The Commonwealth
Blue Charter

An Ocean of Opportunity

Commonwealth Blue Charter: Ocean Action Report

September 2022

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Commonwealth Blue Charter Progress Report

The Commonwealth
Blue Charter

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About the Commonwealth Secretariat

The Commonwealth is a voluntary association of 56 independent and equal sovereign states, all but seven of which are coastal and 25 of which are classified as small island developing states. It is home to over 2.5 billion people.

The Commonwealth Secretariat is an independent organisation working with the member countries to assist them to promote prosperity, democracy and peace, amplify the voice of small states, and protect the environment. The Commonwealth Secretariat provides technical assistance and supports member countries to develop policies, laws, design of fiscal regimes and strengthen national institutions.

The Secretariat's Trade, Ocean and Natural Resources Directorate assists its member countries to sustainably manage their natural resources, in the ocean and on land, for the benefit of present and future generations. The Oceans and Natural Resources Section of the Secretariat manages the Commonwealth Blue Charter Programme.

An earlier version of this report (Interim Report, October 2021) was initially compiled by Thuso Ltd., with the support of expert inputs from David Sheppard, editorial oversight by Matthew Goldie-Scot, specialist input from Nina Schoonman, Research Support by Charles Schulze, and Design Work overseen by Alexandra Tigan, with additional inputs and revisions by the Commonwealth Secretariat.

This final iteration was reviewed and updated by David Sheppard, Matthew Goldie-Scot and Nina Schoonman, with further review and corrections by the Commonwealth Secretariat.

Contents

Acronyms and Abbreviations

ACU	Association of Commonwealth Universities
CBD	United Nations Convention on Biological Diversity
CCOA	Commonwealth Clean Ocean Alliance (Marine Plastics Action Group)
CHOGM	Commonwealth Heads of Government Meeting
CLEAR	Civic Laboratory for Environmental Action Research
COBE	Centre of Excellence for Oceanography and the Blue Economy
DRS	deposit return scheme
EEZ	exclusive economic zone
EPRS	extended producer responsibility scheme
GCRMN	Global Coral Reef Monitoring Network
GIS	geographic information system (mapping)
GOA-ON	Global Ocean Acidification – Observing Network
GPAP	Global Plastic Action Partnership
ICRI	International Coral Reef Initiative
IUCN	International Union for Conservation of Nature
MELAG	Mangroves and Livelihoods Action Group
MPA	marine protected area
MRE	marine renewable energy
MSP	marine spatial planning / plan
NAPA	National Adaptation Plan of Action
NDC	Nationally Determined Contribution (under UNFCCC)
NGO	non-governmental organisation
NPOA	National Plan of Action
PO	producer organisation
PoA	Plan of Action
PSMA	Port State Measures Agreement
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SBEC	Sustainable Blue Economy Conference
SDG	Sustainable Development Goal
SeyCCAT	Seychelles Conservation and Climate Change Adaptation Trust
SIDS	small island developing state
SPC	(Secretariat of) The Pacific Community

SPREP	Secretariat of the Pacific Regional Environment Programme
TOR	terms of reference
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	UN Environment Programme
UNFCCC	UN Framework Convention on Climate Change
WDPA	World Database on Protected Areas
WTO	World Trade Organization

Foreword

The Commonwealth is home to 2.5 billion people, spread across five continents and our one shared ocean. Our Commonwealth is an Ocean Commonwealth.

Forty-nine of our 56 Commonwealth countries border the ocean and more than a third (36 per cent) of the ocean under national jurisdiction is in Commonwealth countries. Around 45 per cent of all coral reefs and over a third of all mangroves, as well as two-thirds of all Small Island Developing States (SIDS), are in the Commonwealth. On average, 96 per cent of SIDS' territory is ocean and only 4 per cent is land, which is why they really are Big Ocean States.

With every breath we take, we are connected to the ocean. The ocean provides us with half the oxygen we breathe, as well as with food, livelihoods and deep spiritual connections. Making up more than 95 per cent of our biosphere, the ocean stabilises our climate, absorbing most of the heat trapped in the Earth's system. Billions of humans, animals and plants, on land and in the ocean, rely on a healthy ocean.

The ocean is the most precious, life-giving – yet undervalued, under-researched and recklessly exploited – natural wonder of our planet. The protection and sustainable management of our shared ocean is a huge priority for the Commonwealth, and for me personally as Secretary-General.

Five years ago, at the first UN Oceans Conference, I presented the germ of an idea that we had developed: the Commonwealth Blue Charter. Ten months later, at the Commonwealth Heads of Government Meeting (CHOGM) in 2018, leaders adopted the Charter we all recognise today. The Blue Charter is the flagship among a fleet of Commonwealth policies and programmes designed to help our member countries protect the ocean. The Commonwealth Blue Charter is member-led, principled and energetic – translating ideas and commitments to on-the-water actions. Four years later, 16 Champion Countries have stepped forward to lead 10 Action Groups, with 46 Commonwealth countries active in those groups.

As is outlined in this report, much has been achieved in those four short years, notwithstanding the serious and tragic disruptions associated with the COVID-19 pandemic. But still more needs to be done. At the recent CHOGM in Kigali, our brilliant Blue Charter team launched our new Blue Charter Project Incubator. This incubator is different to others: it is the first designed to assist governments to start turning their words to actions.

It is a very good beginning, but we urgently need to progress to the next level. As the Blue Charter shows – indeed, as does the history of the Commonwealth – we achieve progress by working together. The Commonwealth has a superb track record of forging quality, impactful partnerships. Our member countries' jurisdiction over the ocean means that what we do makes a real difference, and sets a shining example of what can be achieved globally. However, the fate of the ocean as a whole lies beyond our jurisdiction as well. And so, the Commonwealth needs the wider world too.

When reading this report, I invite you to ask yourself, 'How can my government or organisation work with the Blue Charter? How might we better support projects focused on the ocean?' Sustainable Development Goal 14 remains, by far, the least funded of all the SDGs. This needs to change. It is only by joining hands and moving forward together that we can build a healthier, happier, more resilient, more prosperous and beautiful blue future for all.

The Rt Hon Patricia Scotland QC
Secretary-General of the Commonwealth

Executive Summary

The Commonwealth Blue Charter is an agreement by Commonwealth countries to actively co-operate in addressing the myriad of ocean-related issues and commitments that they face. Commonwealth Blue Charter Action Groups are member driven, led by Commonwealth Blue Charter 'Champion' countries.

This report serves as a compilation of action under the 10 Action Groups, in the context of wider Commonwealth Ocean action, with the aim of highlighting the impact of the Commonwealth Blue Charter.

The last four years have been a remarkable beginning to a shared journey. **Forty-six countries (plus one overseas territory)**, led by **16 Co-Champions**, have embarked on a shared mission to co-operate to solve ocean-related challenges and meet commitments for sustainable ocean action.

The Commonwealth Secretariat has amplified national ocean action and is working to support Action Groups to scale action by building partnerships, closing the funding gap, training ocean leaders and empowering collective solutions. Seventy-five per cent of countries that participated in the Commonwealth Ocean Action Survey reported that the Commonwealth Blue Charter helped to progress ocean policy or legislation and allowed them to better interact with external partners.

6 partnerships

More than 50,000 visitors welcomed to the website

19 informational videos created

286 officials registered on the Commonwealth Blue Charter Knowledge Hub

12 knowledge exchange webinars, averaging 120 participants each

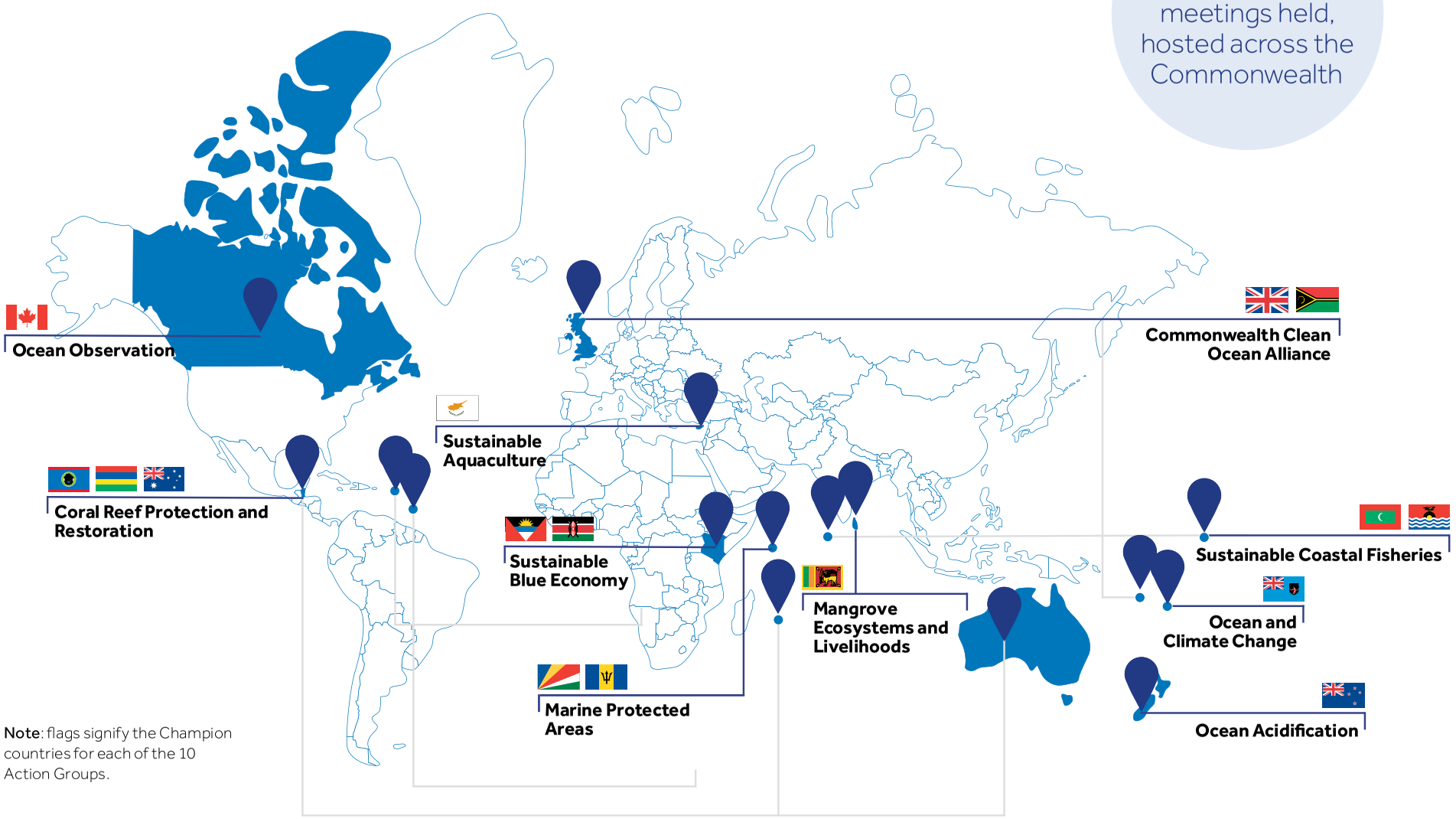
15 thematic toolkits developed

More than 200 external training opportunities compiled in a searchable database

13 bespoke online training courses held, building the capacity of more than 400 officials from 40 countries

Over 100 online funder profiles compiled, providing access to opportunities worth over £126 million

21
Action Group meetings held, hosted across the Commonwealth



Note: flags signify the Champion countries for each of the 10 Action Groups.

5
'All Champions' meetings were held: 1 in-person and 4 virtual

Commonwealth Blue Charter All Champions Meeting, 18–21 June 2019, London

Charting the course **going forward**, the Commonwealth Blue Charter will need to focus on:

- building **capacity** to implement ambitious plans
- closing the **resourcing** gap
- quantifying **progress** at the national and pan-Commonwealth scales
- locking in **ocean sustainability** through a 'Blue Re-Set' from COVID-19
- harnessing the **collective power** of the Commonwealth Blue Charter's members.

62
case studies were developed to demonstrate good practices and inform action

Clean Ocean Alliance

52 countries have taken some form of action to address marine plastic pollution

43 countries have taken steps to reduce avoidable single-use plastic waste

29 countries have instituted a ban on single-use plastic carrier bags

Coral Reef Protection and Restoration

33 countries have protected coral reef habitats

8 countries or territories have protected over 40% of their coral reefs

Coral reef restoration activities are underway in **16** countries with coral reefs

Mangrove Ecosystems

39 Commonwealth countries are restoring their mangroves

13 countries have protected at least half of their mangrove stands

32 countries have Ramsar sites that include mangroves

Marine Protected Areas

Commonwealth countries are responsible for nearly **30%** of all MPAs

34 countries with MPAs have undertaken assessments of management effectiveness

14 countries have made SDG14 voluntary commitments relating to MPAs

32 countries are now committed to the 'Thirty by Thirty target' of protecting 30% by 2030

Ocean Acidification

34 countries are represented on the Global Ocean Acidification Observing Network

55% of reporting countries have or are planning ocean acidification policy/ legislation

Acidification Handbook launched to empower policymakers to act on ocean acidification

Ocean and Climate Change

29 countries have referenced Blue Carbon in their NDCs

9 countries / territories are signatories to the 'Because the Ocean' and/or Ocean Pathway Declarations

33 countries mention the ocean in their NDCs

Ocean Observation

18 countries participated in a webinar on Argo floats

Argo floats and Biogeochemical Argo floats have been purchased and deployed

1 publicly available open-source Argo floats package has been released

'GOA-ON in a Box' kits have been assembled for use in SIDS and with Indigenous communities in Canada

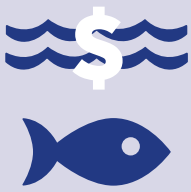
Sustainable Aquaculture

Strategic Roadmap on the Sustainable Development of Aquaculture is under development

4 case studies developed documenting aquaculture in Cyprus, Seychelles, Mozambique and Egypt

1 training course was delivered on the good governance of Aquaculture. **67** participants over **17** countries participated

Sustainable Blue Economy



28 coastal countries have implemented or are preparing MSP initiatives

20 coastal countries have some form of Blue Economy initiative underway

7 countries are committed to sustainably managing 100% of their marine waters by 2025

Sustainable Coastal Fisheries

22 coastal countries have NPOAs for sharks, sea birds, or turtles

28 countries are Parties to the Port State Measures Agreement

10 countries have made SDG14 voluntary commitments relating to fisheries

All coastal Commonwealth countries have reported on implementing the FAO Code of Conduct for Responsible Fishing

Gender and Ocean Science

A study on *Gender Equity in Ocean Science* highlights **15** immediate actions and **6** recommendations

Youth in Ocean Science

14 countries have distributed *Message in a Bottle*, a children's book on marine litter

Over **330,000** young people have participated in the Tide Turners Plastic Challenge

48 talented young researchers supported by Blue Charter Fellowships

Introduction

The Commonwealth Blue Charter is an agreement by Commonwealth countries to actively co-operate in addressing the myriad of ocean-related issues and commitments that they face. The world's ocean is essential to life on our planet. Billions of people depend on it for their livelihoods, yet human activity is increasingly putting the health of this crucial natural resource in peril. These are not challenges that any single country can solve alone. Covering over a third (35.5 per cent) of the global ocean under national jurisdiction, the Commonwealth community is uniquely well-positioned to make a positive impact globally.

In April 2018, the Commonwealth Blue Charter was adopted by member countries to guide co-operative action on ocean issues, contributing to Sustainable Development Goal (SDG) 14, 'Life Below Water' – to 'conserve and sustainably use the oceans, seas and marine resources for sustainable development'. The UN Secretary-General's Special Envoy for Oceans commended the '**wave of ocean action**' initiated by the Commonwealth Blue Charter, which reflects the six strategies underpinning the roadmap for using the UN Decade of Ocean Science for Sustainable Development.[1]

In the words of the Commonwealth Secretary-General, the Rt Hon. Patricia Scotland QC,

> '*The Commonwealth Blue Charter has undoubtedly changed the pace of global efforts on ocean conservation, unlocking the power of [56] nations on what is clearly one of the most pressing causes of our time.*'

Commonwealth Blue Charter Action Groups are member driven, led by 16 Commonwealth Blue Charter 'Champion' countries. Through working together, Action Groups seek to unlock the experiences and knowledge of their member countries and partners.

This report serves as a snapshot compilation of activities under the 10 Action Groups, in the context of wider ocean action within the Commonwealth, with the aim of highlighting the impact of the Commonwealth Blue Charter over the past four years. This report summarises activities and achievements since the genesis of the Commonwealth Blue Charter, early indicators of success, progress to date, what has been learned and priorities moving forward.

Methodology

This report primarily draws on three sources of data and information, complemented through further literature review.

1. Progress reports submitted by Champion countries of each of the 10 Action Groups.
2. National responses to the Commonwealth self-reporting survey on ocean action (see below).
3. Desktop-based research conducted on the ocean action by Commonwealth countries.

Commonwealth Ocean Action Survey

To gather additional information on progress under the Commonwealth Blue Charter, the Commonwealth Secretariat has undertaken a survey focusing on:

- countries' engagement with the Action Groups over the last three to four years;
- countries' ocean-related priority areas;
- actions taken by the countries to support the Commonwealth Blue Charter, including details of specific projects and their current status;
- the value of the Commonwealth Blue Charter and its Action Groups in terms of progressing the countries' ocean-related policies or laws, or capacity to tackle ocean issues and establish relevant partnerships; and
- documenting countries' progress towards Action Group targets.

The survey was undertaken by qualified representatives from twenty Commonwealth countries, including:

Antigua and Barbuda
Australia
Bahamas
Bangladesh
Barbados
Belize
Canada
Cyprus
Kingdom of Eswatini
Fiji
Jamaica
Kiribati
Malaysia
Mauritius
Rwanda
Seychelles
Sierra Leone
Sri Lanka
Trinidad and Tobago
United Kingdom

10 Blue Charter Action Groups


Commonwealth Clean Ocean Alliance


Coral Reef Protection and Restoration


Mangrove Ecosystems and Livelihoods


Marine Protected Areas

Ocean Acidification


Ocean and Climate Change


Ocean Observation

Sustainable Aquaculture


Sustainable Blue Economy


Sustainable Coastal Fisheries

Sea Change

Harnessing the Momentum behind the Blue Charter

The Commonwealth Heads of Government have called for ambitious, co-ordinated pan-Commonwealth action to address ocean issues. The Commonwealth Blue Charter fills a particular gap in current global efforts, providing a practical means by which states can work together to meet their shared ambitions, transforming high-level commitments into actual 'on-the-water' realities.

The Action Group Status Updates summarised here demonstrate that the Commonwealth is collectively working towards a more equitable, and sustainable, approach to ocean protection and economic development. The Action Groups, alongside Blue Charter Partners and the Commonwealth community more broadly, have achieved a range of tangible successes on which future efforts will build.

Action Group achievements

The development of the Commonwealth Blue Charter has created an effective and dynamic network for knowledge exchange and capacity building across the Commonwealth. Champions have demonstrated the potential for the Commonwealth Blue Charter to effect tangible progress in relation to these plans. All 10 Action Groups met at least once, in person or virtually, to discuss how best to achieve their thematic goals.

