

# BLUE CHARTER FELLOWSHIPS 2018/19

## IMPACT REPORT



The Association  
of Commonwealth  
Universities



Department for  
Business, Energy  
& Industrial Strategy

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BLUE CHARTER

# BACKGROUND

The ocean is essential for nearly all processes of life on Earth and underpins livelihoods, food security and tradition for communities around the world. However, the accumulation of marine plastics pollution increasingly threatens fragile underwater ecosystems and has become one of the biggest environmental challenges of our time.

In 2018, all 53<sup>1</sup> Commonwealth countries signed the Commonwealth Blue Charter to affirm their collective commitment to tackling ocean-related challenges. In the UK, the Department for Business, Energy and Industrial Strategy (BEIS) spearheads the Commonwealth Marine Plastics Research and Innovation Framework (MPRIF) to drive forward the aims of the Blue Charter. By bringing together governments, researchers, innovators, industry and practitioners from across the Commonwealth, the MPRIF continues to provide a vital platform to translate science into cutting-edge solutions to reduce marine plastics pollution.

Research and collaborations play a key role in the MPRIF. In 2018, BEIS provided funding for the ACU to establish the Blue Charter Fellowships Programme enabling 38 outstanding research fellows from across the Commonwealth to undertake diverse, collaborative projects in line with MPRIF objectives. Building on the impact of the Programme's first year, Waitrose & Partners funded a second small-scale round of 10 fellowships which began in 2019.

Fellowships were supplemented by an online knowledge exchange training course to support fellows translating research into practice. Content for this course was developed using data provided by our members as part of a BEIS-funded marine plastics research capacity audit led by the ACU.

## COHORT 1, 2018–2019

The present report reviews the key outcomes and impact of the BEIS Cohort 1 fellowships and the substantial achievements of alumni since completing the programme. Their research outcomes cover all four MPRIF priority areas and have greatly enhanced the evidence base on which effective policies are formulated. Today, these passionate individuals continue to generate momentum to tackle plastics pollution across the Commonwealth.

The data contained in this report have been drawn from semi-structured interviews and are the results of a one-year follow-up survey for alumni conducted in March 2020. At the time of writing, the survey had received 33 out of 38 responses.

<sup>1</sup> The Maldives joined the Commonwealth in February 2020, bringing the current total number of Commonwealth countries to 54.



“

*Because plastic pollution is a growing concern worldwide, I was able to articulate the problem in a clearer and more effective way after the fellowship. I believe this is the most important aspect of science communication - trigger curiosity and the desire to know more."*

