exclusive seafood to foreign markets also can move towards high-tech, high-quality food production and influence consumers via social media and digital channels.

CASE: SHEPHERD ISLANDS ORGANIC SEAFOOD DELICACIES, VANUATU

Case presenter: *Obed Timakata, Shepherd Islands Organic Seafood Delicacies, Vanuatu*

The Shepherd Islands, in Vanuatu, is dedicated to organic seafood for exclusive food consumption and health supplements. The process began in 2004, when the first marine protected area (MPA) was established on Emae Island by Chief John William Mata'ariki Maa Tui'makatamata. This was followed by the establishment of sustainable organic high-profit micro farms for the production of sea cucumbers and sea urchins using the MPAs to produce exotic seafood and pharmaceutical markets products. As part of this process, health and well-being ecotourism resorts targeting the high-end tourism market will be established in conjunction with the marine protected areas as support measures in providing a sustainable livelihood for people with the conservation of their marine ecosystems.

All seafood products are processed and packaged locally, providing employment and skills training for rural communities targeting women and the disabled. With organic labels, Vanuatu is expecting international exports to foreign seafood distributors, research institutions, and pharmaceutical companies at a total farming value of $2.5 million in two years for the sea cucumbers alone.

CASE: ARCTIC CAVIAR, NORWAY

Case presenter: *Roderick Sloan, Arctic Caviar, Norway*

The founder of Arctic Caviar, Roderick Sloan, is a trained chef who tried his luck as a sea urchin fisherman in the cold and nutrient-rich water of the Arctic. Ten years later, it is his main business, with ever-greater success.

After initial years of struggle, he caught a big break when the chef from the world-famous restaurant NOMA, Rene Redzepi, contacted him to try his product. After that, NOMA never looked elsewhere for their sea urchins, and Arctic Caviar started growing more and more because of the demand created by the New Nordic Food Manifesto. The company has since supplied ocean products such as sea urchins, mahogany clams, and softshell clams to high-end restaurants all over the world.

As part of Arctic Caviar's efforts to ensure long-term sustainability of resources, they harvest only the top 5% of the sea urchins. The company works closely with the Norwegian Food Safety Authority to provide a high level of food security for the customer, which can be a challenge when building a business in an isolated area with limited infrastructure in a harsh environment north of the Arctic Circle.

Fashion is the second most polluting industry in the world, responsible for 10% of all carbon emissions. In addition, it is also the second-largest polluter of fresh water. Combined with the growing trend of fast fashion, finding alternative sourcing and manufacturing solutions has become an urgent task for the fashion industry and for the planet.

In 2017, Faroe Islands launched the Blue Fashion Challenge as part of the Danish Presidency program of the Nordic Council of Ministers. The event aimed at showcasing how fashion can become more sustainable by encouraging disruptive innovation on materials, design, and supply chain. The philosophy of the Blue Fashion Challenge builds on several fundamentals from the field of sustainable fashion: designing for longevity, promoting the use of eco-materials, ensuring their responsible production, firing-up collaboration across regional supply chains to create "closed loops." Blue fashion and Blue Bioeconomy is not about overexploitation of resources. It is about maximising value and giving a purpose to by-products and waste materials that are widely available today in the fishing industry and not leveraged to their full potential.

Introduction by José A. Herrera

Minister for the Environment, Sustainable Development, and Climate Change, Malta

The minister commended the initiative of the Large Ocean Nations Forum, highlighting marine plastic pollution and previewed commitments to be announced by the Maltese Prime Minister, Joseph Muscat, during the Our Ocean Conference that was set to take place in Malta the days following the forum, October 5-6.

Morten Stemre

Adviser, Nordic Atlantic Cooperation (NORA)

Morten Stemre provided the introduction to the event, highlighting the work done as part of the Blue Fashion challenge. He described how fashion is often counter-intuitive: Polyester and other synthetics textiles are common materials in the fashion industry even though they use large amounts of petroleum and contribute to micro-plastic pollution of the ocean. At the same time, other materials such as seal and salmon skin, which are by-products that would otherwise be wasted and can be used in a very sustainable manner to create new fashionable garments, are seen as unconventional or even unethical. Seaweed-based textiles, at the edge of biotechnological development, can become a sustainable marine option to traditional textiles such as cotton.