43 countries have taken steps to reduce avoidable single-use plastic waste

Commonwealth Clean Ocean Alliance

Fifty-two countries have taken some form of action to address marine plastic pollution, and 90 per cent of the 20 countries that reported through the Commonwealth survey on ocean action have undertaken action to eliminate single-use plastic. The Commonwealth Intelligence Litter Programme has already supported several member states to develop Marine Litter Action Plans.[2] Building on the momentum cultivated by the more than 30 members of the Commonwealth Clean Ocean Alliance (CCOA), the Commonwealth community is positioned to take bold steps to 'design out' plastic waste (focusing on packaging) and improve collection and management of residual waste.

Case Study: Litter Intelligence Programme, New Zealand
November 2020
© Sustainable coastlines
Source: The Commonwealth Blue Charter

8 countries have protected over **40%** of their coral reefs

Coral Reef Protection and Restoration Action Group

The Commonwealth contains about 45 per cent of coral reefs globally. According to the Commonwealth Ocean Action Survey, all reporting countries with coral reefs have some policy or legislation in place to protect coral reefs. In total, 33 countries have protected coral reef habitats; coral reef restoration activities are underway in 16 of the 37 Commonwealth countries with coral reefs; and 31 countries are actively contributing data to the Global Coral Reef Monitoring Network, which will help to steer coral reef protection and restoration into the future. Commonwealth Blue Charter efforts to 'map the Commonwealth one reef at time'[3] contribute to this goal. Co-Champions are leading the way: Belize is sowing 'fragments of hope' through a community-led coral reef restoration project in Laughing Bird Caye National Park, while Australia's Master Reef Guides are raising awareness of the importance and beauty of coral reefs.[4] Mauritius is training community members to restore and protect corals, experimenting with the use of thermally resistant 'super corals'. In May 2021, the Secretariat developed and delivered a coral reef mapping training for managers and technicians.

Case Study: *Master Reef Guides Programme, Great Barrier Reef, Australia*
July 2020

Case Study: *Fragments Of Hope – Community-Led Coral Reef Restoration, Laughing Bird Caye National Park, Belize,*
November 2020

Mangrove Ecosystems and Livelihood Action Group

More than one-third of the world's mangroves are in Commonwealth countries. Seventy-five per cent of reporting countries have policy or legislation in place to protect mangroves. Mangrove restoration activities are underway in 39 of the 42 Commonwealth countries or territories that hold mangrove stands. Thirty-two countries or territories have protected 'Ramsar'[5] sites that include mangroves. Several members have formalised their commitments in national policies or plans, creating a framework for action that can inspire others. Champion country Sri Lanka has strictly protected more than 14,000 hectares (ha) of mangroves, while Trinidad and Tobago are pursuing a 'no net loss' of wetlands policy, which underpins the success of its mangrove restoration project in Point Lisas.[6] In October 2020, the Secretariat developed and delivered a mangrove mapping training for managers and technicians.

13 countries have protected at least half of their mangrove stands

Case Study: *Lessons From The Restoration Of A Mangrove System In Point Lisas, Trinidad And Tobago*
June 2020

Marine Protected Areas Action Group

Seventy-five per cent of countries reporting to the Commonwealth Ocean Action Survey have committed to protect 10 per cent of their coastal and marine areas. All but one of the 49 Commonwealth countries with a coastline have designated Marine Protected Areas (MPAs). In total, around 6,665,340 square kilometres (km^2) of ocean has been protected by Commonwealth countries, relative to a global total of 22,846,219km^2. That means that Commonwealth countries are responsible for nearly 30 per cent of all MPAs globally, including nearly 300,000km^2 in fully or highly protected areas. Thirty-four countries with MPAs have undertaken assessments of management effectiveness and 14 countries have made SDG14 voluntary commitments relating to MPAs. Seychelles, as co-Champion country, has already met its 30 per cent MPA target, implemented though marine spatial planning (MSP)[7], while The Bahamas is assigning International Union for Conservation of Nature (IUCN) management categories,[8] and Malaysia has identified two MPA candidates for the IUCN Green List.[9] In April 2022, the Secretariat developed and delivered expert seminars for countries on the topic of Marine Protected Area (MPA) implementation. In June 2021, Barbados announced that it is joining Seychelles to co-champion Commonwealth action on marine protected areas. Thirty-two Commonwealth countries so far have signed onto to one or both of the '30 by 30' Initiatives to protect 30 per cent of the ocean by 2030.

6,665,340 km^2 of ocean has been protected by Commonwealth countries

Case Study: *Seychelles – using marine spatial planning to meet the 30 per cent marine protected areas target*, February 2021

Case Study: *Assigning IUCN protected area management categories – the Bahamas Experience*, April 2021

Case Study: *Malaysia – two MPA candidates for the Green List*, March 2021

34 countries are represented on GOA-ON

Ocean Acidification Action Group

Thirty-four (34) coastal countries are represented on the Global Ocean Acidification Observing Network (GOA-ON). The 2021 launch of the *Ocean Acidification Handbook*[10] equips Commonwealth policymakers to develop strategies to address the impacts of ocean acidification, while the Champion, New Zealand, has demonstrated that citizen science can help to expand the scope of national monitoring to inform evidence-based action. The recent event 'Path to Action – Addressing the Impacts of Ocean Acidification' highlights a way forward.[11] The Commonwealth Ocean Action Survey indicates that 55 per cent of reporting countries either have policy or legislation in place to address ocean acidification or are planning to develop this. In May 2022, the Secretariat developed and delivered a training for countries on the topic of 'Addressing the impacts of ocean acidification through mitigation, monitoring and policy'. This training was delivered twice to accommodate the different time zones with 68 participants attending from over 21 countries.

A Policymakers' Handbook For Addressing the Impacts of Ocean Acidification, 2021

Path to Action: Addressing The Impacts of Ocean Acidification, April 2021

29 countries reference Blue Carbon in their NDCs

Ocean and Climate Change Action Group

All Commonwealth countries are signatories of the Paris Agreement, and member states are discharging their responsibilities to mitigate climate change with a growing focus on ocean-related climate action. According to the self-reporting survey, 80 per cent of reporting countries' climate policy considers ocean impacts or contributions. Twenty-nine (29) countries have referenced 'blue carbon' in their Nationally Determined Contributions (NDCs). Nine (9) countries/territories are signatories to the 'Because the Ocean' and/or Ocean Pathway Declarations. Fiji and Australia have implemented partnership models for measuring climate risk,[12] while Kenya's Gazi Bay mangroves demonstrate the potential of blue carbon.[13] In March 2022, the Secretariat developed and delivered a self-paced training course for countries on the topic of 'Introductory training on Blue Carbon'.

Case Study: *Climate Vulnerability Assessments in Fiji And South Australia: Two Partnership Models for Measuring Climate Risk*, September 2020

Case Study: *Community-Led Mangrove Restoration and Conservation in Gazi Bay, Kenya: Lessons From Early Blue Carbon Projects*, July 2020

Ocean Observation Action Group

'GOA-ON in a Box' kits ready to deploy in SIDS

Nearly half (45 per cent) of reporting countries declare that they have undertaken efforts to increase scientific knowledge, develop research capacity or marine technology for ocean observation. Ocean observational technology, such as the 'Global Ocean Acidification – Observing Network (GOA-ON) in a box' kits, is being assembled for use in small island developing states (SIDS) and with Indigenous communities in Canada. The Blue Charter is pushing frontiers in marine science, including by supporting the deployment and data analysis of a global fleet of robotic floats.[14] The 2021 'Hack the Planet' Competition is an example of the Commonwealth's participatory approach to bring together ideas from diverse communities living on the frontlines of the impacts of ocean challenges, while a new study calls for gender equity in ocean science.[15] The Action Group is exploring the development of next-generation affordable monitoring packages for detecting ocean eutrophication (oxygen depletion). In April 2022, the Secretariat in partnership with Fisheries and Oceans Canada developed and delivered a training for countries on the topic of 'Using R to analyse and interpret ocean observational data'.

'Gender Equity In Ocean Science'
Report cover
Author: Carolanne Black,
Produced for: DFO Canada, 2020

Sustainable Aquaculture Action Group

Ninety per cent of countries that reported through the Commonwealth Ocean Action Survey communicated that they have policy or legislation in place to enable environmentally sustainable aquaculture. More broadly, the Commonwealth community is beginning to leverage the benefits of aquaculture. Countries are developing proposals to secure funding and build external partnerships to realise this Blue Economy opportunity. Champion country Cyprus has practised aquaculture for nearly half a century and is sharing lessons learned and best practices.[16] A recent webinar revealed the 'keys to aquaculture success',[17] while an event on the development of sustainable aquaculture development strategies highlighted a way forward.[18] The Secretariat has recently developed training for countries in the good governance of sustainable aquaculture. Other member states, like Seychelles[19] and Mozambique,[20] are working to establish their own aquaculture industries.

Case Study: *Addressing And Assessing The Environmental Performance Of Marine Offshore Aquaculture In Cyprus*, August 2020

Case Study: *Development Of An Aquaculture Industry In Seychelles*, September 2020

Case Study: *Development Of Chicoa Fish Farm In Mozambique*, January 2021

Sustainable Blue Economy Action Group

The Action Group on Sustainable Blue Economy continues to garner interest from potential new members. Seven Commonwealth countries are on the High-level Panel for the Sustainable Ocean Economy, committing to sustainably managing 100 per cent of their marine waters by 2025. Seventy per cent of reporting countries declare that they have policy or legislation in place to enable a Sustainable Blue Economy, 20 coastal countries have some form of 'Blue Economy' initiative underway, and 25 coastal countries have implemented or are preparing MSP initiatives. The Government of Antigua and Barbuda, with support from the Commonwealth Secretariat and world experts, is establishing a Centre of Excellence on Oceanography and the Blue Economy. Seychelles is piloting innovative new financing mechanisms.[21] The Action Group's webinar on 'The Blue View: Opportunities and Challenges for the Blue Economy' set the stage for action to be accelerated across maritime sectors.[22] In May 2021, the Secretariat developed and delivered training for countries on the topic of 'Policy Considerations when developing a sustainable Blue Economy'. In November 2020, Antigua and Barbuda stepped forward to co-champion the Commonwealth Blue Charter Action Group on the sustainable blue economy, alongside Kenya.

Case Study: *Innovative Financing – Debt for Conservation Swap, Seychelles' Conservation and Climate Adaptation Trust and The Blue Bonds Plan, Seychelles*, November 2020

Sustainable Coastal Fisheries Action Group

Through its newest Action Group, the Commonwealth is well-positioned to take bold steps to promote transparent and sustainable coastal fisheries, with potentially far-reaching impacts for both national and global fishing stocks. Kiribati's new fisheries regulations came into effect in February 2020, giving a legal basis to community-based fisheries management, and enforceable management measures for vulnerable species.[23] Known for its sustainable practices in harvesting tuna, the Maldives recognises that 'fisheries are an integral part of Maldivian identity' and is pursuing fisheries reforms to secure its coastal marine resources.[24] Overall, over half (55 per cent) of countries responding to the Commonwealth Ocean Action Survey report that they have a regular fisheries stock assessment performed for over two-thirds of their coastal fisheries (or lakes where landlocked countries are concerned).

MFMRD staff doing inspection at the market - Tarawa, Kiribati. (Image: Jeff Dunlop, Ministry of Primary Industries, New Zealand)
Source: The Pacific Community (SPC)

Twenty-two coastal countries have a National Plan of Action (NPOA) for sharks, sea birds or turtles, and 28 countries are parties to the Port State Measures Agreement (PSMA). Ten countries have made SDG14 voluntary commitments relating to fisheries. In November 2021, the Secretariat developed and delivered training for countries on the topic of 'Managing for Effective Compliance in Coastal Fisheries'. In January 2021, Maldives stepped forward to co-champion the Commonwealth Blue Charter Action Group on Sustainable Coastal Fisheries alongside Kiribati.

Crosscutting themes

The following themes cut across all Action Groups, promoting inclusive ocean action across the Commonwealth.

Gender

Gender is a cross-cutting theme across all 10 Action Groups.

Champion country Canada spearheaded a study on gender equity in ocean science, calling for better opportunities for women, as well as other minority groups. The study outlines six key recommendations and five immediate actions to support gender equity.[25]

To celebrate International Women's Day, the Secretariat has convened webinars to celebrate women's contribution to ocean action:

- 'Sea the She: Recognising women's contributions to ocean science' webinar (March 2021).
- 'Breaking the Blue Bias – Celebrating and sharing the experiences of ocean experts' (March 2022)

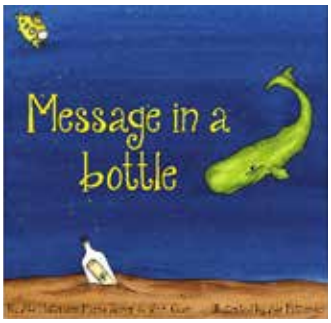
The Civic Laboratory for Environmental Action Research (CLEAR) at Memorial University, Canada, is putting gender equity into practice in marine plastic monitoring.[26]

In South Africa, meanwhile, the Advancing Womxn Initiative partnered with the University of Cape Town to create a prestigious fellowship for black women to undertake postgraduate and postdoctoral studies in oceanography.[27]

Commonwealth Blue Charter is promoting Gender Equity in Ocean Science

Case Study: *Lear: Putting Equity Into Ocean Plastics Research*, March 2021

Case Study: *Ocean Womxn: Supporting Black Women to Earn Postgraduate Degrees in Oceanography at the University of Cape Town, South Africa*, February 2021



Youth

Future generations are at the heart of the Commonwealth. Recognising this, the Blue Charter team in the Secretariat appointed a dedicated part-time Youth Outreach Co-ordinator who works closely with youth initiatives across the Commonwealth. A survey conducted to gauge interest in ocean action indicated that 90 per cent of the youth that responded to the survey were interested in engaging with Blue Charter Action Groups. Action Groups are engaging and involving children and youth in their activities, including the following.

- Citizen-science in New Zealand: the Litter Intelligence Programme includes marine litter monitoring by schools, coupled with an integrated education programme.[28]
- Commonwealth Youth for Climate Action Blog Series: launched in the run-up to the 26th Conference of the Parties (COP26) to the UNFCCC. This blog features young people from across the Commonwealth who are leading the way on local climate action, including ocean action.
- Distributing the *Message in a Bottle*[29] children's book to educate children between the ages of four and six about marine litter and its impact on the marine environment. Fourteen Commonwealth countries have requested its national distribution to date.
- Association of Commonwealth Universities (ACU) Blue Charter Fellowships, which support young researchers to explore innovative ways to tackle marine plastic pollution.[30]

The Blue Charter helped progress ocean policy or legislation and allowed better engagement with partners in **75%** of reporting countries

Commonwealth Secretariat's support

Seventy-five per cent of countries that undertook the Commonwealth Ocean Action Survey reported that the Commonwealth Blue Charter helped progress ocean policy or legislation and allowed them to better interact with external partners. Over half (55 per cent) explicitly reported that their capacity to tackle ocean issues had improved since the CHOGM 2018. Country representatives highlight numerous areas of improvement. For example, Kiribati notes that staff now have the capacity and skills required for monitoring and evaluation, and for in-country project proposal development. Similarly, the Bahamas has taken on several officers and run government programmes to increase capacity in the communities and among the regulators. In Belize, the establishment of the Ministry of Blue Economy and the ongoing development of the Blue Economy Policy and Strategy are testament to a growing institutional capacity.

The Secretariat has provided a wide range of ocean-related support to Commonwealth member countries.

For example, we have **assisted Ocean Champions** with membership outreach and meeting preparation, with the creation of terms of reference (TOR) and Plans of Action (PoA), and with **convening Action Groups, including through**:

- one in-person (2019) and four virtual 'All-Champions' meetings (2020, 2021, 2022)
- 12 knowledge exchange webinars, each attended by an average audience of 120 participants, with recordings summarised into short videos and shared across the Commonwealth Blue Charter.

Based on findings from the Commonwealth Ocean Action Survey, meetings were the most popular forum for engagement by member countries, followed by trainings and webinars.

Building partnerships for the ocean: The Secretariat has formally established six Blue Charter Partnerships – see below. In addition, the Commonwealth Blue Charter Team, on behalf of the Secretariat, is an official nominator for the Royal Foundation's Earthshot prize, under the 'Revive Our Oceans' theme.

Bloomberg Philanthropies	NEKTON	eXXpedition
Bloomberg Philanthropies offers a powerful range of data analytics, as well as support from the Vibrant Oceans initiative.	Nekton is a scientific research and discovery organisation that has worked closely with Commonwealth governments to link science with policy through expeditions, and which offers in-country training to young scientists.	eXXpedition is a not-for-profit organisation that runs all-female sailing research expeditions to investigate the causes of and solutions to ocean plastic pollution.
Arizona State University	ICRI International Coral Reef Initiative	ORRAA Ocean Risk and Resilience Action Alliance
Arizona State University power the Allan Coral Atlas, which aims to support coral reef conservation, including through a dynamic interactive coral reef map hosted on the Commonwealth Innovation Hub.	The Commonwealth Secretariat is a member of ICRI, the global partnership for the preservation of the world's coral reefs and associated ecosystems.	The Commonwealth Secretariat is a member of ORRAA, an international and multi-sector collaboration driving a transformative and global response to ocean-derived risks.

A Partnerships Day at the 2019 All-Champions week, co-hosted by Bloomberg Philanthropies, was devoted to introducing Champions to interested partnering organisations. Twenty-one partner organisations made five-minute 'pitches' to the Champion countries on how they could support them.

Blue Charter Fellowships: The Association of Commonwealth Universities established a Blue Charter Fellowship programme to tackle marine pollution. The UK's Department for Business, Energy and Industrial Strategy and supermarket chain Waitrose & Partners funded the awards, while the Secretariat gave support. Since their inception, the Blue Charter Fellowships have supported **48 talented young researchers** from across the Commonwealth.

The Association of Commonwealth Universities

Amplifying a Sea of Voices: The Secretariat has provided various platforms to amplify the voices of people across the Commonwealth.

- A public website, which has welcomed more than 50,000 visitors, with more than 170,000 page views.
- News media: 69 opinion articles ('op-eds'), news stories and press releases on the Commonwealth Blue Charter, in addition to regular features and case studies.
- Nineteen videos, including Commonwealth Blue Charter informational videos highlighting benefits to member countries and progress made to date; 10 Action Group videos; and 8 case study videos, documenting highlights from 62 written case studies, and starring country representatives.
- An open platform – Sea of Voices – where Commonwealth citizens can send short videos to celebrate their special relationships with the ocean, currently featuring more than 33 people from across the Commonwealth.
- Side-events at a wide range of international fora.
- Quarterly newsletters, to keep interested parties abreast of action under the Blue Charter.

Scaling action: The Commonwealth Blue Charter Knowledge Hub provides a collaborative platform to allow for communication across Action Groups and among their members. Some **286 officials are registered** on this password-protected forum. Good and best practices are documented through **case studies**, published monthly on the Commonwealth Blue Charter website, to inform and inspire replication and scaling. **Ten thematic toolkits** were developed to reflect the current state of knowledge on each Action Group area, highlight recommended training opportunities, and identify knowledge gaps. In addition, **five cross-cutting toolkits** were developed, covering Maritime Security, Ship Registries, Social Sciences, Gender, and the development of robust Indicators. The Funding Opportunities Database and Training Database each provide Action Groups with the tangible tools and resources to implement their Action Plans.

Commonwealth Blue Economy Series

Closing the finance gap: The Secretariat launched an online database (May 2021) and an associated handbook to help member countries be aware of and access more than US$170 million of international funding available for ocean-related projects. On average, there are 56 funds per action area, covering 11 different types of funding. Designed specifically

to support the work of the Commonwealth Blue Charter, this compilation of funding opportunities, currently worth £126 million, has the potential to generate a critical shift in the financing seascape.