**DR JOANA BEZERRA,**  
LECTURER, RHODES UNIVERSITY  
SOUTH AFRICA

# COHORT 1

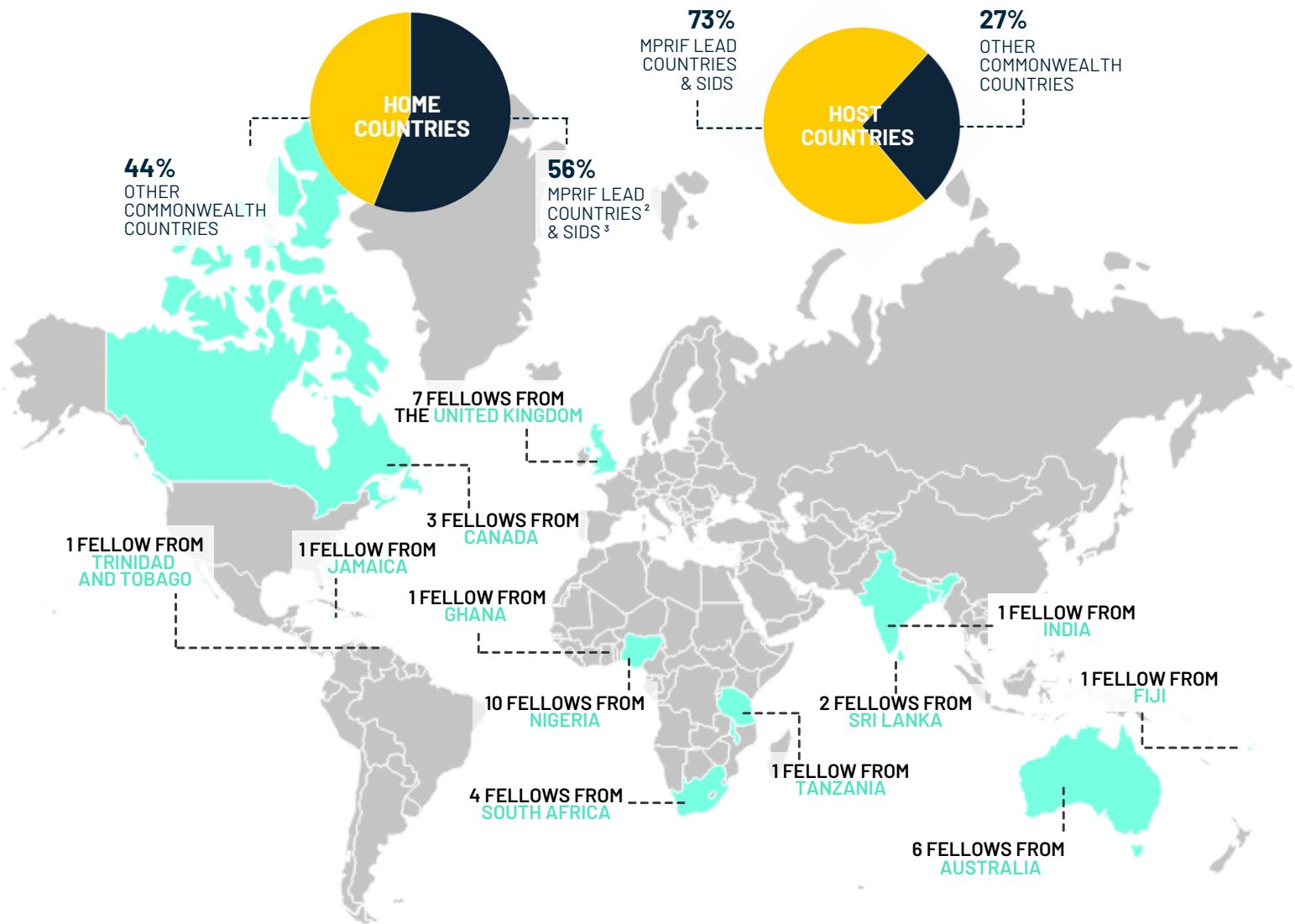
## SUMMARY & IMPACT REPORT

“

*My scope and horizon of teaching postgraduate students has been broadened [by] the experience garnered in the course of the fellowship. I now have a well-thought proposal of how to sample and ameliorate the problem of micro-plastics pollution in Lagos, Nigeria."*

**DR PAUL BANKOLE**  
LECTURER, FEDERAL UNIVERSITY OF  
AGRICULTURE ABEOKUTA, NIGERIA

# HOME AND HOST COUNTRIES



## Gender

53% FEMALE  
47% MALE



## Collaborations

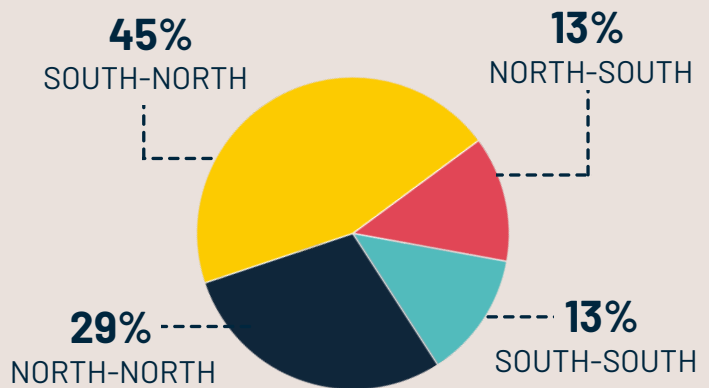
82% NEW  
18% EXISTING



## Degree

50% POST-PHD  
50% PHD CANDIDATES

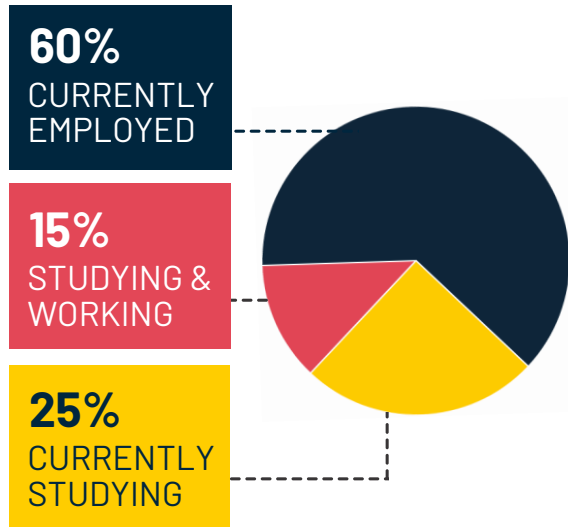
## DIRECTION OF TRAVEL



<sup>2</sup> MPRIF (Marine Plastics Research and Innovation Framework) lead countries refers to: Canada, India, Australia, South Africa and the UK.