Dominique Benzaken, Seychelles

Senior Ocean Governance Expert

The Seychelles have made transitioning towards sustainable fisheries and the Blue Economy a priority. As a country, it is aware of the need to promote its "Blue Brand" and emphasise its work on sustainability, including in Blue Fashion. An example of this is Seychellois company Kreolor, a 40-person enterprise established 27 years ago. The company makes use of coco de mer shells, palm seeds, oyster shells, pearls, and swordfish bills together with gold to create jewellery and other fashion products.

Karen Sissal, Faroe Islands

Winner of the Blue Fashion Challenge 2017

Karen Sissal presented a smock and travel bag made from salmon skins, a dress made of seal fur, and a fabric made of 35% seaweed. She argues that customers have to make an active rational choice of becoming more sustainable, and that textiles made from carbon-mitigating seaweed should be an easy sell to conscientious consumers. Her circular economy model is based on the mantra that we should eat the fish and use its the skin for other purposes.

Kolbrún Ýr Gunnarsdóttir, Iceland

Runner Up of the Blue Fashion Challenge 2017

Kolbrún is an Icelandic design firm founded in 2012 on the concept of "slow fashion," offering high-quality, long-lasting products. Using seal fur and skin, a marine resource traditionally hunted in her native Iceland, Kolbrún decided to upcycle their skin and make fashion garments. Her products aim for full transparency, with each seal having an identification number providing information on the type of seal, where it was hunted, and who ate the meat.

Louise Lynge, Greenland

Louise Lynge argues that Greenland has a legacy for sustainable living, which comes from the "mother of the ocean" parable. Her brand, Nuuk Couture, uses mostly seal skin and recycled fabrics for their garments and aims at convincing Greenlanders to become ambassadors of their own culture and way of life.

Marianne Mørck, Norway

With 15 years' experience making textile and leather for orthopaedic purposes, Mørck launched her own line of clothing and accessories using salmon skin in 2012, together with her daughter. Depending on tanning for the salmon skin of her designs, she sees business opportunities in developing tanning methods that would require less harmful chemicals and water use.

Sam Shelby, Malta

As a fashion designer, Sam Shelby focuses on products that rebuild marine habitats by compressing sea sediments and encouraging the regrowth of marine habitats. She recognises that aesthetics and ergonomics matter as much as the carbon footprint of her garments.

Overview of Recommendations

The seven recommendations and 24 ideas for specific actions below form the summary of our thematic discussions on Blue Growth challenges and opportunities, and list policy recommendations that can be used as inspiration by national governments, regional bodies, or international fora to promote Blue Growth.

1 Foster effective international collaboration and Partnerships

Adopt a set of principles for what Blue Growth means for Large Ocean Nations and guidelines for working together in order to align efforts

Develop strategic alliances to represent and organise Blue Growth interests of Large Ocean Nations in relevant international/regional fora to ensure Large Ocean Nations' issues and perspectives are heard

Enable and encourage regional and thematic working groups that reflect the current interest and priorities of Large Ocean Nations

2 Use digitalisation and data-sharing policies

Assess the potential to improve existing databases and sharing protocols between them to improve monitoring and reporting abilities of stakeholders (e.g. companies, academia, government, international organisations) and, when necessary, create new inter-operative databases

Set up centres of excellence to, inter alia, grow digitalisation-based innovation

3 Encourage structures that nurture Blue Growth

Formalise coordination of efforts within all levels of government, where it provides added value, in order to break down silos

Create Blue Growth centres of excellence to provide guidance on Blue Growth initiatives

Ensure integration of local communities into Blue Growth initiatives to promote public participation, ideas, and support

4 Tie Blue Growth to Agenda 2030 and long-term planning

Tie plans and visions to Agenda 2030, the Paris Agreement, and other international commitments in order to ensure the international alignment of efforts

Secure political leadership endorsement to ensure long-term mandate and action

Develop clear short-, medium-, and long-term visions and plans for action on Blue Growth to align government activities and measure progress

5 Ensure that standards and legal frameworks support Blue Growth

Align and when necessary revise standards, certifications, and legal frameworks to facilitate innovation and streamlined administration

Provide opportunities for Blue Growth innovators to meet with government and regulators

6 Mainstreaming Blue Growth

Devise public communication campaigns to promote Blue Growth that benefit human well-being, the environment, sustainability, and the economy

Frame Blue Growth products and services as part of the "conscious consumption" movement to tap into this growing market

Engage influencers to promote Blue Growth and make it "cool"

Encourage the use of social media to get access to niche markets from remote areas

Strengthen education and knowledge on the ocean and Blue Growth to nurture interest and engagement today and in the future

7 Support Blue Growth innovators and access to markets

Working with technical bodies (food safety, etc.) to support pilot assessments and testing of products

Set up national bodies, where none exist, to provide administrative support, regulatory information, trading regulation information, etc.