Source: oceanfund-bluecharter.thecommonwealth.org

The Commonwealth Secretariat also announced the appointment of a **consortium of experts to advise on ocean-climate finance**. Generously supported by the United Kingdom, the appointment is a joint venture of the Commonwealth Climate Finance Access Hub and the Commonwealth Blue Charter. The consortium of experts worked from October 2021 to March 2022 with Commonwealth governments to develop proposals and access funding for ocean-based adaptation and mitigation activities, as detailed in countries' Nationally Determined Contributions under the UNFCCC.

Training ocean leaders: The Secretariat developed and delivered 13 training courses training over 400 officials from 40 countries over the past few years. In 2020, the Secretariat delivered five bespoke online training courses, on:

Project Proposal Development	**Stakeholder Engagement**	**Bridging the Science-Policy Divide**	**Remote Sensing of Mangroves (for Managers)**	**GIS Mapping of Mangroves (for Technicians)**

These courses are currently being converted into self-paced learning modules. Courses and expert seminars delivered in 2021 and 2022 include:

- Policy Considerations when Developing a Sustainable Blue Economy
- Coral Reef Mapping for Managers
- Coral Reef Mapping for Technicians
- Managing for Effective Compliance in Coastal Fisheries
- Marine Protected Area (MPA) Implementation
- Effective Governance of Sustainable Aquaculture
- Addressing the Impacts of Ocean Acidification through Mitigation, Monitoring and Policy
- Ocean Observations: Using R to Analyse and Interpret Ocean Observational Data
- Commonwealth Blue Charter Introductory Training on Blue Carbon

SOURCE: TRAINING-BLUECHARTER.THECOMMONWEALTH.ORG

In addition, the **Training Database**, which was launched in November 2021, with more than 200 curated courses, provides a 'one-stop-shop' for capacity building and training opportunities for each Action Group, including training opportunities provided by the Commonwealth Secretariat.

Piloting rapid assessment projects: The Secretariat partnered with the US-based Stimson Center to pilot a new process to quickly determine climate vulnerability and risks in coastal communities. This 'rapid assessment protocol', developed under the Stimson Center's Coastal Resilience Vulnerability Index (CORVI) Project, was trialled in the Commonwealth countries of Barbados, Kiribati and Sri Lanka. The project partnership is in part generously supported by the United Kingdom's Blue Planet Fund through the Ocean Risk and Resilience Action Alliance (ORRAA) which the Commonwealth Secretariat recently joined as a member. It aims to support better decision making and more climate-smart investments by clearly outlining the financial, political, and ecological risks that climate change poses to a small island country or coastal city

Empowering collective solutions: The Commonwealth Secretariat teamed up with Satellite Applications Catapult, Maxar, Planet and Amazon Web Services (AWS) to deliver the first virtual 'Hack the Planet' competition. The competition stimulates discussion around the development of new concepts relating to the sustainability of the ocean, incorporating satellite data and technologies. Solutions are aligned to the 10 action areas of the Commonwealth Blue Charter. The 2021 winners are working with ocean and satellite experts to make their ideas become reality.

Striving for excellence: The Secretariat is working with the University of the West Indies, the Association of Commonwealth Universities (ACU), and the Government of Antigua and Barbuda, Co-Champion of the Sustainable Blue Economy Action Group, to set up a Centre of Excellence on Oceanography and Blue Economy, which will serve as a regional hub for world-class research and institutional capacity building. Head of Oceans and Natural Resources at the Commonwealth Secretariat, Dr Nicholas Hardman-Mountford, recently joined the Secretary-General of the ACU, Dr Joanna Newman, and others on a scoping mission to Antigua and Barbuda. Prime Minister of Antigua and Barbuda, Hon. Gaston Browne, welcomed the visit and reiterated his support for the endeavour.

'Given the fact that the nation of Antigua and Barbuda is such a vast ocean state and the growing interest in Blue Economy related subject areas, the establishment of the COBE is indeed very timely and advantageous.'

– Honourable Prime Minister Gaston Browne, Antigua and Barbuda

Waves
of Action

Updates from Blue Charter Action Groups

Champion countries

United Kingdom Vanuatu

Commonwealth Clean Ocean Alliance

'I am proud of the ambitious and collaborative action taken by 34 Commonwealth countries to reduce marine litter through the Commonwealth Clean Ocean Alliance. By working together, the Alliance has showcased global leadership in tackling the scourge of marine plastic pollution, alongside nine other Blue Charter action groups all working to protect our ocean.'

Lord Zac Goldsmith, Minister for the Pacific and Environment, United Kingdom

Summary of achievements

The largest Blue Charter Action Group, the Commonwealth Clean Ocean Alliance (CCOA) has grown to become a community of 34 of the Commonwealth's 56 countries. Collaborative working relationships have been established with key regional organisations to support delivery, and various initiatives have been successfully working to meet CCOA objectives, including the following.

The Commonwealth Litter Programme (CLiP)

CLiP supports Commonwealth countries to develop Marine Litter Action Plans and a pilot study in India on water quality.

Global Plastic Action Partnership (GPAP)

Under the World Economic Forum, initially co-funded by Canada and the UK, along with private sector partners, the GPAP has established National Plastic Action Partnerships globally.

The Tide Turners Plastic Challenge Badge (TT)

Since 2018, more than 330,000 young people have participated in this challenge.

Eight Commonwealth countries have endorsed the Ocean Plastics Charter, an initiative spearheaded by Canada since 2018, to demonstrate their commitment to take concrete and ambitious action to reduce plastic pollution and waste through a resource-efficient and sustainable approach to the management of plastics across its entire lifecycle. More recently, Rwanda was one of two sponsors of the historic **global resolution to end plastic pollution**, which was adopted at the United Nations Environmental Assembly in March 2022 with backing from all Commonwealth countries.

Across the Commonwealth, 43 countries have taken steps to reduce avoidable single-use plastic waste, most commonly through regulatory instruments. For example, Malaysia has developed a comprehensive **'Roadmap Towards Zero Single-Use Plastics'** 2018–2030, while Singapore has set the goal of becoming a **'Zero Waste Nation'**.[31] The UK has developed a new **plastic packaging tax**, to be introduced in 2022.

Twenty-nine Commonwealth countries have instituted **a ban on single-use plastic carrier bags**, either at point of production/import (for example, Bangladesh, Rwanda, Samoa), point of sale or both (for example, Kenya). Landlocked countries are also taking action. For example, Eswatini has promulgated the Control of Plastic Bags Regulations of 2021, and is implementing numerous initiatives to reduce plastic use and improve waste management, as reported through the Commonwealth Ocean Action Survey.

Small island states (which make up most Commonwealth oceanic countries) have been disproportionately more likely to enact bans on single-use plastics – 27 per cent of national bans globally have come from these countries.[32] Subnational jurisdictions within a number of Commonwealth countries, such as states in Australia and provinces in Canada, have also instituted bans on single-use plastics. However, the efficacy of bans in terms of reducing plastic pollution remains uncertain,[33] in part because many bans have only recently been implemented, and

27% of national bans on single-use plastic carrier bags globally have come from small island states

It is estimated that as much as **90%** of plastic waste globally is currently not managed

79% of all plastics are neither recycled nor reused

'Despite COVID-19, we engaged with our Action Group through two informal CCOA virtual coffee mornings in the summer of 2020, followed by a webinar in November – "Breaking the Plastic Wave Across the Commonwealth" – where we explored two studies on the global plastics system and reflected as a group on how these can inform our collective work on tackling ocean plastic pollution.'

CCOA Blue Charter Progress Report

because enforcement is a substantial challenge – particularly where alternatives are not readily available, accessible and cost-effective.

Some Commonwealth countries, such as Barbados, Belize, and Trinidad and Tobago, have made positive progress towards instituting **deposit return schemes (DRS)**, which provide an economic incentive for the consumer to return plastic waste. Others, like Zambia and Singapore, have opted for **extended producer responsibility schemes (EPRS)**, which create an economic incentive for industry to recover plastic waste. In Canada, the Strategy and Action Plan on Zero Plastic Waste include efforts to facilitate consistent extended producer responsibility programmes, assess infrastructure needs, develop a roadmap for single-use plastics, and create guidance to inform consumer behaviours and target plastic pollution leakage points, as reported through the Commonwealth Ocean Action Survey.

India has partnered with the informal waste sector to collect, sort and repurpose plastic waste. Commonwealth countries also participated in 'clean up' efforts, such as the **Ocean Conservancy's International Coastal Clean-up**. Belize developed a **National Marine Litter Action Plan** – the first in the wider Caribbean region. About 5.7 per cent of all fishing nets, 8.6 per cent of all traps and 29 per cent of all commercial fishing lines are lost each year, comprising ~10 per cent of global marine plastic pollution.[34] Seven countries and one UK Overseas Territory (UKOT) are members of the **Global Ghost Gear Initiative (GGGI)**, and several are implementing policies to address maritime sources of plastic. Twenty-three (23) countries are **UN Clean Seas Countries** and 25 are party to the **London Protocol**. Seven countries have signed up to the **New Plastics Economy Global Commitment**.

Challenges

The scarcity of effective waste collection and management systems at the national level constrains efforts to curb plastic waste flows into the ocean; it is estimated that as much as 90 per cent of plastic waste globally is currently not managed.[35] Ineffective waste collection allows 'plastic leakage'. Even when collected, open dumps remain a substantial source of marine plastic, as well as causing public health concerns.

Bans can play an important role but must be considered as just one element of an integrated national waste management strategy. If poorly implemented, plastic bans are met with opposition from both consumers and the manufacturing industry.[36] Moreover, bans need to be carefully considered to avoid unintended consequences, such as plastic bags being smuggled into countries with no end-of-life solution for sanitary disposal (ibid). Similarly, product bans, particularly of single-use plastic food packaging, must be weighed up against the potential risks to food and water security (ibid). Such

impacts need to be considered from a full lifecycle perspective. Subsequently, the effective enforcement of even well-designed bans and levies remains challenging, particularly in the face of industry opposition. There is a trend of short-term compliance, followed by a rebound in the use of plastic bags, for example,[37] particularly where there are no easily accessible and affordable alternatives. In some countries, the ban also resulted in a black market for plastic bags.[38] As such, market incentives, rather than bans coupled with punitive measures, may prove to be more effective at reducing the flow of plastic from source to sea.

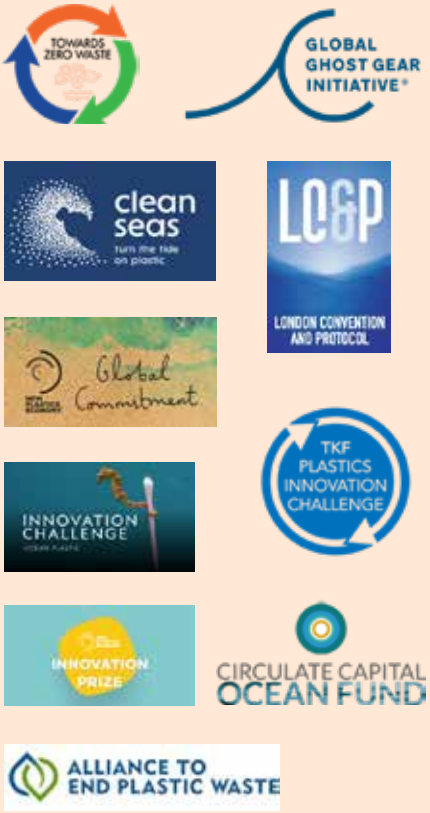
In addition to the technical challenges above, COVID-19 created a barrier to convening member states, although innovative approaches have allowed CCOA to continue collaborating through online platforms.

Priorities, opportunities and next steps for the coming year

There is a real opportunity for tackling plastic waste at source, particularly through market incentives to minimise plastic by design and by promoting circular economy solutions where plastic use cannot be phased out. Such initiatives should form an integral element of national waste management strategies. The **Plastics Innovation Challenge**,[39] the **New Plastics Economy Innovation Prize**,[40] and the **Ocean Plastic Innovation Challenge**[41] provide opportunities in this regard. In order to incentivise innovation to reduce unnecessary plastics, Commonwealth countries might consider implementing market incentives. More specifically, a value-added tax/ goods and services tax (VAT/GST) (or equivalent) exemption for (non-essential) products that minimise unnecessary plastic along the entire supply chain could serve as a powerful market incentive, encouraging industry innovation and shifting consumer behaviour, without imposing additional costs to the consumer.[42] Conversely, there should be no VAT exemptions for products containing unnecessary plastics (for example, microbeads, single-use, superfluous plastic packaging), or where there is no system in place to manage waste.

In light of the limitations of current waste management systems, the new investment firm **Circulate Capital**[43] and the industry-led **Alliance to End Plastic Waste**[44] are both directing funding from corporate partners to develop better waste infrastructure in Asia, where an estimated 81 per cent of ocean plastics are emitted.[45] Opportunities for investment may include waste-to-energy options, coupled with **carbon capture and storage (CCS) technology** to ensure that other environmental impacts are mitigated. Integrated DRS and EPRS[46] may also be scaled across the Commonwealth, as they provide economic incentives to ensure waste capture and collection. At present, only five countries have achieved a 30 per cent plastics recycling rate.

Spotlight on other initiatives



35 Commonwealth countries participated in 'clean up' efforts

It is estimated that **81%** of ocean plastics are emitted in Asia.

Small island developing states may be particularly well-placed to phase out single-use plastics, as exemplified by Maldives' pioneering **National Single Use Plastic Phase Out Strategy.**[47] CCOA is well-positioned to support with this, including through continued advocacy to temper consumer demand for single-use plastics, and to identify, pilot and promote alternative reusable products or reuse systems.

Recent research suggests that more than 1,000 rivers account for 80 per cent of global annual emissions, which range between 0.8 million and 2.7 million metric tons per year, with small urban rivers among the most polluting[48] – including several in Commonwealth countries.[49] River clean ups and booms therefore provide a secondary opportunity to stem the flow of plastic into the ocean, buying time to implement more holistic plastic waste mitigation strategies. Other 'end-of-pipe' solutions include advanced final-stage wastewater filtration and treatment technologies to reduce microplastic pollution discharged from wastewater treatment plants.[50, 51] The majority of microplastics in the marine environment are from secondary sources,[52] so addressing the flow of microplastics from source to sea directly contributes to the reduction of microplastics. For plastic pollution from fisheries, track and trace systems for fishing gear, coupled with the implementation of flat fees (or no fees) for disposal of worn out or retrieved gear, should be considered.

'The UK has worked alongside non-profits such as the Waste and Resources Action Programme (WRAP) to deliver "Plastics Pacts" on an international scale.'

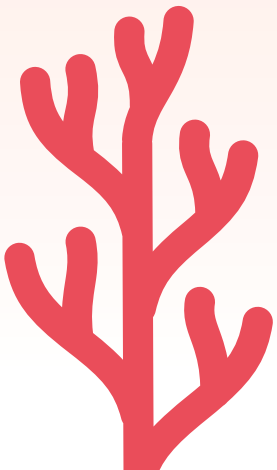
Champion countries

Australia Belize Mauritius

Coral Reef Restoration and Protection

'Coral reefs are the engine room of our oceans, supporting 25 per cent of marine life and delivering benefits to hundreds of millions of people. However, the health of our coral reefs is declining, with coral bleaching driven by climate change being their single greatest threat to these critical ecosystems globally. While we take action on climate change, we need to build coral reef resilience. Australia welcomes the opportunity to continue working with Belize, Mauritius and other Commonwealth nations, to share our collective knowledge to protect, restore and build the resilience of our precious coral reefs.'

Jamie Isbister, Australia's Ambassador for the Environment



Summary of achievements

Thirty-seven Commonwealth countries are reef-bearing (~45 per cent of the global whole), and 33 of these countries or territories have protected some coral reefs (8 have protected over 40 per cent). Coral reef restoration activities are underway in 16 Commonwealth countries or territories. Thirty-one reef-bearing countries have submitted monitoring data for the 2020 *Global Report on the Status of Coral Reefs*. Seventeen countries, as well as the Commonwealth Secretariat, are members of **the International Coral Reef Initiative (ICRI)**, and contributed to an ICRI Resolution on Coral Reef Restoration and Rehabilitation.

Forty per cent of **Belize's** coral reefs are covered by marine protected areas (MPAs); community-led coral reef restoration in Laughing Bird Cave National Park achieved coral cover increases of 10–20 per cent, and there are now 23 in-situ coral nurseries throughout Belize.[53] The **Republic of Mauritius,** where 4 per cent of reef area lies within an MPA, has successfully restored 275m^2 of degraded reef in the Blue Bay Marine Park and at Trou au Biches. In addition, Mauritius implemented a **'Community-based Coral Culture Project'** in 2018–19 to promote coral farming by fishers and small and medium-sized enterprises (SMEs), which consisted of five pilot coral farms staffed by 110 trained community members. The Republic of Mauritius is currently also collaborating with the Adaptation Fund Board to reduce climate change impacts in Mauritius, Rodrigues and Seychelles by implementing coral reef restoration with thermally tolerant 'super corals'. A Coral Reef Network has been set up at the level of the ministry to co-ordinate activities aiming at enhancing the adaptive capacity of vulnerable marine ecosystems. In **Australia**, 85 per cent of reef area is covered by MPAs, including the Great Barrier Reef, where 82 Master Reef Guides have been trained to inform and inspire the public.[54]

Work under the Action Group was presented at the **ICRI General Meeting** in December 2019, highlighting the need to monitor progress, share information and work with partners. In recognition of the connection, the Commonwealth Secretariat became an ICRI member at the ICRI General meeting in

'As one of the four countries which share the Mesoamerican Reef System, Belize recognises its responsibility as stewards and custodians of this iconic reef system given its central role to our culture, economic development, and as a common heritage to the global citizenry. As the Minister of the new and innovative Ministry of the Blue Economy and Civil Aviation, I am humbled and honoured to be at the helm of the responsible development and conservation of this Reef System. My Ministry intends to build on existing efforts focused on the protection, health and resilience of our reef system, such as the expansion and improved management of the MPA network, the full protection of grazers, and the restoration of corals. As a Champion for the Blue Charter's Action Group on Coral Reef Protection and Restoration, Belize joins Australia and Mauritius in mobilizing interested countries in the Commonwealth in sharing our experiences, knowledge, management actions and lessons learnt.'

The Honourable Andre Perez, Minister of the Blue Economy and Civil Aviation, Belize

Coral reef restoration activities are underway in **16** Commonwealth countries.

December 2021. Leveraging synergies across Action Groups, the efforts of member countries to monitor and map coral reefs were also highlighted on **World Oceans Day 2020**.

Work by Champion countries has received international recognition, including through the following awards.