<sup>3</sup> SIDS (Small Island Developing States) refers to a group of island nations of the Caribbean Sea and the Atlantic, Indian and Pacific Oceans that face similar environmental vulnerabilities and developmental challenges.

## CURRENT STATUS



## POLL: TO WHAT EXTENT HAVE YOU ACHIEVED YOUR FELLOWSHIP OBJECTIVES?



## RESEARCH THEMES



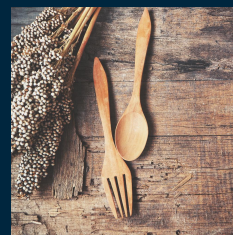
**58%**

PREVENTING PLASTICS FROM ENTERING THE OCEAN



**12.5%**

CLEANING UP THE SEAS



**17%**

DEVELOPING SUSTAINABLE ALTERNATIVES TO PLASTIC



**12.5%**

IMPACT OF MARINE PLASTICS

**1**

IMPACT ON COMMUNITIES AND POLICY-MAKING

**2**

NEW LINKS CREATED AND EXISTING LINKS STRENGTHENED



**3**

RESEARCH CAPACITY-BUILDING AND KNOWLEDGE TRANSFER

**4**

SCIENTIFIC PUBLICATIONS AND RAISING PUBLIC AWARENESS

# 1

## WIDER IMPACT: COMMUNITY ENGAGEMENT AND POLICY INFLUENCE

Engaging local communities, industry actors and policymakers both during and after the research process is essential to creating lasting impact. The Blue Charter Fellows used a range of communication channels over the course of the programme, and report that their work has influenced policies, increased public awareness and helped local communities voice concerns.



# 50%

OF FELLOWSHIPS RESULTED IN **COMMUNITY DEVELOPMENT AND/OR PUBLIC ENGAGEMENT** OUTCOMES

WORKSHOPS

PUBLIC PRESENTATIONS

EXHIBITIONS

CLEAN-UP ACTIVITIES

# 31%

OF FELLOWSHIPS RESULTED IN CONTRIBUTIONS TO POLICY-MAKING, INCLUDING:



A national-level single-use plastics ban in Fiji.



A roadmap for a local-level single-use plastics ban in Sempornah, Malaysia.



A university campus-greening policy at the Caribbean Maritime University in Jamaica.



A new national-level position paper amending existing laws to improve recycling in Nigeria.

# “

*A lot of communication and relationship-building came out of what I did during my Fellowship [in New Zealand]. My team ended up putting on a plastic exhibition at a local church, which all the leaders in the council came to see. It ended up in them backing anti-single-use-plastic policies.”*

**MISS XIAOYU LEI,**  
PHD CANDIDATE, KEELE UNIVERSITY  
UNITED KINGDOM

# 2

## NETWORKS: NEW LINKS CREATED AND EXISTING COLLABORATIONS STRENGTHENED

The programme strengthened existing collaborations and led to new North-South and South-South partnerships between institutions, nurturing a growing ecosystem of academics and universities working to forward marine sustainability across the Commonwealth.

**78%** of alumni plan to conduct **joint work with their collaborators** linked to Fellowship outcomes.



Fellows have already applied for or obtained further research funding with their host collaborators since completing the Programme.



**45%**

of Fellowships resulted in new partnership agreements between home and host institutions.

2 SOUTH-SOUTH AGREEMENTS  
2 NORTH-NORTH AGREEMENTS  
11 SOUTH-NORTH AGREEMENTS

**UNIVERSITI  
PUTRA  
MALAYSIA**

**NNAMDI AZIKIWE  
UNIVERSITY,  
AWKA NIGERIA**

## NEW LINKS

During his fellowship at Universiti Putra, Malaysia, Dr Emmanuel Chukwuma of Nnamdi Azikiwi University conducted a collaborative research project on plastic leakage into the oceans. This work led to the establishment of a new partnership between the two universities, with plans already in place to undertake further joint research.