Encourage governmental leaders, industry associations, and trade missions to connect Blue Growth innovators with foreign markets

Establish public funding programs to encourage partnerships and improve access to capital for small, new, potentially risky businesses

Encourage partnerships between academia and Blue Growth companies to enhance implementation of scientific inventions and knowhow

Explore inter-Large Ocean Nations investment and credit mechanisms to better enable flow of capital investment between Large Ocean Nations.

High-level roundtable as conclusion to forum

The forum was concluded by a high-level panel comprising ministers and high-level officials from various Large Ocean Nations, as well as the EU. Together, they highlighted the need for further action in the Blue Growth space and the significant potential it has to contribute to sustainable development and the Agenda 2030 and Paris Agreement.

FAROE ISLANDS

Høgni Hoydal, Minister of Fisheries of the Faroe Islands, opened the roundtable discussion and summarised the forum discussions, highlighting the importance of Blue Growth for countries like the Large Ocean Nations, as well as the value of international cooperation and forums such as these. The minister stressed the importance of improving value chains as significant drivers for economic growth. By focusing on "value, not volume," countries can improve resource efficiency and reduce waste.

ICELAND

Thorgerður Katrín Gunnarsdóttir, Minister of Fisheries and Agriculture in Iceland, emphasised the importance of Blue Growth as a vehicle for involving and empowering youth and women in particular in the sustainable development of ocean resources, including through initiatives like the Blue Fashion challenge. The minister pointed out the importance of politicians making responsible decisions regarding sustainable management of living marine resources, based on sound scientific advice, and that misinterpretation of information regarding the state of fish stocks was a serious issue, taking as an example the Atlantic Cod. In summary, the minister encouraged everyone to follow the recommendations created in the forum.

SEYCHELLES

Pamela Charlette, Minister of Fisheries and Agriculture in the Seychelles, underscored the many common challenges and issues that Northern and Southern Island states face, resulting in many opportunities for partnerships and collaboration via sharing of experiences. Seychelles has an ambitious and transformational approach to grow the ocean economy in a sustainable manner, focusing on entrepreneurship and technological innovation. This includes innovative financing mechanisms, partnerships with organisations such as The Nature Conservancy, and developing a marine Spatial Plan for its EEZ and designating 30% as marine protected areas.

EUROPEAN COMMISSION

Stefaan Depypere, Director for International Ocean Governance and Sustainable Fisheries in DG MARE, EU, underlined the necessity to integrate various maritime sectors, trying to develop new Blue Economy opportunities between traditional and new sectors, such as fishing and ecotourism. The director also pointed out the need to create macro-regional strategies to collaborate between countries.

CABO VERDE

José Filomeno Monteiro, Ambassador of Cabo Verde to the EU, Belgium, and Luxembourg, highlighted the importance of Blue Growth for Cabo Verde, which relies heavily on fishing, tourism, and shipping. A national Charter for the Promotion of Blue Growth promotes the development of ocean and coastal resources, minimising environmental degradation and maximising the economic and social benefits from these resources. The ambassador stressed the need for a platform for communication and collaboration among Large Ocean Nations and SIDS to better face challenges unique to Ocean Nations.

MAURITIUS

Kan Oye Fong Weng-Poorun, Senior Chief Executive of the Ministry of Ocean Economy, Marine Resources, Fisheries and Shipping of Mauritius, explained the steps Mauritius has taken to develop good governance for the sustainable development of its fisheries sector. The ministry was created in 2015, following a government decision to promote a Blue Economy, in order to combine all ocean-related activities in one place. Partnerships should continue to develop and SIDS have many shared interests and opportunities.

SÃO TOMÉ AND PRÍNCIPE

Dr. Joao Gomes Pessoa Lima, General Director of Fisheries in São Tomé and Príncipe, emphasised the threat from climate change and rising sea levels in Ocean Nations such as São Tomé and Príncipe. Dr. Gomes Pessao Lima underscored the need for both North-South and South-South cooperation, carrying forward the momentum of the forum into the future with the sharing of opportunities and experiences.

SUMMARY BY MINISTER HOYDAL

Faroese Minister Hoydal once more highlighted the good outcomes and expressed the desire to carry on the forum and its discussions. The minister reiterated calls by forum participants for a more permanent platform to connect Large Ocean Nations. Lastly, Minister Hoydal announced that the next organised session will be held as a side event at the FAO Conference on Fisheries in 2018 to present this forum's conclusions.