Secretariat for Climate Change Lighthouse Activity Award 2017

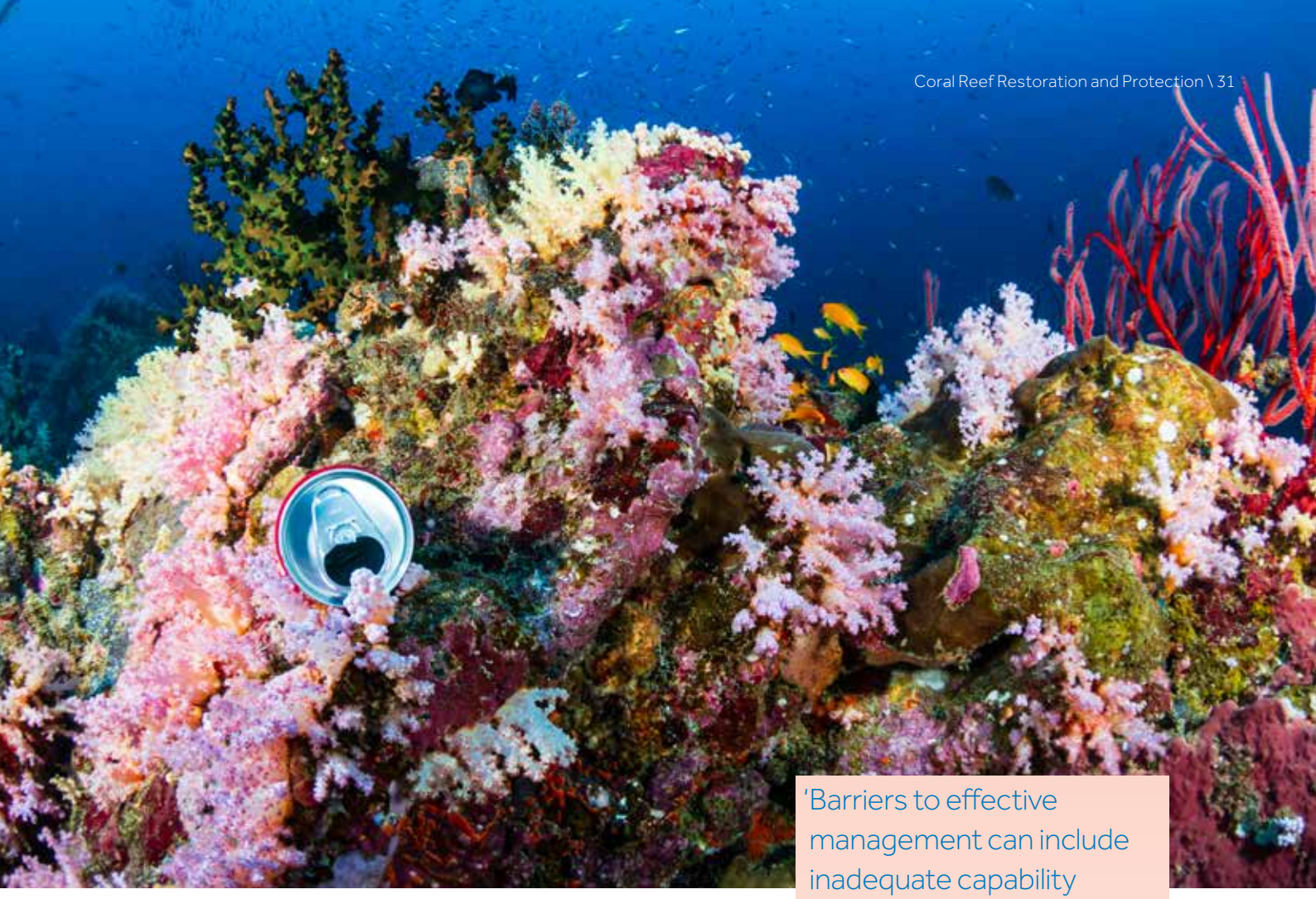
Global Environment Fund SGP Women as Agents of Change 2018

Challenges

The most fundamental challenge to coral reefs is climate change, and associated impacts such as bleaching and ocean acidification. Successful protection and restoration therefore remain contingent upon meaningful and effective action to mitigate climate change, in parallel with action to reduce local and regional pressures on coral reefs. Global co-operation, collaboration and knowledge sharing continues to be crucial to ensure efficient and effective use of resources.

'Mother Nature has gifted the Republic of Mauritius with a well-developed system of coral reefs. It is our prime duty to conserve and protect this reef system, as it plays a fundamental role in our economic development, food security and coastline protection and as a common heritage to humanity. Being the Senior Chief Executive responsible for the subject of development of the Mauritian Blue Economy, sustainable utilisation and management of the marine and fisheries resources, and protection and conservation of the biodiversity, I am committed and dedicated to protecting and conserving this valuable ecosystem for the benefit of the present and the coming generations. My ministry is determined to reinforce the preservation of the reefs through the creation of new MPAs and active restoration of degraded reef areas. As a Co-Champion for the Commonwealth Blue Charter's Action Group on Coral Reef Protection and Restoration along with Australia and Belize, the Republic of Mauritius is ready to share its experiences, knowledge, best practices and lessons learnt globally.'

Virendra Kumarsingh Daby, Senior Chief Executive of the Ministry of Blue Economy, Marine Resources, Fisheries and Shipping, Republic of Mauritius



'Barriers to effective management can include inadequate capability and capacity, inadequate funding, inadequate compliance and enforcement (especially for countries with large Exclusive Economic Zones and/or where territorial disputes persist), weak governance structures, inadequate knowledge of the human dimensions of coral reefs, and lack of long-term government commitment.'

Joint statement, Belize and Australia Champion country representatives

Coral reefs continue to decline globally, despite the fact that there are more than **230 international policy instruments, 73 binding global and regional instruments, and 591 commitments**, directly or indirectly supporting the conservation and sustainable management of coral reef ecosystems and/or addressing anthropogenic drivers of change in these ecosystems.[55] Implementation of protection and restoration measures, at scale, remains a serious challenge. Comprehensive monitoring is key to informing management action. Design of local monitoring programmes should respond to local needs, but by ensuring that monitoring is nationally, regionally and ultimately globally consistent allows for findings to be integrated into global reports, such as those produced by ICRI's Global Coral Reef Monitoring Program which released its sixth **Status of Coral Reefs of the World 2020 Report** in October 2021.

Consistent, long-term funding remains a barrier to sustainable coral reef restoration and protection. The 'coral funding gap' is beginning to be closed through global efforts, particularly the Global Fund for Coral Reefs, but even more is required if reef restoration and protection is to be scaled in the future. Coral Vita, based in the Bahamas, won the Earthshot Prize in the Ocean category, for its innovative methods to restore coral reefs. Elsewhere, progress with image-based, technological tools, which can be 'trained' using artificial intelligence to make these assessments, could fill some of the monitoring gaps. The Australian Institute of Marine Science, working in partnership with Fiji and Palau, launched the ReefCloud

Coral restoration techniques include:

- Selective breeding of 'super corals'
- Microbiome manipulation
- Coral gardening and micro-fragmentation
- Larval restoration
- Coral refugia
- Active intervention (e.g., removal of crown of thorns starfish, removal of fleshy algae)

Technological innovation:

- Underwater drones
- Machine learning
- Big data

Learning and Collaboration Opportunities

tool at the Our Ocean Conference in 2022. ReefCloud uses cutting-edge technology in machine learning and artificial intelligence to rapidly analyse photographs of coral reefs and extract data, which can then be used to inform management. The impacts associated with climate change, including ocean acidification, coral bleaching and disease, as well as unsustainable fishing practices, will pose growing challenges, although the establishment of 'no-take zones' was found to improve outcomes.

The priorities of member states have necessarily shifted during the COVID-19 pandemic, with some coral reef-dependent industries, including tourism and fishing, being severely impacted. Nonetheless, Action Group members remain committed to safeguarding their coral heritage. Mauritius also had to divert resources to manage the impacts of the 2021 grounding of the MV Wakashio on the reef of Pointe d'Esny.

Priorities, opportunities and next steps for the coming year

More specifically, the Action Group contributed to the **Reef Restoration and Adaptation Program (RRAP)**, developed by Australia. Members also completed the ICRI survey on reef restoration. The Action Group will pursue synergies with the **Global Coral Reef Monitoring Network (GCRMN)** and **International Coral Reef Initiative (ICRI)**.

The Republic of Mauritius plans to integrate into its Economic Recovery Programme community capacity building on coral farming, nursery management and reef restoration, and the development of new nurseries – an approach that could be considered across all reef-bearing Commonwealth countries, in hand with the Blue Economy Action Group. The Commonwealth Secretariat Database of Funding Opportunities provides an overview of funding sources to continue and scale the achievements of the Action Group to date, while the Training Database includes courses on coral reef restoration for practitioners.

Effective, locally relevant and appropriately resourced policies for coral reef protection and restoration are being developed. For example, according to the Commonwealth Ocean Action Survey, Belize is developing a Resilient Reefs Strategy under the UNESCO and GBRF Resilient Reef initiative. More broadly, however, a robust policy gap analysis is needed to understand how local, regional, national and international policies pertaining to coral reef restoration and protection intersect, which could build on the work completed by the UN Environment Programme (UNEP) and ICRI to analyse global and regional policy instruments and mechanisms. Drawing on best practices and lessons learned from, for example, the Mauritius' Coral Reef Network and Australia's Reef 2050 Plan,

'...focus on the protection and restoration of coral reefs within and among Commonwealth Countries. Primarily, actions will aim to reduce stressors and the adverse impact of climate change on local communities and coral reef-dependent economic activities. It will do this by promoting policies and techniques that confer reef resilience, and by developing and implementing coral reef restoration methods that can be applied at-scale and engage community participation.'

Joint statement, Belize and Australia Champion country representatives

the Action Group may also consider harnessing synergies with similar initiatives, such as the Global Fund for Coral Reefs, to make more effective use of resources. The revitalisation of **the Global Coral Reef Monitoring Network (GCRMN)** should be a continued priority, while technology such as the **Allen Coral Atlas** provides a new opportunity to overcome monitoring gaps.

Coral restoration, valuable though it is, is not a replacement for reducing local, regional and global stressors acting on reefs, particularly climate change, marine pollution and overfishing. The protection and effective management of intact reefs are prerequisites to successful risk-informed restoration. It therefore remains vital to leverage and strengthen existing synergies with other Action Groups, particularly those on MPAs, Ocean and Climate Change, CCOA, Mangrove Ecosystems and Livelihoods, and Ocean Acidification, as well as other initiatives to protect coral reefs and address stressors. The concept of 'nature-based solutions' may be used as a framework for action, particularly in the context of climate change.

Champion country

Sri Lanka

Mangrove Ecosystems and Livelihoods

'The COVID-19 pandemic has shown how fast nature can heal from some of the environmental damage caused by humans. Sri Lanka is indeed happy to champion Mangrove Ecosystems and Livelihoods Action Group under the Commonwealth Blue Charter. Leadership is not about leading others, but also continuing to learn and share our experiences with the Commonwealth family and beyond.'

The Honourable Prof G L Peiris MP, Foreign Minister of Sri Lanka

Summary of achievements

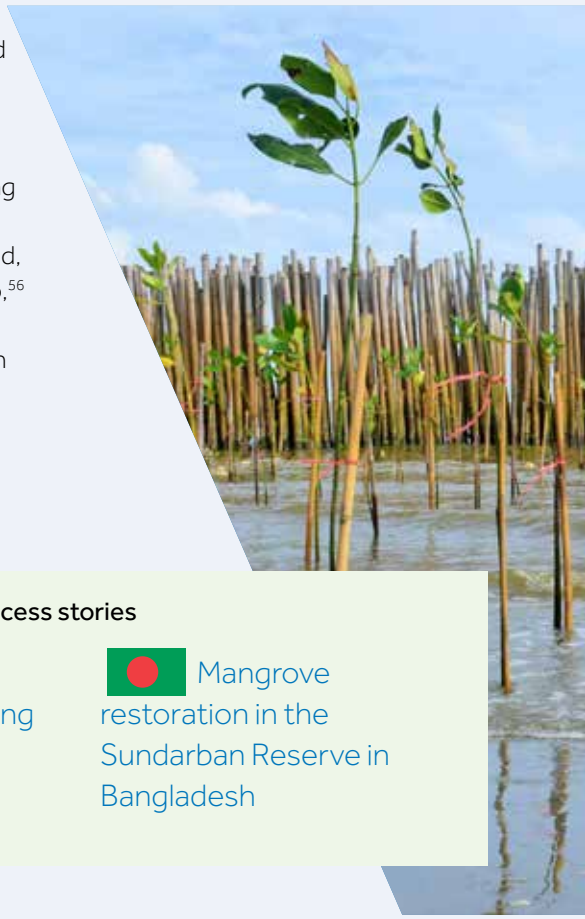
Mangrove restoration activities are underway in 39 of the 44 Commonwealth countries where mangroves occur. Thirty-nine countries have provided some protection, with 13 having protected at least half of their mangrove stands. Commonwealth member states have collectively made 46 national commitments to protect or restore mangroves, and 15 project proposals were developed under the Action Group. Nine countries are members, or outreach or dialogue countries, of **Mangroves for the Future**. Several member countries have formalised their commitments in national policies or plans, such as Belize's 2018 Protection of Mangroves Regulations, India's NDC and the 'Green India Mission', Kenya's National Mangrove Ecosystem Management Plan 2017–2027, and Mozambique's Strategy and Action Plan for Mangroves. These can serve to inspire policy and generate learnings for other Commonwealth countries.

Sri Lanka, home to nearly 16,000 ha of mangroves, with 21 true mangrove species and several mangrove associate flora and fauna, had strictly protected over 18,000 ha of mangroves as of August 2021.

In January 2020, the Government of Sri Lanka adopted the National Policy on Conservation and Sustainable Utilization of Mangrove Ecosystems in Sri Lanka, with a vision of 'a healthy mangrove ecosystem with rich biodiversity supporting the nation with direct and indirect services'. In order to maintain the sustainability of the policy, an action plan focusing on 'conservation, research, land-use conversions and sustainable resource extraction and restoration parameters' has been drafted. Furthermore, National Guidelines for Restoration of Mangrove Ecosystems and Propagation of Mangroves have also been drafted to assist in achieving the set goals of said policy and the strategies therein.

Mangrove restoration activities are underway in **39** Commonwealth countries

Many relevant institutions, including government, private and non-governmental organisations in Sri Lanka, have been working to ensure the conservation and restoration of mangrove ecosystems in the country by publishing awareness-raising materials, granting funds for research on mangrove conservation and restoration, and conducting awareness programmes, hands-on training workshops and island-wide scientific restoration programmes. Several case studies were developed, including on **mangrove restoration in Point Lisas, Trinidad and Tobago**,[56] which took an evidence-based approach to restoring the topography of the area. Here, mangrove recolonisation, once hydrologic restoration was complete, was largely natural, and little replanting was required. According to the Commonwealth Ocean Action Survey, new research led by Trinidad and Tobago's Institute of Marine Affairs (IMA) will help to lay the groundwork for the country to trade carbon internationally. The project aims to measure the amount of carbon stored in local mangrove soils and give it a monetary value, thereby enabling trade in the emerging carbon market.[57] Another case study described the **Tahiry Honko mangrove carbon project in the Velondriake locally managed marine area of Mozambique**, which highlighted the potential of mangroves for nature-based



Other Commonwealth success stories

Mangrove restoration in the Matang Reserve in Malaysia

Mangrove restoration in the Sundarban Reserve in Bangladesh

solutions to climate change.[58] To mark the International Day for the Conservation of the Mangrove Ecosystem on 26 July 2021, the Commonwealth Secretariat hosted a **virtual event** to showcase how powerful satellite technology can support the conservation and sustainable management of mangroves in the Commonwealth.

Challenges

The primary stressors on mangroves are habitat destruction and conversion for aquaculture, agriculture, urban and coastal development, and overexploitation. For example, 38 per cent of mangrove loss between 2000 to 2012 was attributed to the development of palm oil plantations and rice paddy crops. Despite the demonstrable value of protected areas and Ramsar sites in mitigating mangrove losses (levels of degradation within protected areas are less than half those recorded from outside of protected areas),[59] approximately 75 per cent of mangrove forests globally remain unprotected and overexploited,[60] suggesting that Commonwealth countries with mangrove stands could increase the protection of mangroves within their protected area programmes and initiatives. There is no legally binding global framework for the conservation of mangrove (and other) ecosystems;[61] instead, policy frameworks comprise a plethora of international, regional, national and non-binding tools and standards. Moreover, even where national frameworks exist, national stakeholders reporting to the Commonwealth Ocean Action Survey stress that enforcement remains a challenge.

Funding constraints and information gaps continue to hamper effective progress. Restoration projects that are implemented without an underlying science-based approach have generally proved unsuccessful. Successful mangrove regeneration has generally only been achieved by planting monocultures of fast-growing species (such as, Rhizophora sp., Avicenna

sp.), generating mangrove forests with low biodiversity and potentially limited ecosystem functioning, and potentially limited blue carbon values. (At present, saltmarshes and seagrasses, also noted for their potential for blue carbon, are not specifically included under this Action Group.)

Priorities, opportunities and next steps for the coming year

The goals outlined in the Plan of Action centre around sharing knowledge on the importance of mangroves and how to protect and manage these critical ecosystems. One avenue is through land-use reforms and the holistic integration of environmental considerations into coastal development. Where restoration is required, hydrologic restoration appears to provide most value for money. Effort should be focused on countries with high total mangrove biomass, countries where mangroves make up a large proportion of total forest area (for example, SIDS) and countries with high restoration potential scores. Continued research on mangrove biology, ecology and function under different management conditions, coupled with the active promotion of their importance and functional worth at the community level, and the establishment of effective protection measures, will be essential in the maintenance of healthy, productive and protective mangrove forests.

Training and capacity building (technical mangrove restoration and protection, as well as general project management, monitoring and evaluation) are a continued priority, which can be guided by the Commonwealth Secretariat's Training Database. In the short term, member countries intend to continue exchanging knowledge on legislation and regulations relating to mangrove protection and management, in an effort to understand the most appropriate regulatory regimes for member countries and their mangroves. The Action Group is also eager to facilitate pilot projects for assessing and trialling mangrove restoration across Commonwealth member countries, but this has not proved possible in the absence of committed funding for activities. The Action Group is therefore committed to ensuring the availability of funding sources for activities under the Action Plan. The Commonwealth Secretariat's new Database of Funding Opportunities can help to guide this commitment. Mangroves are the 'poster child' for ecosystem goods and services valuation, providing a potential pathway to incentivise funding. In order to effectively address the stressors that impact on mangrove ecosystems, and leverage their economic potential, this Action Group could strengthen synergies with the other Action Groups, especially those on MPAs, Ocean and Climate Change, Sustainable Aquaculture, and Sustainable Blue Economy.

Learning and collaboration opportunities

Mangrove Restoration Mapping Tool

Global Resilience Project – Sri Lanka Mangrove Restoration Project

Mangrove Capital Africa

International Society for Mangrove Ecosystems

Champion countries

Seychelles Barbados

Marine Protected Areas (MPAs)

'Seychelles has designated more than 30% as protected areas which surpasses the global targets and plans to protect 100% of the seagrasses and mangroves by 2030. Balancing economic growth through the management of the resources that the sea provides will give us a sustainable future. Protecting the ocean is giving our generations a brighter future.'

His Excellency, Wavel Ramkalawan, President, Republic of Seychelles

Summary of achievements

All but one Commonwealth countries with a coastline have designated MPAs. Seven countries have met the Convention on Biological Diversity (CBD) Aichi Target of 10 per cent of coastal and marine areas to be conserved by 2020, and four countries have protected 30 per cent or more of their exclusive economic zones (EEZs) in MPAs. Thirty-two countries are now committed to the 'Thirty by Thirty target' of protecting 30 per cent by 2030.

Six countries host MPAs that have been awarded **'Blue Park'**[62] status and 34 countries have undertaken a minimal assessment of management effectiveness. Several countries have committed to ambitious targets under regional and national frameworks, such as the **Caribbean Challenge** (20 per cent by 2020), or unilateral pledges, such as the **Maldives' Blue Prosperity Programme, Bermuda's Ocean Prosperity Programme** (20 per cent by 2024 and 2022, respectively), and the **Micronesian Challenge** (30 per cent of near-shore marine resources conserved).