*The partnership during the fellowship was a great one. Generally, there was a strong drive to continue the research by the host institution and members of the research Fellowship panel."*

**DR EMMANUEL CHUKWUMA,  
LECTURER, NNAMDI AZIKIWI UNIVERSITY,  
NIGERIA**



# 3

## CAPACITY-BUILDING: STRENGTHENED SKILLS AND KNOWLEDGE BASE OF RESEARCHERS

Fellows highlighted access to lab equipment and training provided by their host universities, as well as exposure to new knowledge and cultural contexts, as key gains from the Programme. On return to their home institutions, fellows have shared learning with their peers and used their new skills to progress their careers.

### ALL FELLOWS

responding to the follow-up survey reported applying the knowledge and skills acquired during the Fellowship to their current work and study. They reported building key skills such as:



LAB TECHNIQUES



SAMPLE COLLECTION



COMMUNICATIONS



STAKEHOLDER ENGAGEMENT



STUDY DESIGN



ANALYSIS TOOLS

# 4

## PUBLICATIONS & DISSEMINATION: CONTRIBUTIONS TO SCIENTIFIC LITERATURE AND PUBLIC AWARENESS

Following the Programme, many fellows went on to publish their Blue Charter research and undertake media engagements and conference presentations to increase public awareness around marine plastics pollution.



47%

of fellows undertook media engagements on the topic of their Fellowship research.



56%

of fellows have presented their Fellowship research at conferences.



41%

of fellows had articles or book chapters from their Fellowship research accepted for publication.



# MR RUFINO VAREA

## RESEARCH THEME: MICRO-PLASTICS AND AQUATIC ORGANISMS



HOST UNIVERSITY: University of Adelaide, Australia

HOME UNIVERSITY: The University of the South Pacific, Fiji

**AFTER COMPLETING HIS BLUE CHARTER FELLOWSHIP**, Rufino presented his research outcomes at a major conference which generated national-level attention and received positive responses from policymakers and practitioners for the challenge of marine plastics in Fiji. He went on to serve as a consultant to Fiji's National Taskforce on GloFouling, where he advised government officials on marine pollution-related challenges. Rufino was also invited to share his insights and experiences on a national talk show and in a local podcast, and has since conducted multiple workshops and local engagement programmes.

Rufino believes the Blue Charter fellowship played a crucial role in his academic and professional development. It allowed him to establish lasting connections at the University of Adelaide and gain exposure to important new lab techniques, which he continues to apply in his current projects. He hopes to co-author a paper with his host collaborator in the near future.

Today, Rufino is working to obtain his PhD on marine plastics pollution. He has been involved in a number of international collaborative projects at the University of the South Pacific, and regularly visits local communities to conduct participatory research. He hopes to equip local groups, particularly those most affected by unsustainable resource use and pollution, with the tools and opportunities to protect their marine environments and voice their concerns to policymakers.

“

*One of the most important things from my fellowship was going to the University of Adelaide and seeing the research they conducted there. It's such important work, and it reminded me of how much more we can do here at the University of the South Pacific.”*

<sup>4</sup> The GloFouling Partnerships were established in 2018 by the GEF, UNDP and IMO to combat the negative environmental impacts of the transfer of aquatic species through ships. Fiji and Tonga have spearheaded the 12 Lead Partnering Countries (LPCs) under this initiative.



## DR DATIVA JOSEPH SHILLA

**Research:** Mapping plastic routes from land to sea  
**Host:** University of Dhaka, Bangladesh  
**Home:** University of Dar es Salaam, Tanzania

Dativa is currently a lecturer at the Dar es Salaam University College of Education. Following her fellowship, she played a key role integrating plastic pollution into the environmental chemistry curriculum at her university. Currently, she is supervising one of the first studies on marine plastics in Tanzania's coastal areas. In collaboration with an environmental NGO, Dativa also established a beach clean-up campaign mobilising volunteers from schools, communities, education sectors and municipal authorities in Dar es Salaam every month.



## DR CAULA ANDREA CLAYTON

**Research:** Behavioural change and single-use plastics  
**Host:** Dalhousie University, Canada  
**Home:** Caribbean Maritime University, Jamaica

Passionate about citizen science, Andrea returned from her fellowship to launch a new "Earth Ambassadors" student programme at the Caribbean Maritime University in Jamaica. She currently serves as Chair for the Sustainable Development programme at CMU and has incorporated the lessons she learned from the fellowship into the course. Andrea's research also resulted in a CMU campus greening programme and a new mentorship programme with Harbour View Primary School. Working closely with her collaborator, she has successfully applied for the National Geographic Society's Committee for Research and Exploration grant, and currently works with her team on a new research project on plastics reduction in Ghanaian cities.