Next Steps: Strengthening the Large Ocean Nations Partnership

The inaugural Large Ocean Nations Forum in Malta in 2017 was one of the concluding projects in a series of activities under the Faroese chair of the three-year Growth in the Blue Bioeconomy programme under the 2015 Danish Presidency of the Nordic Council of Ministers.

With a focus on value chains and value creation, the purpose of the first forum was to create a partnership between Large Ocean Nations and provide an open, free exchange of experiences and ideas. This resulted in a strong commitment from participants to continue the work and collaboration. As part of the activities leading up to the forum, a Steering Group was established, which includes representatives from the Ministry of Fisheries of the Faroe Islands, the Nordic Council of Ministers, the Commonwealth Secretariat, and FAO supported by Nora.

Moving forward, the Steering Group recommends the presidency project end with a side-event at FAO's Committee of Fisheries (COFI) in July 2018. Here, the output from the inaugural Large Ocean Nations Forum will be presented and next steps of the project will be announced.

Prior to the side-event at COFI, a number of activities will ensure continued progress and a stronger collaboration within the partnership:

- Develop terms of reference for the Large Ocean Nations partnership
- Create a calendar for Large Ocean Nations relevant activities and events
- Distribute relevant information and knowledge sources among the partnership
- Organise smaller activities to raise awareness and maintain momentum in the partnership in connection with other relevant events, for instance the Arctic Circle Forum or the North Atlantic Ministers Conference, both in the Faroe Islands
- Connect Large Ocean Nations in the partnership with opportunities for training within the United Nations University Fisheries Training Programme

TOWARDS LARGE OCEAN NATIONS FORUM II

After the completion of the presidency project, the Large Ocean Nations partnership requires a main activity to work towards, and the natural next step is a Large Ocean Nations Forum II in 2019. Whereas the inaugural Large Ocean Nations focused on value chains and value creation, with an emphasis on value not volume, the Steering Group has identified a focus on governance and resource mobilisation issues as the most relevant for the next stage of the partnership.

Leading up to the Large Ocean Nations II and following it, a suite of smaller side-events, sessions, breakout-sessions etc. in connection with suitable events and activities is needed to raise awareness, maintain momentum, and continue to develop the partnership. Relevant events identified at the meeting include:

- Arctic Circle Assembly in Reykjavik October 2018
- Our Oceans in Norway 2019
- Our Oceans in Palau 2020

Moreover, the natural cooperation interface in the partnership and particularly within the organisations involved in the Steering Committee, should lead to further collaborations on Blue Growth and Blue Bioeconomy activities, as well as concrete ad-hoc Large Ocean Nations initiatives. These should preferably build on the recommendations and ideas for action presented in this report.


blue fashion
blue growth
Nordic Atlantic
Cooperation

Participants of the Forum

Name	Country/Org	Title
Carlos Rocha Evora	Cabo Verde	National Director of Marine Economy
José Filomeno Monteiro	Cabo Verde	Ambassador to the EU, Belgium, and Luxembourg
Paulo Veiga	Cabo Verde	
Jeff Ardron	Commonwealth Secretariat	Adviser, Ocean Governance
Stefaan Depypere	European Commission	DG MARE, Director for International Ocean Governance and Sustainable Fisheries
Henry DeBey	FAO	Fisheries Officer
Ib Kollavik Jensen	FAO	Senior Consultant
Samson Fare	FAO	SIDS Specialist
Zachary Foco	FAO	Programme Specialist
Elsebeth Mercedis Gunnleygsdóttur	Faroe Islands	Member of Parliament
Hanna Eivinsdóttir	Faroe Islands	Model
Herluf Sigvaldsson	Faroe Islands	Head of Negotiations, Ministry of Fisheries
Høgni Hoydal	Faroe Islands	Minister of Fisheries and Deputy Prime Minister
Jenny S Wardum	Faroe Islands	Model
Kaj Leo Holm Johannesen	Faroe Islands	Member of Parliament
Kate Sanderson	Faroe Islands	Head of Mission of the Faroes to the EU
Katrin B. Egholm	Faroe Islands	Model
Magni Laksáfoss	Faroe Islands	Member of Parliament
Olavur Gregersen	Faroe Islands	Managing Director, Ocean Rainforest
Óluva Klettskarð	Faroe Islands	Member of Parliament
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Catherina Hvistendal	Greenland	Secretary, Greenland Representation in Brussels
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