Half of the Western Indian Ocean countries involved in the Great Blue Wall initiative launched in November 2021 are members of the Commonwealth. The **Great Blue Wall initiative**, which seeks to create a network of marine conservation areas, including coral reefs, mangroves, and seagrass meadows, seeks to bridge the gap between the marine area that is under protection (5–8 per cent) and the goal of protecting 30 per cent of the ocean. Commonwealth countries, like the Seychelles, are playing a leading role in such initiatives.

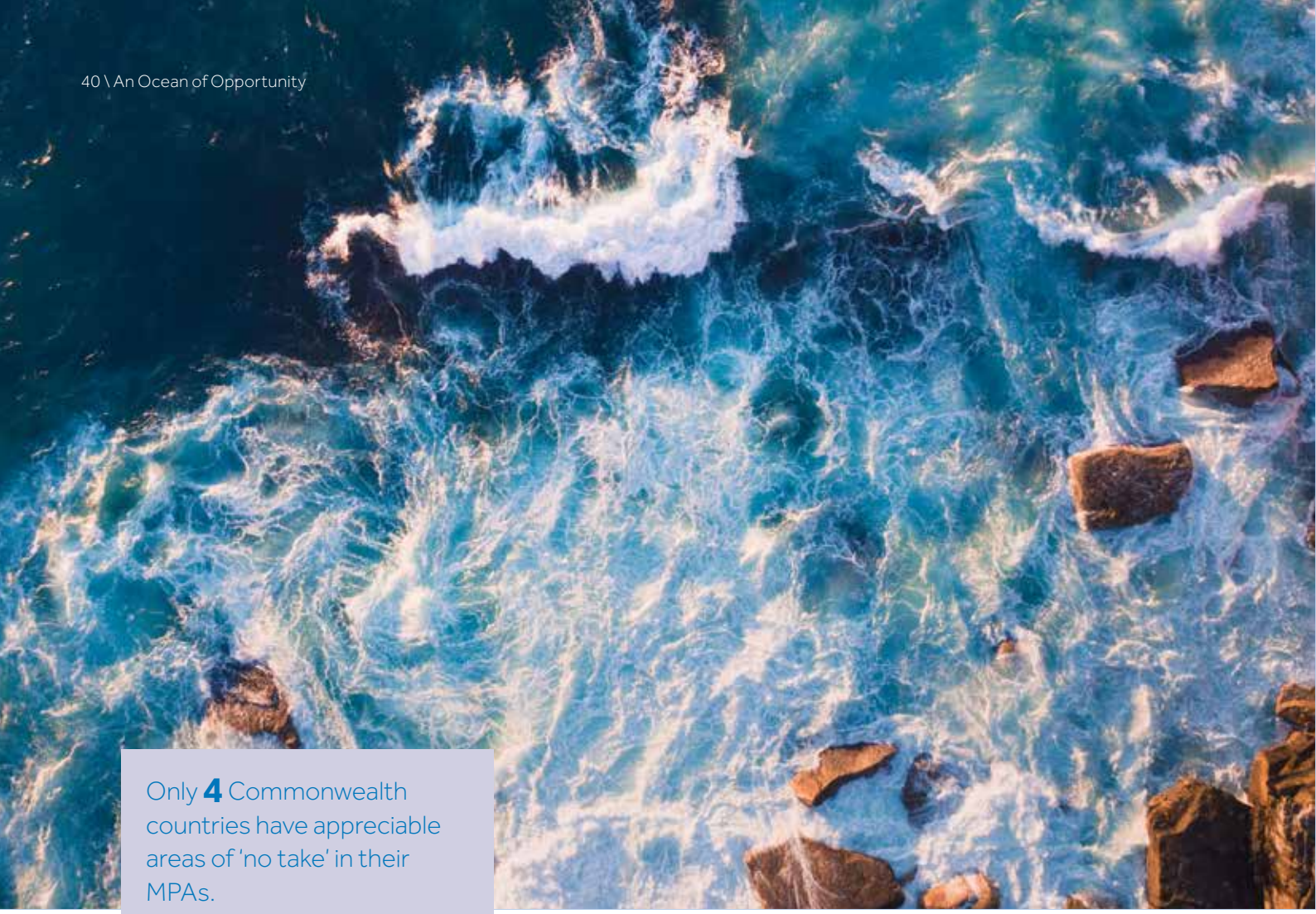
Some countries have already protected more than 30 per cent of their waters. For example, as reported through the Commonwealth Ocean Action Survey, the establishment of the new Christmas Island and Cocos (Keeling) Islands Marine Parks mean that Australia has now formally protected 45 per cent of its waters, spanning over 4 million square kilometres.[63]

The Action Group has created a vibrant network of Commonwealth countries that are focused on MPAs, as exemplified by the inaugural Action Group meeting, as well as

contributing to the online capacity-building programme on the **IUCN MPA Categories** and the development of guidelines on **Other Effective Area-based Conservation Measures (OECMS)**, organised in conjunction with the Pew Charitable Trust and IUCN. **The Marine Protected Area Strategic Management Framework** has been redesigned to better co-ordinate MPA management in terms of scope, strategic objectives, institutional responsibilities and activities, and the various actions needed to achieve the framework's objectives. The findings from the **2019 Nekton Deep Sea Expedition** have helped guide the designation of further MPAs. In April 2022, the Secretariat hosted two half-day seminars (twice across time zones), to discuss the identification, designation, management and financing of MPAs in light of the growing '30 by 30' movement.

Seychelles made significant progress at the national and regional levels in establishing and managing its own MPAs. Through a marine spatial planning (MSP) exercise, the country has designated 30 per cent of its marine waters as protected areas.[64] Seychelles has also passed legislation to designate, classify and manage its MPAs, and is in the process of redesigning its Coral Reef Policy. A workshop on the Evaluation of Ecosystem Services and Goods was held in 2020. In addition, the country will conduct mangrove and seagrass assessments of the Mahé Plateau and outer islands, which are intended to inform the Nationally Determined Contribution (NDC) under the UN Framework Convention on Climate Change (UNFCCC).

7 countries have met the CBD Aichi Target of **10%** of coastal and marine areas to be conserved by 2020.



Only **4** Commonwealth countries have appreciable areas of 'no take' in their MPAs.

Barbados will be designating two new marine management areas along its west and south coasts, respectively. These locations build on the former established Folkestone Marine Reserve and informal Carlisle Bay Marine Park on the respective coasts. The new West Coast Marine Management Area extends approximately 8.2km in length and has an area extent of 8.3km^2. The new South Coast Marine Management Area extends approximately 5.2km in length and has an area

'Seychelles is a Champion in Marine Protection and has come a long way since 2012, when the Seychelles government set a goal for protected area expansion. The journey has not been easy but through use of best practices, scientific data, local expert knowledge and stakeholder input, the country has finally achieved its goal, 10 years ahead of international targets. The successful management of these areas will contribute significantly towards the conservation of Seychelles species, especially those that are vulnerable, as well as provide better management of critical ecosystems and species habitats. In addition, it will enable communities to draw benefits from biodiversity (spillover effects) in the form of food supply, clean water, reduced beach erosion, soil and sand formation, and protection from storm surge. To achieve this, an integrated approach will be adopted to ensure sustainable management of the MPAs as well as the entire EEZ. By undertaking such bold actions and backing it up with implementation, Seychelles aims to inspire the global community to follow suit through the Commonwealth Blue Charter Action Group.'

extent of 5.5km^2. This will provide a total of almost 14km of protected coastline for the island, representing 14 per cent of the coastline being protected.

The work now must start in the need for protection of larger areas of coastal and marine space, as the boundaries only extend 1km offshore. Through the development of a Marine Spatial Plan (MSP), commenced in 2020, it is intended that greater emphasis will be placed on the protection of offshore resources and areas. The MSP will take about five years to complete and will be comprehensive in its integration of new information for the offshore areas, as it is intended to extend to the 200 nautical miles exclusive economic zone boundary.

As with any new initiative, there will be extensive consultations with stakeholders and fisher folk, which will help shape how the Action Group uses the space. The successful management of these areas will contribute significantly towards the conservation of existing and potentially new exploitable species, especially those that are vulnerable, as well as provide better management of critical ecosystems and species habitats, as Barbados looks to develop a sustainable ocean-based economy.

Spotlight on other initiatives

Challenges

Currently, around 8 per cent of the global ocean is designated as MPAs, but less than 3 per cent is highly protected. Just four Commonwealth countries have appreciable areas of 'no take' in their MPAs (UK, Kiribati, Australia and Belize). Moreover, the 10 per cent CBD and SDG target represents a political target dating back to 1983, prior to the identification and amplification of most ocean threats. While some countries have met this initial target, qualitative MPA targets (pertaining to adequacy, representativeness, resilience and connectivity) will require significant additional effort and resources. Just four countries have signed up to the IUCN Green List, which provides the global standard for protected area management. As such, Commonwealth MPA initiatives and pledges represent a promising first step, but the full benefits presented by MPAs have not yet been realised and pledges need to be followed up with appropriate management measures, including adequate resources and effective surveillance and reporting to evaluate impact.

Transparency on reporting requirements continues to be a challenge, despite the existence of the **World Database on Protected Areas (WDPA)**. (The WDPA does not yet characterise the stage of establishment and maintenance of MPAs, or the level of protection provided.) The requisite legal and governance frameworks associated with MPAs may also need further strengthening, on a country-to-country basis, to allow for effective enforcement and accountability.

90% of all countries present at the Conference of the Parties to CBD voted for the Motion to protect at least **30%** of the ocean in highly protected, no take zones.

Convention on Biological Diversity

Finally, there is often a gap in terms of training enforcement officers and the judiciary on the specifics of maritime law, enforcement and successful prosecutions.

Funding gaps constrain effective implementation of the Action Plan, and the economic impact of COVID-19 will further exacerbate this challenge. Trainings under the Action Group had to be moved online during the COVID-19 pandemic, and it has been challenging to secure the engagement of all members.

Priorities, opportunities and next steps for the coming year

Barbados and Seychelles are fully committed to promoting MPAs and supporting member states to implement their existing commitments, including by developing indicators to measure progress under the Action Group. Many of the opportunities will require active collaboration with the other Action Groups, including Coral Reef Restoration and Protection, Mangrove Ecosystems and Livelihoods, Sustainable Coastal Fisheries, and Ocean Observation.

Following progress in **the Convention on Biological Diversity (CBD),** where countries are seriously considering protecting at least 30 per cent of the ocean in highly protected, 'no take' zones, there is an unprecedented opportunity and urgent imperative to leverage the potential of Commonwealth MPAs. The Action Group is uniquely well placed to:

- explore innovative rapid assessment techniques to identify gaps and priorities in marine protection
- promote approaches to community engagement in the selection of MPAs and their management
- pilot cost-effective monitoring and surveillance mechanisms (including remote sensing, data sharing and crowd sourcing), and explore their potential for enforcement and compliance, as well as developing proven templates for clear laws that allow for the protection of the marine environment
- continue improving the adaptive management of existing MPAs in the field (including through IUCN's MPA Standards and Green List process).

The Bahamas' experience of assigning IUCN Protected Area Management Categories[65] and Malaysia's two candidates for the Green List[66] provide useful case studies in this respect.

Across the Commonwealth, there is a clear need to identify and leverage new funding sources for MPAs, including through the Commonwealth Secretariat's Funding Opportunities

Database, prioritising countries with limited domestic resources. The United Kingdom's GBP500 million **Blue Planet Fund**, which supports developing ODA-eligible countries to protect the marine environment and reduce poverty through interventions in four interlinked areas (biodiversity, climate change, marine pollution and sustainable seafood), may provide one opportunity to support MPA establishment, expansion and sustainable management.

Champion country

New Zealand

Ocean Acidification

'Toitū te marae a Tāne-Mahuta, Toitū marae a Tangaroa, Toitū te tangata.'

'If the land is well and the sea is well, the people will thrive.'

Nanaia Mahuta, Minister of Foreign Affairs and Trade, New Zealand

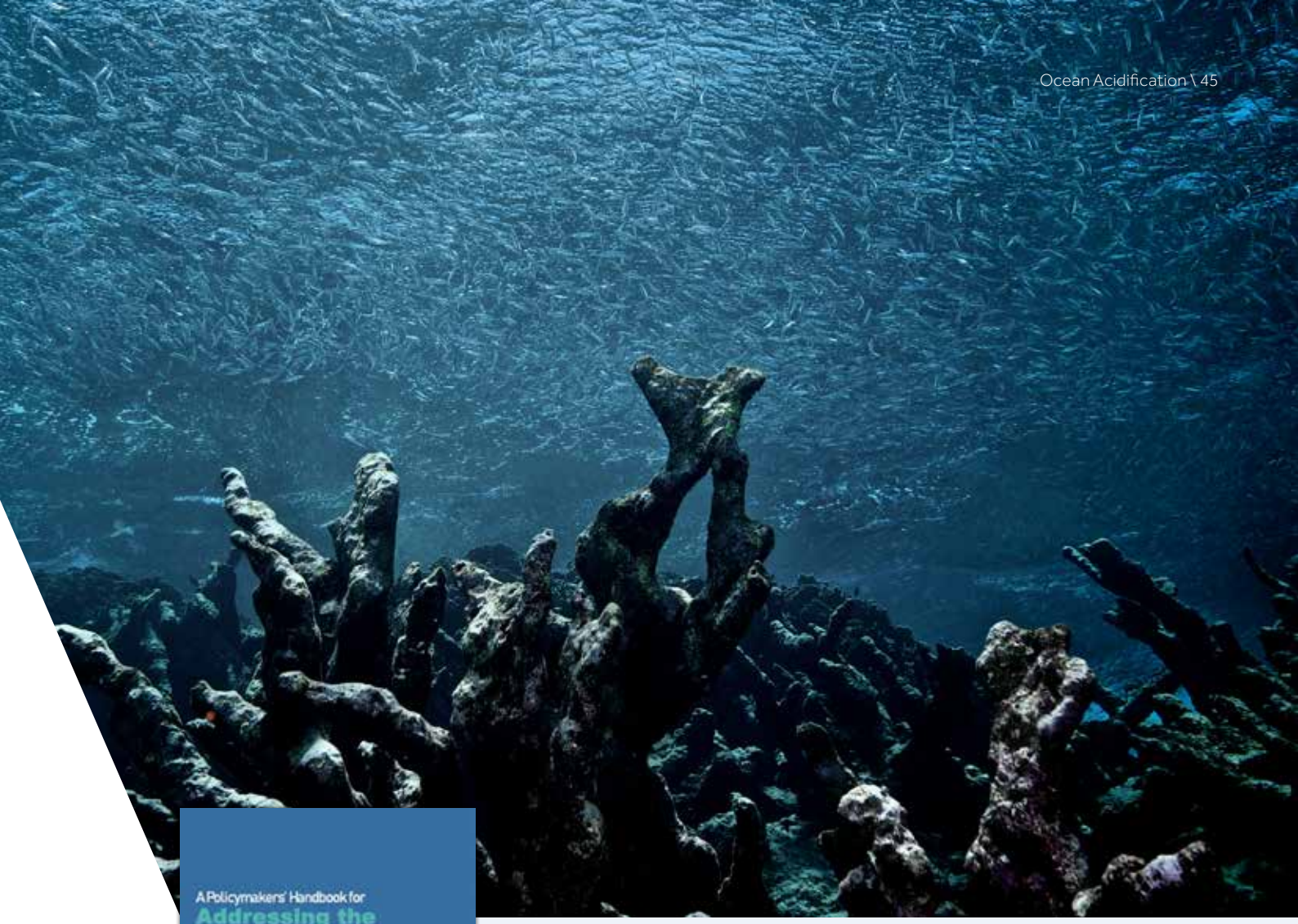
Summary of achievements

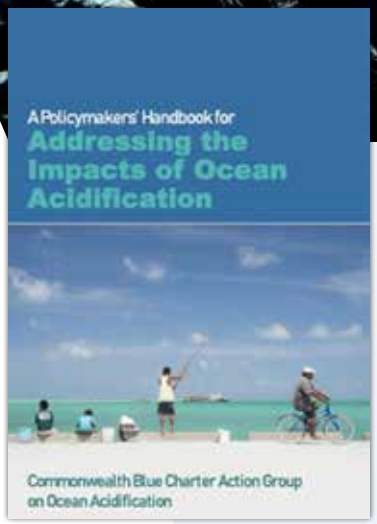
New Zealand hosted an Ocean Acidification Action Group technical workshop in 2019, attended by ocean acidification experts, as well as 23 government officials from 17 countries across the Commonwealth. Workshop participants identified multiple challenges, highlighting gaps in monitoring, science and funding. Actions to address these challenges included improving the accessibility of information of ocean acidification, impacts and potential mitigation measures, and leveraging existing networks and tools. New Zealand commissioned the development of an **Ocean Acidification Handbook**[67] to guide Commonwealth policymakers to develop strategies to address the impacts of ocean acidification, launched at two webinars in April 2021. Training for policymakers was provided by the Secretariat in May 2022. Globally, 30 Commonwealth countries are represented on the **Global Ocean Acidification Observing Network** and 4 are members of the **Ocean Acidification Alliance**. In New Zealand, a citizen science programme contributes to and expands the scope of national ocean acidification monitoring. In Fiji, scientists from the University of the South Pacific collaborated with the Ocean Foundation to restore a bed of mangroves and study the effects on local-carbon chemistry.

Challenges

Efforts have primarily focused on understanding the threat, rather than addressing it. Most small island states have no monitoring or research programmes, and ocean acidification in coastal zones remains poorly understood, largely due to the high procurement and maintenance costs of monitoring systems. Ocean acidification monitoring requires substantial human capacity investment, yet the regions that are most vulnerable to the impacts of ocean acidification also face the greatest limitations in human capacity. This constraint was noted by the Champion country but is common to all Commonwealth SIDS.

Most measures to mitigate or adapt to ocean acidification remain untested or prohibitively expensive to implement in resource-limited contexts. Moreover, ocean acidification is





generally not included in global financing instruments. For example, if the potential value of ocean acidification mitigation was better internalised, this might provide additional impetus for the financing of blue carbon activities.

Although the 2008 Monaco Declaration represents a landmark international statement of concern, the governance framework to address ocean acidification remains largely ad hoc and voluntary (although national legislative frameworks are emerging in some countries, including Fiji). Where (sub)national plans are concerned, non-point source pollution is commonly not considered, despite its contribution to local acidification.

Priorities, opportunities and next steps for the coming year

An Action Plan for the Action Group will be produced. This will benefit from other Plans of Action that have been developed by members, as well as from the Ocean Acidification Handbook and the International Alliance to Combat Ocean Acidification's

Spotlight

GOA-ON
Global Ocean Acidification Observing Network

OA ALLIANCE
INTERNATIONAL ALLIANCE TO COMBAT OCEAN ACIDIFICATION

34 countries are represented on the Global Ocean Acidification Observing Network

Action Plan Toolkit.[68] The Action Group is well placed to encourage a diverse set of stakeholders to engage with and strengthen existing mechanisms for co-operation, such as the Global Ocean Acidification Observing Network (GOA-ON) and its regional monitoring hubs. The Action Group can also play a role as a platform for sharing information on new developments in ocean acidification science techniques for research (drawing on the UN International Oceanographic Commission's methodology and data template for the collection and submission of pH data, the International Atomic Energy Agency's Ocean Acidification International Coordination Centre's existing database, and The Ocean Foundation's monitoring kit).[69] There is need for regular scientific training, and the Commonwealth is uniquely positioned to offer this training by drawing on the range of capacities that exist across members, including some of the countries with the most advanced systems (for example, New Zealand and Australia). The Action Group could foster stronger cross-regional co-ordination between SIDS in the Caribbean and the Pacific.