## MR RAJKUMAR SAHOO

**Research:** Sustainable practices in single-use plastics consumption  
**Host:** Cardiff University, UK  
**Home:** Jawaharlal Nehru University, India

Rajkumar envisions a future of cleaner, greener cities in his home country of India. During his Fellowship, he worked closely with his host collaborator to design a new, innovative analytical tool to measure pro-environmental behaviours which reduce urban plastics pollution. Since returning to his home university, Rajkumar has been applying this tool - and the research and technical skills he built - to understand trends in single-use plastic consumption in India. He has also adopted the tool in the initial stages of his PhD work. Today, Rajkumar continues to work with his host collaborator to collect data, write academic papers and pursue further opportunities for knowledge exchange.



# DR ISABEL RICHTER

## RESEARCH THEME: SUSTAINABLE TOURISM AND BEHAVIOURAL CHANGE



HOST UNIVERSITY: University of Malaya, Malaysia  
HOME UNIVERSITY: University of Plymouth, UK

**ISABEL HAS A BACKGROUND IN PSYCHOLOGY AND A PASSION** for behavioural change. As the intersection between psychology and marine plastics pollution remains largely understudied, she used her Blue Charter fellowship at the University of Malaya to delve deep into the issue, design innovative studies and address critical research gaps.

In Malaysia, Isabel quickly immersed herself in the cultural context and her collaborative work with the local government of Sabah resulted in a single-use plastics ban for a touristic diving region in the city. She also sensitised key decision-makers to the power of psychology and behavioural change, which has since been an integral part of her work.

Isabel continues to use the stakeholder engagement and communications skills she gained during her fellowship in her current work with local governments and NGOs in the UK and Namibia. Under a young researchers' fund, she is working across a diverse array of community-embedded projects in Southeast Asia, including another Sabah-based project linked with her fellowship collaborators. She has recently also submitted proposals for two larger grants to expand her work into Africa and Latin America.



*The Fellowship enabled me to be confident enough to look at the topic [of behavioural change and plastic pollution] itself, to work with stakeholders, and the whole process of going through grant applications, managing the money and reporting back to the funders. It gave me more confidence to apply for future grants."*



## MS NINA WOOTTON

**Research:** Micro-plastics in food chains  
**Host:** University of the South Pacific, Fiji  
**Home:** Adelaide University, Australia

Through her collaborative, community-embedded research at the University of the South Pacific, Nina contributed to the implementation of a national-level plastics ban on plastic bags and other single-use items in Fiji. During her fellowship, she actively engaged local residents and youth by presenting to school groups and scuba diving clubs to raise awareness about marine pollution and biodiversity preservation. Since returning to Australia, Nina has acquired additional funding to continue her work using many of the lab skills she acquired during her fellowship.



## DR PAUL OLUSEGUN BANKOLE

**Research:** Microbes and bio-degradation of plastics  
**Home:** Federal University of Agriculture Abeokuta, Nigeria  
**Host:** Lancaster University, UK

Paul is a postgraduate lecturer working to address micro-plastic pollution in Lagos through research, innovation, and community engagement. The useful laboratory skills he built during the Fellowship simultaneously helped Paul advance his research career and broaden the scope of his teaching. Paul's Fellowship research has also catalysed dialogues within local and national policy circles on the issue of urban plastics pollution. He is currently developing a national-level position paper to amend existing Nigerian laws to cater for plastics recycling.



## DR JOANA CARLOS BEZERRA

**Research:** Impact of plastics on marine life  
**Host:** Dalhousie University, Canada  
**Home:** Rhodes University, South Africa

The fellowship equipped Joana with the tools to engage diverse stakeholders and effectively communicate science to non-academic audiences. Since returning to her home university, she has presented her work at a range of public events and reached stakeholders such as the Southern African Development Community and national park managers. Today, she continues to disseminate her research by engaging local action groups in workshops, community activities and seminars. Since completing the fellowship, she has also obtained funding to supervise a study in a Marine Protected Area and continues to work closely with her fellowship collaborators on new research projects.



*The ACU is grateful to the Department for Business, Energy and Industrial Strategy for funding Blue Charter Fellowships for promising young researchers across the Commonwealth.*



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