The communication and implementation of the Handbook and Toolkit can support accelerated action on ocean acidification, and the Action Group could be used to further discuss promising adaptation and mitigation strategies, as well as to explore ways to minimise the cost of proven strategies. Work under the Action Group is designed to complement work under the other Action Groups, such as Ocean and Climate Change, Mangrove Ecosystems and Livelihoods, and Ocean Observation and Sustainable Aquaculture.

GOA-ON Regional Monitoring Hubs

Latin American Ocean Acidification Network

Mediterranean Ocean Acidification Hub

North American Ocean Acidification Network

North East Atlantic Hub of GOA-ON

Ocean Acidification Africa Network (OA-Africa)

Pacific Islands and Territories Ocean Acidification Network (PI-TOA Network)

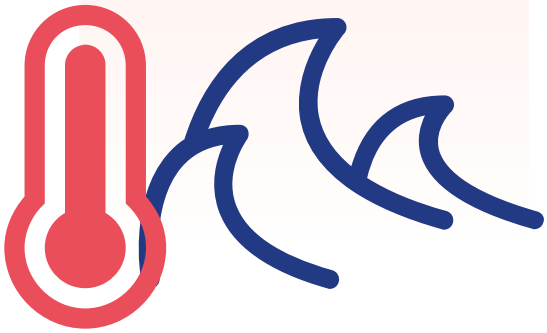
Champion country

Fiji

Ocean and Climate Change

'Now more than ever our ocean desperately needs the voices of its champions. As generational custodians of a "Blue Pacific", Fijians are proud to lead the campaign for ocean climate action within the Commonwealth Blue Charter. Fiji is leading by innovating with big blue ideas. We are protecting our 1.2 million square kilometres of ocean, replanting coral, preserving fisheries, restoring mangroves and fields of seagrass and shifting to carbon neutral shipping. We call on the world to do the same.'

Aiyaz Saiyed-Khaiyum, Hon. Minister of Economy and Minister responsible for Climate Change, Fiji



Summary of achievements

A joint meeting was held with the Mangrove Ecosystems and Livelihoods Action Group to identify collaboration opportunities, with the focus on blue carbon and nature-based solutions. A concept note is being developed to inform a project proposal on these topics. A case study documenting lessons from early blue carbon projects, such as the **community-led mangrove restoration and conservation in Gazi Bay, Kenya**, was developed.[70] The Action Group also developed a briefing note on the options available to small- and medium-sized ports to **reduce the carbon emissions of global shipping**,[71] contributing to the International Maritime Organization (IMO)'s global target of a 50 per cent reduction by 2050. Seven Commonwealth countries form the Pacific Blue Shipping Partnership, where these options could be implemented. Fiji has worked closely with the **Secretariat of the Pacific Regional Environment Programme (SPREP)** to inform its work, providing a model for other members to work with regional or national institutions. Fiji also worked with Australia to identify two potential partnership models to support **Climate Vulnerability Assessments**,[72] which can help identify climate-related risks and vulnerabilities, to inform potential mitigation strategies.

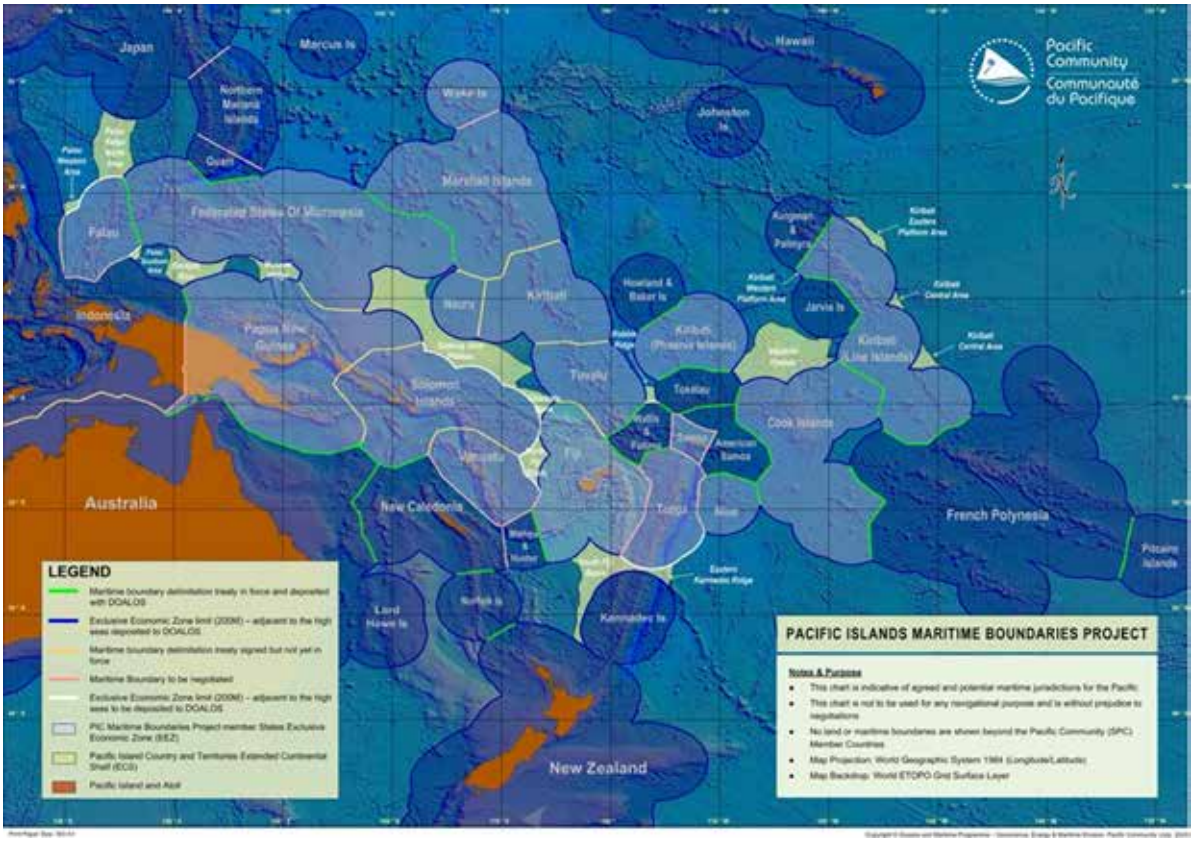
The Commonwealth Secretariat launched a new partnership with the US-based Stimson Centre on a new pilot to **quickly determine climate vulnerability and risks in coastal communities**. Normally this process would take at least 18 months. However, the 'rapid assessment protocol', developed under the Coastal Resilience Vulnerability Index (CORVI)

Project, takes only three months, providing countries with a 'first look' overview of the risk landscape. In the first half of 2022, this new protocol was **trialled in the three Commonwealth Blue Charter champion countries of Barbados, Kiribati and Sri Lanka**. The case study on potential partnership models to support the technical exercise of completing a Climate Vulnerability Assessment, which draws on lessons from Australia and Fiji, provides Action Group members with useful ideas and examples.

Challenges

Climate change challenges all Action Groups and all Commonwealth countries. The draft Plan of Action for this Group is creating an opportunity for cross-cutting action across the Commonwealth Blue Charter. The plan is anticipated to focus on blue carbon. However, in order to receive carbon credits for coastal restoration, a certified methodology must usually be followed. The cost of conducting required evaluations is still high and not feasible for small projects. Therefore, the Action Group may benefit from looking at the streamlining and combining of blue carbon projects to save costs. The group will consider accelerated global emissions reductions (as well as sequestration) to secure positive climate outcomes across all Commonwealth countries. At the national level, action can be ratcheted up through NDCs, including by leveraging renewables and supporting technologies, zero-emission fuels and the promotion of energy-efficient design in shipping, ports and elsewhere. In addition, the development of more ocean-sensitive climate policy provides an opportunity to identify, strengthen and harness synergies between ocean action and climate

'The most urgent priority globally is to address the root causes of warming and acidification through redoubled efforts to reduce greenhouse gas emissions.'



The Status of Pacific Regional Maritime Boundaries as of July 2020
Source: SPC Geoscience, Energy and Maritime Division[73]

Spotlight on other initiatives

SPREP PROE

UN CLIMATE CHANGE CONFERENCE UK 2021

AOSIS

Pacific Community
Communauté du Pacifique

action. For example, as per the Commonwealth Ocean Action Survey, Canada's strengthened climate plan, 'A Healthy Environment and a Healthy Economy', includes provisions for the protection of ocean waters and ecosystems, including the commitment to protect 25 per cent of Canada's oceans by 2025, working towards 30 per cent by 2030.

Priorities, opportunities and next steps for the coming year

In the run-up to the **26th UN Climate Change Conference of the Parties (COP26)**, the Action Group supported the integration of oceans within the UNFCCC process, and advocated for accelerated emissions reductions to safeguard ocean action. These processes continued at the Commonwealth Pavilion at COP26, which hosted events emphasising the need to finance ocean resilience as a priority for climate action, and showcasing experiences from across the Commonwealth.

The most urgent priority globally is to address the root causes of warming and acidification, through redoubled efforts to reduce greenhouse gas emissions. The Commonwealth and its Blue Charter Action Groups have considerable convening power, with the potential to co-ordinate, support or lobby with other blocks, such as the **Alliance of Small Island States**

(AOSIS). Efforts to scale the use of marine renewables and improve energy efficiency in both the marine and terrestrial sector, should be seen as priority 'no regrets' options.

There are opportunities to leverage 'triple wins' by promoting and scaling actions that are already being undertaken to address other critical threats facing the ocean, which also have mitigation or adaptation co-benefits. These are likely to represent a good use of climate funding. Examples include restoration, conservation and protection for blue carbon and coastal resilience, the elimination of marine resource overexploitation, and the reduction of marine pollution. At least 40 coastal countries have blue carbon ecosystems; blue carbon sinks can sequester up to five times as much carbon as tropical forest, yet they are being lost at a rate five-to-ten times faster than rainforests. Their conservation and restoration contribute to both climate change mitigation and adaptation and should be an urgent priority. Existing processes such as the Ocean Pathway and 'Because the Ocean', as well as the SAMOA Pathway, can be used to advance ocean-related climate action, as well as integrating oceans-related climate action into the development and implementation of countries' NDCs, national adaptation plans, and other national climate and development policies, plans and processes. Regional frameworks such as the Organisation for Eastern Caribbean States (OECS) Ocean Policy Framework and the 'Blue Pacific Framework' provide further opportunities to mainstream climate considerations into ocean action.

The UNFCCC's financial mechanisms, operated by the Global Environment Facility, include the Special Climate Change Fund and the Least Developed Countries Fund. Other relevant mechanisms include the Green Climate Fund and the Adaptation Fund. Efforts to improve transparency and monitoring of these funds present an opportunity to mainstream ocean issues into the climate change regime. The **Commonwealth Toolkit to Enhance Access to Climate Finance** provides practical guidance for countries, based on lessons drawn from Commonwealth experiences.

Where Commonwealth countries face losing their marine jurisdiction, baselines and established boundaries need to be submitted at the earliest opportunity. The Action Group provides a potentially powerful forum for advocacy on the issue of shrinking maritime boundaries in the face of sea-level rise, and the promotion of urgent action to address the root causes of sea-level rise. The ongoing process towards an internationally legally binding instrument on **Biodiversity Beyond National Jurisdictions** may provide an entry point for these discussions. The Pacific Island nations have been particularly active in regional policy processes and frameworks for action: strengthened cross-regional linkages with the **Caribbean SIDS** could maximise collective influence on the global stage.

'The Pacific Community has been working on mapping and registering marine boundaries for a number of Pacific countries, as part of the **Pacific Islands Regional Maritime Boundaries Project**.'

Champion country

Canada

Ocean Observation

'Canada is surrounded by three oceans and home to the longest coastline in the world. Canada is a proud ocean nation. We recognise that strong ocean leadership requires ocean monitoring, data collection and co-operation among member countries. We are proud to lead as the Commonwealth Blue Charter Champion of the Ocean Observation Action Group, whose hard work demonstrates our commitment to science-based solutions for the benefit of oceans sustainability now and for the future. We look forward to continue working with the Commonwealth Secretariat and others to solve ocean-related challenges and meet our commitments to sustainable ocean development.'

The Honourable Joyce Murray, Minister of Fisheries, Oceans and the Canadian Coast Guard

Summary of achievements

Key achievements so far include:

- advancement of innovation, development and deployment of ocean observational technologies, with an emphasis on underrepresented areas
- promotion of the accessibility of ocean observational data, knowledge and best practices
- advancement of political co-operation to better integrate ocean observational data, information and knowledge into decisions, products and services within the Commonwealth
- progression of gender, youth and Indigenous issues within the context of ocean science.

Forty-five per cent of countries that participated in the Commonwealth Ocean Action survey have undertaken efforts to increase scientific knowledge and develop research capacity or marine technology for ocean observation. Some countries have well established ocean observation systems. For example, Australia's **Integrated Marine Observing System (IMOS)**, is a collaborative, nationwide integrated programme that deploys a national array of equipment to monitor the open oceans and coastal marine environment around Australia, covering physical, chemical and biological variables. However, the Action Group has recognised the uneven global representation of observational technologies, which has led to gaps in observations, especially surrounding SIDS and coastal states that are most vulnerable to ocean changes. The Action Group aims to address this gap by providing existing affordable and ease-of-use observational technology, such as '**Global Ocean Acidification – Observing Network (GOA-ON) in a box**', 'Argo' and 'Biogeochemical Argo' floats, and focusing on developing draw-down technologies to create low-cost, low-maintenance technology for areas with limited resources and difficulty to access. As reported through the Commonwealth Ocean Action Survey, this includes work to advance the development of an affordable eutrophication monitoring programme to generate data that could inform the priorities of several Commonwealth Blue Charter Action Groups (e.g., Ocean Acidification, Fisheries

Management, Mangroves etc.) and contribute to global knowledge regarding coastal eutrophication.

The Action Group additionally recognises that existing ocean observational data is not fully utilised due to siloed databases, as well as lack of training and tools to fully find and utilise existing ocean observational data. To promote accessibility of ocean observational data, knowledge and best practices, the Action Group initially focused on the ease of access to Argo Floats. The Action Group has held virtual meetings on Argo floats, which reached participants from 18 countries, and subsequently released a publicly available open-source analysis package which provides tools for downloading and analysing collections of oceanographic Argo float datasets. In addition, Champion country Canada also hosted the North Atlantic Biogeochemical Carbon Pump Workshop in December 2021, which was a key commitment made at the G7 Climate and Ministers' Meeting in May 2021. In the first half of 2022, it offered training in the computer language 'R' to process Argo float data.

Spotlight on other initiatives

The Action Group is working on political co-operation to better integrate ocean observational data, information and knowledge into decisions, products and services within the Commonwealth. By providing funding to our member countries to attend knowledge mobilisation and training sessions, the Action Group can advance the utilisation of existing ocean observations into decision-making today.

The Action Group has worked to advance inclusivity issues in ocean science, with an initial focus on gender issues. In December 2020, the Action Group released an issue paper on gender issues in ocean science, which included actions and recommendations to advance gender equality in this area. The paper was presented at the All-Champions Virtual Meeting in December 2020 and as part of an event for International Women's Day 2021 entitled '**Sea the She: Recognising women's contributions to ocean science**'.

Challenges

Through our Action Group meetings with member countries, several challenges within ocean observations have been identified:

- accessibility of ocean observation data
- capacity restraints related to transforming data into information and knowledge
- communication of ocean observations to non-scientists and decision-makers
- cost of ocean observation equipment, especially regarding sustaining long-term ocean monitoring.

Existing ocean observation data are not easily accessible or findable. Additionally, data are not always shared between countries or programmes. The Action Group is working to bring awareness to existing data resources and is encouraging the sharing of data and information across nations and programmes.

Some programmes, like Argo, have data freely available to everyone and without restrictions; however, interpretation of that data remains challenging. Member countries have expressed capacity restraints related to transforming available data into useable information and knowledge. The Action Group is looking at opportunities to advance available ocean observation data into useable products.

The Action Group has also received interest in bridging the gap between ocean observation and non-scientists, policy advisers and decision-makers. It acknowledges this as another challenge area and will work to communicate ocean observations in a meaningful way to enable evidence-based decision-making.

Finally, member countries have discussed the difficulty of sustaining long-term ocean monitoring programmes due to cost. Often, grants or funding are available for short-term observational programmes; however, observations over longer timescales are often what is most useful to our members. The Action Group is working on creating low-cost, easily maintainable technology for long-term ocean monitoring projects.

Priorities, opportunities and next steps for the coming year

At the start of the **UN Decade of Ocean Science for Sustainable Development (2021–2030)**, the Ocean Observation Action Group plans to improve ocean observations on multiple scales and advance SDG14 through information and knowledge sharing. The Action Group plans to increase the innovation, development and deployment of ocean observational technologies, by developing and sharing modular/portable fit-for-purpose observation platforms and investigating draw-down technologies that allow for simpler, cheaper and easier to use ocean observations, such as eutrophication monitoring kits. Furthermore, the Action Group aims to improve the accessibility of ocean observational data, knowledge and best practices among Commonwealth countries through the development and training of open-source tools for accessing, analysing and visualising existing data, including orphaned data. The sharing of technologies, expertise and analytical capacity will further improve the accessibility of ocean observational data. Additionally, the Action Group plans to engage political co-operation to better integrate ocean observational data, information and knowledge into decisions, products and services within the Commonwealth, by interacting with other Action Groups to identify cross-cutting issues and opportunities to collaborate. Finally, the Action Group wishes to further examine gender, youth and Indigenous issues within the context of ocean science, by promoting gender equity in ocean sciences, by advancing the recommendations from the gender equity issue paper, and by exploring opportunities to promote the inclusion of Indigenous peoples, youth and early-career scientists in ocean sciences.

'GOA-ON in a Box' kits have been assembled for use in SIDS and with Indigenous communities in Canada.

Champion country

Cyprus

Sustainable Aquaculture

'We are faced with one of the greatest challenges of our century, namely, how to provide food for the ever-increasing population of our planet. Aquaculture is one of the fastest growing food production industries globally and it is considered a major pillar of Blue Growth. Aquaculture is vital in contributing to food security, but also in creating employment opportunities and improving the well-being of local communities. In order to secure the future of aquaculture, it is our obligation as political leaders to set a strong and solid foundation based on environmental, social, and financial sustainability.'

Prof Costas Kadis, Minister of Agriculture, Rural Development and the Environment, Cyprus

Summary of achievements

Aquaculture in many Commonwealth countries, including India, Bangladesh, Australia and Sri Lanka, can be described as mature or modernising. Three countries have **prioritised aquaculture** as part of their National Adaptation Plan of Action (NAPA), namely:

- **The Gambia:** increasing fish production and preservation of fish
- **Bangladesh:** adaptation to new climate-induced environments, including increased salinity
- **Zambia:** spatial planning of land use practices.

Various tactics are being applied to help countries rationally develop their aquaculture sector to meet their needs, including (but not limited to) the promotion of farming of species that feed low in the aquatic food web, integrated multi-trophic aquaculture, sustainable intensification, certification and ecological aquaculture. A case study was developed on aquaculture in Seychelles,[74] with a focus on the 2018 Blue Economy Strategic Framework and Roadmap. The environmental performance of marine offshore aquaculture in Cyprus was assessed,[75] including attention to the policy and legislative developments required to support growth in private sector aquaculture. The Action Group also documented Best Management Practice Training for Egyptian Fish Farmers[76] and Chicoa Fish Farming in Mozambique.[77]

Challenges

It has proved difficult to achieve economies of scale. Low population densities in rural areas, compounded by a poor enabling environment – inadequate infrastructure and the distances between small, fragmented markets, the lack of affordable credit, the absence of sound practical information – are among the most common sources of poor sector development. These conspire to constrain fish farming to a subsistence role. In addition, findings from the Commonwealth Ocean Action Survey suggest that the legislative frameworks

governing the aquaculture sector in some countries may require revision to better reflect changing domestic and environmental needs.

Aquaculture may impose negative impacts on the environment. Certification schemes have been introduced as a means of improving sustainability and consumer confidence. However, there is a plethora of such schemes, and it may not be feasible for small-scale farmers to achieve compliance. There is also sometimes a lack of clarity on the regulations for aquaculture operations. There may be trade-offs with other Blue Economy activities, meanwhile, and any proposed aquaculture project is best considered in the broader context of a sustainable Blue Economy strategy and/or a national ocean policy.

A range of endemic, exotic and emerging infectious diseases continue to affect farmed aquatic species. The misuse of antibiotics in aquaculture has also been linked to the promotion of antimicrobial resistance. Addressing biosecurity requires significant resources, political will and concerted international action: without careful planning, a country's aquaculture sector remains vulnerable to new and emerging diseases. Climate change poses an emerging serious threat to the sector.

Spotlight

SPC Fisheries, Aquaculture and Marine Ecosystems Division (FAME) provides the 22 SPC's member countries and territories with the information they need to make informed decisions on the management and development of their aquatic resources, and help to provide the tools and strengthen the capacity needed to implement these decisions.

Priorities, opportunities and next steps for the coming year

The current key priorities of the Action Group are the formulation of an outline and drafting of the Strategic Roadmap for Sustainable Aquaculture. Action Group members will also be developing project proposals to secure funding and develop partnerships with external organisations. For example, Antigua and Barbuda's response to the Commonwealth Ocean Action Survey reports that the government is seeking to increase food security through fish farming. The proposed project aims to train local fisherfolks in aquaculture techniques. Furthermore, the Action Group will explore the possibilities of co-operation with other Blue Charter Action Groups to become involved in projects of common interest.

Guiding Principles: Ecosystem Approach to Aquaculture (EEA)

1. Aquaculture should take account of the full range of ecosystem functions and services; ensure that their sustained delivery to society is not threatened.
2. Aquaculture should improve human wellbeing and equity for all relevant stakeholders.
3. Aquaculture should be developed in the context of other sectors, policies and goals, as appropriate.

The Action Group, through the proposed Strategic Roadmap, is well positioned to play a key role in advising policymakers, stakeholders and civil society to determine the role of aquaculture in meeting: (i) national economic, social and environmental targets; (ii) national food security and nutrition objectives, and implementing the policies, regulations and legal frameworks needed to secure this; and (iii) NDCs and NAPAs. The formation of producer organisations (POs) may help to establish the economies of scale needed to purchase essential inputs at affordable prices and develop and serve larger markets and realise best prices. POs also have the advantage of facilitating the rapid dissemination of good and profitable farming practices. The work of the **Pacific Community (SPC)** can provide some good examples for the Pacific context.[78] In order to access global markets, aquaculture production must meet sanitary and phytosanitary standards, as set out by the World Trade Organization (WTO) and Codex Alimentarius.

In the context of climate change and other environmental impacts, the conversion of coastal mangroves and seagrass areas, which are both important carbon sinks (and high in biodiversity), into aquaculture should be prohibited and not eligible for financing. Meanwhile, farms already established in mangrove areas should be encouraged to offset harm by reforesting local areas,[79] and/or encouraged to review options to relocate to other suitable areas.

Geographic information system (GIS)-based mapping presents new opportunities for aquaculture site selection. Risk-based zoning and siting, and the development of integrated environmental monitoring (for example, water temperatures, harmful algal blooms, toxin levels in shellfish) and low-cost early warning systems (for example, producer networks linked via inexpensive mobile communication technologies – smart phones and weather apps) can help the sector to adapt to climate change and locate in lower-risk areas. Improved provision of credit and insurance can also aid in the prevention and reduction of – and coping with – climate change-induced risks. Many of the better management practices promoted through the Ecosystem Approach to Aquaculture have positive effects on climate change adaptation, using innovative technologies, such as recycling aquaculture systems (RAS) and aquaponics. In June 2022, over two half days, training on the good governance of aquaculture was delivered, twice to accommodate time zones, with more than 70 registered participants. Follow-up rapid governance assessments are planned.

'The Plan of Action was finalised and approved. The key objective is to prepare a strategic roadmap to guide Commonwealth countries in the sustainable development of aquaculture, outlining different factors, challenges and sector-wide policies that can drive or inhibit the development and expansion of sustainable aquaculture.'

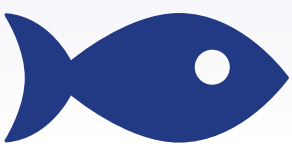
Champion countries

Kenya Antigua and Barbuda

Sustainable Blue Economy

'Member nations should support ongoing efforts that promote sustainable Blue Economy initiatives, improve GDP, communities' livelihoods and mankind well-being, while reducing negative impacts on ecosystem and biodiversity to reverse the cycle of decline in ocean health. Collaborative approaches, strategies to harness opportunities and tackle barriers to growing Blue Economy, facilitation of knowledge exchange and development of innovative solutions should be prioritised.'

Honourable Peter Munya, MGH, Cabinet Secretary, Ministry of Agriculture, Livestock, Fisheries and Cooperatives, Kenya



Summary of achievements

The terms of reference (TOR) and Plan of Action (PoA) were presented and discussed by all members. The Action Group organised a webinar in August 2020, titled **'The Blue View: Opportunities and Challenges for the Blue Economy'**, hosting panellists from the State Department of Fisheries, Aquaculture and Blue Economy of the Government of Kenya, Seychelles Conservation and Climate Adaptation Trust (SeyCCAT), the Nelson Mandela University, Seascape Consultants, and the Commonwealth Secretariat Department of Oceans and Natural Resources. Kenya, Canada and Japan co-hosted the **Sustainable Blue Economy Conference (SBEC)** in Nairobi in November 2018. More than 16,000 participants, including 7 Heads of States, 84 ministers, development partners, civil society representatives, governors and mayors, among others, attended. One of the major outcomes of SBEC 2018 was that it triggered a diverse range of national, continental and even global-level initiatives aimed at harnessing the dividends of the Blue Economy. The Action Group also produced a video showcasing the productivity and sustainability pillars of the Blue Economy. Several case studies were developed, including on Seychelles' **Innovative 'Debt for Conservation Swap', Conservation and Climate Adaptation Trust, and Blue Bonds Plan**.[80] The **Commonwealth Blue Economy Series**, a series of technical notes on relevant topics, was continued. In addition, an Advisory Note was developed on 'Tracing Options for Marine Genetic Resources from within National Jurisdictions',[81]

Seven Commonwealth countries are on the **High-level Panel for the Sustainable Ocean Economy** and have committed to sustainably managing 100 per cent of their marine waters by 2025.[82] Twenty coastal countries have some form of 'Blue Economy' initiative underway. Twelve Commonwealth countries are signatories to the **Jakarta Declaration on Blue Economy**. Furthermore, while just 5 Commonwealth countries have dedicated ministries or departments for the Blue Economy, 18 have current or planned **national strategies for Blue Economy development**, while **marine spatial plan (MSP) programmes** are planned or underway in 28 countries.

The Government of Antigua and Barbuda, which co-champions the Action Group on Sustainable Blue Economy, is partnering with the University of the West Indies and the Association of Commonwealth Universities to establish a new **Centre of Excellence in Oceanography and Blue Economy (COBE)** at the University of the West Indies Five Islands Campus in Antigua and Barbuda. The Centre aims to advance intellectual progress and strengthen institutional capacity in the areas of marine science and the blue economy, while capitalising on the economic opportunities that this emerging sector offers the Caribbean. In February 2022, members of the International Steering Committee undertook a scoping mission to lay the foundations for this exciting endeavour.

Antigua and Barbuda's Department of the Blue Economy, which was established in 2020, recently launched their official Maritime Economy Plan (MEP), which will serve as the blueprint to convene existing stakeholders around an ocean-based economy. The Antigua and Barbuda National Ocean Governance Study, undertaken in partnership with the United Nations Division of Ocean Affairs and Law of the Sea, seeks to map and compile all of the laws, regulations and policies into one official document for coherent management of blue economy development.

7 Commonwealth countries have committed to sustainably managing **100%** of their marine waters by 2025.

Spotlight on other initiatives

Challenges

Capacity constraints and the limited availability of technical staff has delayed research, implementation and engagement with international organisations. Current domestic financial resources may prove insufficient to implement activities as planned: the Action Group is considering leveraging support from development partners, although developing the business case for investment may present a more sustainable outlook. COVID-19 has prevented physical meetings, but the Action Group has responded successfully and flexibly, and is currently considering holding a second virtual meeting before the end of 2022.

Broader challenges pertain to the absence of a comprehensive and transparent policy framework for regulating Blue Economy activities, and the difficulties of implementing marine spatial planning at scale, across jurisdictions, while managing trade-offs between incompatible activities and interests. Development of the national Blue Economy will be controlled by national governance frameworks. However, the marine environment extends beyond national boundaries, and Blue Economy activities in one nation could impact neighbouring nations. Many ocean resources, such as migratory fish stocks or marine genetic resources (MGR), can move between jurisdictions. For example, of the 56 Commonwealth countries, 20 are not party to the UN Convention on the Law of the Sea's (UNCLOS) implementation agreement for migratory fisheries stocks,[83] which may hinder these nations' ability to benefit from fishery resources that migrate beyond national jurisdiction.

Understanding and managing, within a region, shared environmental impacts from Blue Economy activities requires regional environmental baseline information, which would necessitate the sharing of environmental information between nations. For the Blue Economy to be sustainable at a regional scale, there will need to be a collaborative approach between neighbouring nations, and competent bodies that manage such activities.

Integrated marine (spatial) planning and environmental assessments are time consuming and resource intensive. Collaboration and mutual learning within the Action Group could help ease planning difficulties and expedite sustainable results.

Priorities, opportunities and next steps for the coming year

At the second Sustainable Blue Economy Action Group Meeting, the members finalised the terms of reference and Plan of Action. The Action Group will identify viable projects that are eligible for funding from, and partnerships with, development partners, civil society organisations and the Commonwealth Secretariat. Commonwealth countries that already have frameworks to manage individual sectors or the Blue Economy as a whole can share their expertise to help other nations develop, or review and improve, their frameworks as appropriate. The **Commonwealth Blue Economy Series**, including the **Blue Economy and Small States**,[84] as well as the Commonwealth Blue Charter Blue Economy toolkit provide useful entry points to inform planning for a sustainable blue economy.

Specific sectors of (continued) growth include sustainable tourism, transport and communication (shipping, cables and pipelines), marine bioeconomy (fisheries, aquaculture and biotechnology), marine renewable energy (MRE) to meet the growing demand for energy, and payments for ecosystem services (PES), which includes payment for the conservation and restoration of blue carbon sinks through a 'carbon-market' approach. However, quantifying the value of blue carbon is complicated; blue carbon is not yet fully included in emissions accounting, and standards for blue carbon markets are still in their infancy.[85] In addition to blue carbon, MRE may be of particular interest to the Commonwealth, both for developed nations and SIDS, where considerations of energy access and security, water security (desalination), and climate change coalesce. However, the Blue Economy has very real implications for how access to and control over ocean space is distributed, and who is included in these processes and politics.[86] Therefore, a careful, transparent, inclusive and equitable approach is required.

'While actions to support economic growth, livelihoods and jobs are important, our foremost aim must be to address the ill effects of the misuse of our blue resources. Echoing the sentiments of Honorable Peter Munya, a collaborative approach is key to a successful Sustainable Blue Economy, as the ocean is every nation's responsibility.'

Honourable Minister Dean Jonas, Ministry of Social Transformation, Human Resources Development, and the Blue Economy, Antigua and Barbuda

Commonwealth Blue Economy Series

36 Commonwealth countries are parties to the UNCLOS implementation agreement for straddling fish stocks.

Planning for the exploitation of non-renewable resources (for example, offshore petroleum and deep-sea mining) should be approached with caution and foresight, as these may present attractive short-term opportunities, but are unlikely to be long-term blue economic solutions. Lessons from terrestrial mining[87] suggest there can also be risks in the sea.[88] Questions have been raised about the equitable exploitation and use of deep-sea resources and the risk of imbalanced investment arrangements with small states.[89]

Ocean accounting is a key tool enabling robust measurement of the blue economy, marine environments and ecosystem services, supporting ocean resource management. Commonwealth countries including Australia and the UK are leading the development of the Taskforce for Nature-related Financial Disclosures framework and are committed to supporting the development of sustainable blue economies by enabling the private sector to identify its dependencies and impacts on the oceans to promote actions towards biodiversity and adaptation.

Champion countries

Kiribati Maldives

Sustainable Coastal Fisheries

'"To go fast we go alone but to go far we go together." This would earnestly call on our Commonwealth countries, partners, stakeholders and institutions at the national and international scale to support us thrive forward in achieving sustainable coastal fisheries for a better and healthy future generation.'

Honourable Ribanataake Awira, Minister of Fisheries and Marine Resources Development, Republic of Kiribati

Summary of achievements

Key achievements so far include the establishment of a **Kiribati National Taskforce** to facilitate activities under the Action Group, which has held an initial workshop, generating lessons to be shared with other member countries. The first Action Group meeting was held, and Maldives was confirmed as Co-Champion. The key thematic areas have been approved, ready to be implemented in the next CHOGM cycle. A second Action Group meeting was convened in May 2022 and a TOR for PoA for the Action Group has been agreed upon by the members. A joint meeting with the Ocean and Climate Change Action Group was planned but had to be delayed due to COVID-19.

The Action Group has developed case studies on **Community-based Fisheries Management in Kiribati**,[90] the **Lyme Bay Fisheries and Conservation Reserve in the UK**,[91] as well as on **Individual Transferable Quotas for Cod Fisheries in Iceland**.[92] Nearly 70 government officials from 16 Commonwealth countries attended an introductory training course about the legal, policy and management elements that ensure that coastal fisheries regulations are followed. With support from **OceanMind**, a leading agency in the sector, these stakeholders have now mastered the basics of compliance in coastal fisheries. All Commonwealth countries with a coast have reported at least once on progress implementing the FAO Code of Conduct for Responsible Fishing (but few have reported regularly).

Challenges

Twenty-five per cent of fish consumed globally is caught illegally. In some countries (e.g. Sierra Leone, The Gambia) up to 60 per cent of all infractions constituted illegal incursions of large offshore vessels into coastal areas. The most common offence in the Commonwealth is fishing without a valid licence, closely followed by fishing in a prohibited zone or during a closed season. Some offences, such as the use of illegal gear, or relating to bycatch and illegal discarding practices, were less prevalent. Under-reporting of quotas and smuggling were further challenges, as were human rights and labour abuses,

'Maldives, along with the union of Commonwealth countries, the Action Groups and our partners, is committed to working towards the sustainable management of coastal fisheries resources in our countries. We rely heavily on coastal fisheries resources for our food, livelihoods and employment. This co-operation among members is crucial for the sustenance of economically viable coastal fisheries.'

Honourable Dr Hussain Rasheed Hassan, Minister of Fisheries, Marine Resources and Agriculture, Republic of Maldives

but these were less common. The Action Group seeks to address these issues, but funding and capacity constraints in developing project proposals may require further support.

Climate change compounds existing issues of mismanagement and overexploitation, as well as being projected to reduce the productivity and distribution of fisheries and aquaculture, with many commercially important species' distributions shifting outside of the jurisdictions where they are currently managed. The impacts are expected to be greatest

for small-scale coastal fisheries. Many Commonwealth countries rank as those whose economies are most vulnerable to climate change impacts on fisheries.[93, 94] Without regional co-operation and planning, these countries are likely to experience severe impacts, such as declining fish stocks, leading to major economic and social impacts.

According to findings from the Commonwealth Ocean Action Survey, coastal fisheries data collection remains challenging, particularly in under-resourced countries spanning vast seascapes, like Kiribati. Many countries are using a single-species approach for the majority of the stocks under assessment and management. This approach examines one species at a time and uses stock assessment to consider the impact of fishing on the abundance of a fish stock. However, this approach may underestimate or fail to capture the complex interactions within a trophic web or ecosystem. As a result, there is need to incorporate an ecosystem approach to fisheries management, including stock assessments.

Priorities, opportunities and next steps for the coming year

The Action Group looks forward to creating a Plan of Action to drive forward concrete progress. The Secretariat is developing a virtual training for the effective enforcement of coastal fisheries. The Champions are particularly eager to pursue research projects that advance fisheries science, as well as monitoring, control and surveillance (MCS). The Action Group will consider promoting good practices for coastal fisheries, such as the reporting of both catch and effort using available technology and local capacity. It will also prioritise capacity building for developing countries to:

- improve fisheries management through science-based management plans
- revise fisheries laws and policies
- enhance data collection and transparency to better manage stocks and to understand the contribution of fisheries to the economy and food security
- adapt MCS to local contexts
- support collaborative approaches to enforcement actions to ensure that illegal 'pirate' fishing operators cannot escape sanction and continue their illegal activities elsewhere
- support initiatives to end harmful fisheries subsidies, encouraging beneficial fisheries subsidies within Commonwealth countries.

A lack of effective management and fisheries governance results in wastage, overexploitation and degradation of fisheries resources and marine environments. Commonwealth

'The most common offence in the Commonwealth is fishing without a valid licence, closely followed by fishing in a prohibited zone, or during a closed season.'

International treaties and agreements of relevance to coastal fisheries

- Port State Measures Agreement
- WTO Subsidy Negotiations
- FAO Code of Conduct for Responsible Fisheries (CCRF)
- International Plan of Action for the Management of Fishing Capacity
- UNCLOS
- Fisheries Transparency Initiative
- The Abidjan Convention
- The Nauru Agreement

Heads of Government have previously agreed that urgent action was needed to strengthen fisheries and marine management in member states' waters, particularly in the case of the more vulnerable member states.[95] There is a strong correlation between a lack of governance and illegal, unreported and unregulated (IUU) fishing, with developing countries most at risk.

As fish stocks decline, fishers traditionally respond by increasing fishing effort and capacity, sometimes shifting to illegal fishing practices and increasing the spatial fishing range (their 'footprint') into neighbouring areas. Overcapacity (which means having too many vessels or excessive harvesting power) tends to lead to redundant fishing inputs and overfishing of valued fish stocks. For example, the number of motorised vessels has tripled in some countries since 1995. Harmful subsidies for overcapacity and overfishing should be eliminated as a matter of priority (as set out in SDG14.6). The WTO is expected to halt capacity-building subsidies for unsustainable fisheries, although these efforts have been curtailed by COVID-19. Harmful fuel subsidies may also be addressed.

Fishmeal production can be a good use of waste or by-products but should not be the primary use of food-grade catches. (Reduction fisheries, where the catch is reduced into oil or fishmeal, account for 16 per cent of all fishery production globally.) Both by-catch and post-harvest losses must be addressed as a matter of urgency. Twenty-two countries already have National Plans of Action (NPOAs) addressing the by-catch of at least one of the following: sharks, seabirds and turtles. Countries may consider integrating additional vulnerable species into these plans, as appropriate, and prioritising their enforcement. Post-harvest losses can be addressed through improved cold chain and market

access; this includes through the diversion of capacity-enhancing subsidies to improve road access and enhance storage capacity.

While each country must be viewed in its own context, many share characteristics, which include a limited resource base, environmental vulnerability and a heavy reliance on fisheries, as in the Pacific Island states. These similarities have helped unite the islands to combat unsustainable fishing practices, which are a significant threat to food security in the region. The Nauru Agreement, which was established to protect the Pacific region's tuna stocks, contributes an estimated 25 per cent of the world tuna supply and has become a critical source of revenue in the region. It is an example of the potential benefits of co-operative regional fisheries management by coastal states.

Members look forward to trailing rapid assessments to identify actions to meet short and long-term objectives, as well as the development of several training modules (on identified priorities) in the coming year.

Discussion

Taking Stock and Charting the Course

The last four years have been a remarkable beginning to a shared journey. **Forty-six countries** (and one overseas territory) led by **16 Co-Champions** have embarked on a shared mission to co-operate to solve ocean-related challenges and meet commitments for sustainable ocean development. As detailed in the preceding sections, there is growing evidence of ocean action across the Commonwealth, which has been accompanied by positive international attention. However, there is still so much more that can be done. The Commonwealth Blue Charter is building momentum by implementing pilot projects, sharing lessons learned and engaging local communities. The following section draws out some cross-cutting considerations for the next wave of action.

Building capacity to implement ambitious plans

The Action Groups have taken tangible steps to build capacity across their members and countries. Champions also reiterated their commitment to continued capacity building, particularly for member focal points, including on 'technical aspects, project formulation, monitoring and evaluation, [and] advancing IT skills' (Mangroves and Livelihoods Action Group [MELAG] Champion report).

Although training and capacity building remain a priority across all Action Groups, Champion country representatives from numerous Action Groups noted that 'inadequate capability and capacity' remained a challenge, with a 'shortage of technical staff ... for implementation of planned activities'. This is exacerbated by the fact that Action Group Champions and members commonly (with some exceptions) do not have a dedicated internal team to guide and implement Action Group commitments and activities. As a result, the Commonwealth Blue Charter activities are but one of multiple competing responsibilities borne by the assigned focal points. Action Group members may consider following Kiribati's lead in establishing a dedicated national task force, which may help to formalise responsibilities for Blue Charter implementation.

In addition to dedicated Blue Charter training courses, as well as the Commonwealth Secretariat's Training Database, Action Groups are also working to independently identify capacity-building opportunities; for example, the MPA Action Group intends to continue working closely with its NGO partners to explore what additional capacity-building programmes can be organised. Similarly, Fiji noted the benefits of its partnership with SPREP, and recommended that 'other members... identify similar institutions within their region' and create a matrix of the types and providers of support available.

Commonwealth countries, under the framework of the Commonwealth Blue Charter, may wish to consider the following **avenues for further action**.

- Establish or strengthen a **national ocean task force** to support the implementation of the **Action Group PoAs**. Building on existing national structures, they can include representatives from relevant ministries, NGOs and businesses.
- Leverage the opportunities presented by bespoke courses developed by the Commonwealth Secretariat and in the Training Database, to **build capacity** in priority areas.
- Undertake a **national capacity assessment** to highlight capacity gaps and outstanding training needs.
- Action Groups may also consider working together in the formation of multilateral and/or regional pilots and programmes.

Closing the resourcing gap

Financially resourcing the Commonwealth Blue Charter and its Action Groups is an identified need that has been growing in urgency, as noted by one Action Group representative: 'The biggest challenge ... is access to funds to organise activities with member countries across the globe'.

Of all the Sustainable Development Goals, SDG14 on the ocean is by far the least funded, representing a minuscule 0.01 per cent of all SDG funding from development finance up to 2019, and only 0.56 per cent of all philanthropic funding since 2016. The Secretariat's calculations indicate that less than 2 per cent of support from the Green Climate Fund (GCF) and only 0.7 per cent of Global Environmental Facility (GEF) funding for climate change go towards projects that include ocean actions. These figures show a clear mismatch between the ocean conservation requirements and funding available.

In June 2019, at the Commonwealth Blue Charter All Champions Meeting, the Champion countries identified mobilising financial support for the Action Groups and their future projects as an issue of overarching concern, which was reiterated across all 10 recent Action Group reports. To date, just 2 of the 16 Champion country governments managed to secure internal multiyear funding specifically for their Action Groups. For example, in response to the Commonwealth Ocean Action Survey, the MELAG Champion representative noted that 'For countries like Sri Lanka with high biodiversity on land and in its ocean sphere ... there needs to be effective financing mechanisms'.

Source: oceanfund-bluecharter.thecommonwealth.org

There may be scope to better leverage the different strengths and capacities of the different Commonwealth countries to address some of these barriers. For example, Canada's commitment to provide funding to support other members to attend international training programmes.

The Blue Charter Funders Database profiles current funding opportunities relevant to each Action Groups. Across all Action Groups, more than £126 million in funds has been identified, though these are under intense competition from global NGOs and other governments. In 2020, the Secretariat provided three two-day trainings on proposal development, covering 52 representatives from 17 countries. More training is planned for 2022 and 2023. Work to develop a long-term bespoke funding mechanism – a Blue Charter Action Fund – is contingent on CHOGM text, but will likely take one to three years to become established. In the meantime, the Secretariat is establishing a Blue Charter Project Incubator, to be announced at CHOGM 2022, which will leverage modest financial support and training for Action Group pilot projects.

The Secretariat also announced the appointment of a **consortium of experts to advice on ocean-climate finance**. Generously supported by the United Kingdom, the appointment is a joint venture of the Commonwealth Climate Finance Access Hub and the Commonwealth Blue Charter. The consortium of experts worked from October 2021 to March 2022 with Commonwealth governments to develop proposals and access funding for ocean-based adaptation and mitigation activities, as detailed in countries' Nationally Determined Contributions under the UNFCCC.

Funding for ocean-related projects is limited and highly competitive. However, the number of innovative financial instruments has grown rapidly in recent years, creating an exciting new financing landscape to be further explored by Action Groups (with the support of the Secretariat) that have projects mature enough to qualify. This includes instruments such as the following.

Ocean impact investment / technology funds

New specialist funds can attract private impact investors, who look beyond the strictly financial returns to societal benefits which are subject to sustainability criteria, including payments for ecosystems services.

Debt finance

This may include blended finance solutions, including debt-for-nature swaps such as in Seychelles and the resultant SeyCCAT, and the recently announced debt-for-nature swap in Belize. Such measures are most effective in context with sound supporting legislation (see Case Study 2, below).

Bonds and other capital market products

Listed bonds and other capital market products dedicated or inclusive of ocean solutions can provide opportunities for additional funding. The recently launched Seychelles Blue Bond and Fiji's sovereign Green Bond are examples.

Risk alleviation measures

Restoration of wetlands to offset negative environmental impacts is already a US$3 billion industry and 'Blue Carbon' is receiving much attention. Ocean insurance concepts could cover the potential damage caused by measurable ocean phenomena (warming, currents, hurricanes and tropical storms, etc.).[96]

Financial technology

Better forms of observation, inspections and transparent data access have been proposed (via so-called 'blockchain' technology) to reduce the possibility of fraud and corruption in, say, carbon credits, sustainable fisheries or vessel registrations.

Blended ocean financing concepts

Infrastructure projects can include contributions to better governance, blue carbon, ocean observations or protection – for example, tourist fees (collected in airports) or ocean user fees, such as the People's Republic of China's 2002 Law on the Management of Sea Use.[97]

Ocean sustainability bank

Building on the blueprint for integrated ocean planning put forward by the 14 nations supporting the High-Level Panel for a Sustainable Ocean Economy, a dedicated Ocean Sustainability Bank may help to provide a financial mechanism to support ocean action.

Trusts and sovereign wealth funds

Trusts or sovereign wealth funds can act as a supplementary funding mechanism and could receive portions of income from user fees, or blue carbon trades, for instance. This could tie into the Secretariat's ongoing technical assistance provided on these matters.

Sustainability Subsidies and Credits

Environmentally sustainable behaviour can be incentivised and rewarded through appropriate subsidies or credit schemes. Whilst subsidies tend to be public, the concept of credits can be developed into environmental market schemes, like carbon markets or reef credits (see Case Study 1, below).

Case Study 1: Reef Credits for Australia's Great Barrier Reef

Reef Credits is a new, voluntary, environmental market scheme that rewards landholders for actions that improve the quality of the run-off from their land into the Great Barrier Reef catchment. When landholders demonstrate the use of approved methodologies they generate Reef Credits, which are tradable units representing a quantifiable reduction in nutrient, pesticide or sediment loading. Reef credits are sold to public and private sector organisations seeking to improve their environmental, social and governance (ESG) performance. A new entity, Eco Markets Australia, has been established to independently manage the Reef Credit Scheme.

The Reef Credit Scheme is the first voluntary environmental market scheme developed and implemented in Australia, and can serve as a blueprint for other environmental credit schemes.

Case Study 2: Seychelles Debt-for-Nature Swap

In 2020, Seychelles announced the final details of Marine Protected Areas to achieve its goal to protect 30 per cent of its ocean, up from just 0.04 per cent. In order to secure the financial resources to implement this commitment, Seychelles partnered with The Nature Conservancy (TNC) on the world's first debt-for-nature swap. This ground-breaking debt conversion resulted in a US$21.6 million payment of a foreign debt in exchange for in-country financing for long term conservation and commitment to develop a Marine Spatial Plan to achieve the 30 per cent goal.

Debt service payments fund three distinct cash flows for conservation, namely:

- The SeyCCATs Blue Grants Fund
- Repayment of the Impact investor
- Capitalising the SeyCCAT endowment.

TNC's 2016 transaction with the Republic of Seychelles allowed the country to generate up to US$430,000 per year for marine conservation and protect 410,000 km^2 of ocean. The Protected Areas are split into High Biodiversity Protection Areas (Zone 1), which restrict almost all human activities except tourism, as well as Medium Biodiversity Protection and Sustainable Use Areas (Zone 2), which are designed to conserve natural ecosystems whilst supporting sustainable economic activities. With over 200 stakeholders consulted, this participatory approach to marine conservation provides a proof-of-concept for conservation finance through debt restructuring.

Case Study 3: Belize's Blue Bond

The Government of Belize has established an innovative partnership with TNC), Credit Suisse, and the US International Development Finance Corporation, to generate US$180 million for marine conservation over the next two decades. This finance will support the realisation of Belize's commitment to protect 30 per cent of its ocean, strengthen governance frameworks for domestic and high sea fisheries, and establish a regulatory framework for coastal blue carbon projects. These activities, all of which have the potential to boost local economies and protect invaluable marine resources, will be encapsulated in Belize's new participatory, stakeholder-driven Marine Spatial Plan.

Representing the world's biggest debt restructuring for marine conservation to date, the initiative converts a portion of sovereign debt to secure long-term sustainable financing for nature. Modelled after the Seychelles transaction, but at a financial scale more than 15 times larger, TNC has helped restructure about US$550 million of Belize's external debt, leading to a lower outstanding debt balance, and a longer repayment period. With the resultant savings, the government can invest in a national, independent conservation fund earmarked for conservation. The result is US$4.2 million of direct annual funding for conservation for the next 20 years, as well as seed funding of an endowment estimated to grow to US$92 million over the same period.

Some Commonwealth countries are already leveraging these kinds of innovative financing mechanisms (see Case 2 and 3 above for examples), and there are opportunities for lesson learning and accelerated uptake. For example, the Nature Conservancy estimates that up to 85 countries globally could use the sovereign debt restructuring mechanism to develop more resilient, thriving blue economies through marine conservation. The **Commonwealth Climate Finance Access Hub** is well placed to help countries to unlock available finance.

Commonwealth countries, under the framework of the Commonwealth Blue Charter, may wish to consider the following avenues for further action.

- Each Action Group may explore and bring forward recommendations for the **sustainable funding** of their activities and priority projects.
- Secretariat to consider establishment of a **Blue Charter Steering Committee** to consolidate recommendations and agree on next steps.

Quantifying progress at national and pan-Commonwealth scales

When human and financial resources are in place, the Commonwealth Blue Charter will be uniquely positioned to address shared challenges multilaterally. To ensure that activities continue to be evidence based and targeted at priorities, it is necessarily to monitor implementation. To date, quantifying progress of the Blue Charter and its Action Groups has been challenging, not least because data and/or formal reporting mechanisms are often lacking or incomplete, with many countries facing resource and capacity constraints. Globally, there is a plethora of overlapping target-setting and commitment-setting initiatives, with disparate and incomplete reporting and tracking mechanisms. The Commonwealth

Blue Charter, thorough the Secretariat and participating members, could help to encourage a more harmonised and streamlined approach to data collection and target reporting. Efforts should continue to focus on, first, consolidating and applying existing reporting/data frameworks, then identifying remaining gaps.

Evidence-based decision-making

Despite huge advances in ocean science, our understanding of the ocean continues to be limited, and historical data gaps can have implications for conservation and management.[98] Physical data, for example on currents or climate, tends to be better established than ecological or biological components, such as on coral reef health or fishing stocks.

The availability of data from remote sensing, data sharing and crowdsourcing presents an opportunity to pilot cost-effective monitoring and surveillance mechanisms, with an associated potential for enhanced enforcement and compliance. This is of particular relevance to the Action Groups that are interested in managing human activities such as fishing, blue economic development or marine protection.

Where information is available, it is not consistently managed based on FAIR data principles ('findable, accessible, interoperable, reusable').[99] In the absence of a systematic approach to data management, it is difficult to make informed decisions or measure change. Insights from the literature indicate that an improved data infrastructure backbone is urgently needed, particularly to accommodate Big Data.[100] The progression of policies and laws, as well as changes in national capacity to tackle ocean issues, consistent with the Commonwealth Blue Charter, remain difficult to monitor without consistent bespoke data.

The development of individual country profiles, documenting progress under each Action Group theme, may be a useful next step to help address these questions, and begin to inform more robust and consistent legal and regulatory frameworks across the Commonwealth. For example, the Action Group on Mangrove Restoration and Livelihoods intends to exchange knowledge on 'legislation and regulations relating to mangrove protection and management, in an effort to understand the most appropriate regulatory regimes for member countries and their mangroves'. The Commonwealth community may consider strengthening agreements and systems for improved information sharing, particularly where the capacity for monitoring and surveillance is highly divergent. For the Blue Economy to be sustainable, there will need to be a collaborative approach among neighbouring nations, and competent bodies that manage activities within and indeed beyond national jurisdictions.

Commonwealth countries, under the framework of the Commonwealth Blue Charter, may wish to consider the following **avenues for further action**.

- Develop a consistent and **streamlined approach** to data collection and target reporting relating to the Blue Charter.
- Develop **individual country profiles**, documenting progress under each Action Group theme, to inform reporting and facilitate more robust and consistent legal and regulatory frameworks across the Commonwealth.

'Under the Economic Recovery Programme (ERP), we (Mauritius) would like to build capacity by training around 1,000 fishers in coral farming, nursery management and reef restoration. We would also like to set up two coral nurseries at two other locations under the ERP.'

Towards a 'Blue Recovery' from COVID-19

The ongoing COVID-19 pandemic has forced many Action Groups to put their priorities 'on hold, as resources are dedicated to immediate health and economic responses'. While the COVID-19 pandemic has posed substantial challenges to the work of the Action Groups, with countries having to pivot to mitigate pandemic impacts, there is also an opportunity to integrate the commitments of the Action Groups into sustainable economic recovery[101] – that is, to 'build back better':

The Commonwealth Secretary-General has said that post-COVID recovery should 'lock in ocean sustainability',[102] and the Secretariat has recognised the importance of a 'Blue Reset' to build resilient and equitable ocean-based economies post-COVID, as reflected by the virtual event hosted on World Ocean Day 2021, and the World Ocean Day event in 2022 on MPAs. Discussions at the events focused on how the Commonwealth Blue Charter can support post-COVID recovery using 21st century financial tools. This may provide an opportunity to fast-track existing efforts, and embed them into national plans and policies, while setting the stage for the development of resilient sustainable Blue Economies across the Commonwealth.

Commonwealth countries, under the framework of the Commonwealth Blue Charter, may wish to consider integrating the activities of the Action Group plans and projects into their economic recovery plans, to contribute towards a coherent 'Blue Recovery'.

Epilogue: Into the Blue

In just four years, the Commonwealth Blue Charter has created a broad and dynamic network, exchanging knowhow, trainings, experiences and ambition across the Commonwealth. Through their Action Plans, Champions have demonstrated the potential for the Blue Charter to effect tangible progress, and Action Groups are already discussing synergies in co-operating across their target areas. The ability to encourage and facilitate regional collaboration is a strength of the Commonwealth Blue Charter. Potential new partnerships to implement the Action Plans and explore new areas for collaboration are being established by member countries and the Secretariat. Additionally, there are opportunities to harness synergies with the new Commonwealth Living Lands Charter, thereby creating a more sustainable future on land and at sea.

With the Blue Charter Project Incubator being launched at CHOGM in June 2022, and an Action Fund under consideration by the Heads of Government, the stage is now set for the Commonwealth Blue Charter to harness its collective power to deliver a common future. As one Champion put it:

> 'Together we can create the wave of momentum we need to save our ocean, the life it sustains, and the economies it upholds.'

Annex 1: List of Action Group Meetings 2019-June 2022

Name of Action Group	Meeting type	Date
Commonwealth Clean Ocean Alliance	Virtual AG meeting	August 2020
Commonwealth Clean Ocean Alliance	Virtual AG meeting	May 2022
Coral Reef Protection and Restoration	In-person AG meeting	July 2019
Coral Reef Protection and Restoration	Virtual AG meeting	April 2021
Mangrove Ecosystems and Livelihoods	In-person AG meeting	October 2019
Mangrove Ecosystems and Livelihoods	Virtual AG meeting	May 2020
Marine Protected Areas	In-person AG meeting	November 2019
Marine Protected Areas	Virtual AG meeting	June 2020
Marine Protected Areas	Virtual AG meeting	August 2021
Ocean Acidification	In-person AG meeting	February 2019
Ocean Acidification	Virtual AG meeting	August 2020
Ocean and Climate Change	Virtual AG meeting	December 2020
Ocean and Climate Change	Virtual AG meeting	July 2021
Ocean Observation	In-person AG meeting	May 2019
Ocean Observation	Virtual AG meeting	July 2020
Sustainable Aquaculture	In-person AG meeting	March 2020
Sustainable Aquaculture	Virtual AG meeting	April 2020
Sustainable Blue Economy	Virtual AG meeting	November 2020
Sustainable Blue Economy	Virtual AG meeting	August 2021
Sustainable Coastal Fisheries	Virtual AG meeting	December 2020
Sustainable Coastal Fisheries	Virtual AG meeting	May 2022
All Champions Meeting	In-person AG meeting	June 2019
All Champions Meeting	Virtual AG meeting	May 2020
All Champions Meeting	Virtual AG meeting	November 2020
All Champions Meeting	Virtual AG meeting	April 2021
All Champions Meeting	Virtual AG meeting	May 2022

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