

UK Gulf Marine Environment Partnership (GMEP) Programme

TOWARDS A SUSTAINABLE AND
PRODUCTIVE GULF MARINE ENVIRONMENT



Centre for Environment
Fisheries & Aquaculture
Science

Through the UK Gulf Marine Environment Partnership (GMEP) Programme Cefas is working with partner organisations across the Gulf to tackle the shared environmental challenges of climate change, biodiversity loss, enabling blue economies and protecting human health.

The Gulf marine environment supports globally important biodiversity and provides a variety of social and economic benefits. However, climate change and the rapid pace of development in the region is leading to increased pressures on the marine environment.

To build long-term sustainable development, the UK GMEP Programme is working with partners across the Gulf to advance sustainable blue economies and build climate resilience.

The UK GMEP Programme doing this by working with partner organisations to strengthen regulation, build management capacity and develop the knowledge base to inform management.

The UK GMEP Programme is building on Cefas' long standing collaboration with the Gulf states which stretches over four decades.

Clockwise from top left: a fishing boat in Oman, the Duke of Cambridge visited the Marine Science Centre in Muscat as part of His Royal Highness's official visit to Kuwait and Oman in December 2019 on behalf of the Foreign and Commonwealth Office, a flock of birds on Oman beach, fishing boats in Kuwait.



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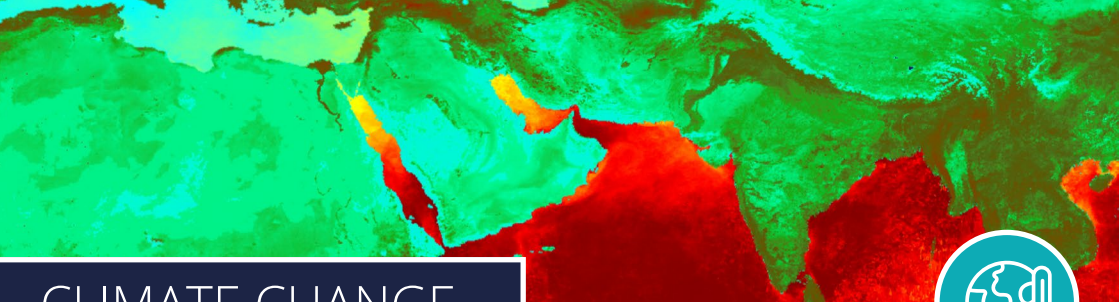
Building on a long history of partnership, and forging new relationships, the UK is collaborating across the Gulf to address today's global challenges. Working together to tackle climate change and biodiversity loss to build mutual prosperity and sustainability for current and future generations.

James Cleverly

MINISTER FOR THE MIDDLE EAST AND NORTH AFRICA

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CLIMATE CHANGE



Climate change impacts on the marine and coastal environment will have major social and economic consequences for all states bordering the Gulf.

Low lying, densely populated coastal settlements, critical infrastructure, and important ecosystems, are at risk from sea level rise and major surge events linked to storms and cyclones. Marine species and habitats could suffer major decline, or even local extinction, as temperatures rise, oxygen levels drop and seas become more acidic.

The UK Gulf Marine Environment Partnership (GMEP) Programme is developing regional understanding of marine and coastal climate change impacts to identify actions. The UK GMEP Programme is evaluating potential for nature based solutions and the role of Blue carbon in climate change mitigation.

The outputs will support Gulf states fulfill commitments to the UN Framework Convention on Climate Change and Paris Agreement.

working with

Bahrain • Iran • Iraq • Kuwait • Oman • Qatar • Saudi Arabia • United Arab Emirates



HUMAN HEALTH



Antimicrobial resistance (AMR), also known as the “silent pandemic”, is one of the most pressing global challenges threatening human health and economic security in the 21st Century.

AMR now spans all classes of antibiotics and the rate of drug resistant infections in humans is increasing. AMR is developing due to the use of antibiotics in both human and veterinary medicine.

The threat of AMR is primarily of concern in human healthcare settings, but it is increasingly clear that AMR can develop and spread in the environment, including freshwater and marine environments.

Through the UK GMEP Programme, Cefas is working with regional partners to build capacity, and understand the environmental and veterinary components of AMR to further enhance Gulf States’ National Action Plans.

working with

Bahrain • Kuwait • Oman • Saudi Arabia • United Arab Emirates



BIODIVERSITY



The coasts and waters of the Gulf states are home to a range of biodiversity including species and habitats of global conservation importance such as coral reefs, turtles and dugongs.

Protecting this biodiversity is important for conservation and for human livelihoods. It is essential for a growing ecotourism industry, to protect coasts from erosion, to build resilience to climate change and productive fisheries.

Marine Protected Areas (MPAs) are recognised as an essential tool for biodiversity conservation. The UK is leading on international marine conservation through the Global Ocean Alliance, which calls for 30% of our seas to be designated as MPAs by 2030.

The UK GMEP Programme is working with Oman and Kuwait to develop capability for effective management of MPAs to support biological conservation and the ecosystem goods and services provided by the region's marine environment.

working with
Kuwait • Oman



BLUE ECONOMIES



There is significant opportunity for economic development of marine and coastal sectors around the Gulf. But development must be managed to avoid undermining the natural capital that supports many of these sectors.

To support the development of sustainable blue economies across the Gulf states Cefas is working with partners across the region to build an evidence base and advise on the environmental impacts of many sectors and activities.

The range of activities that have been addressed include: aquaculture, desalination, sewage pollution, marine litter and the introduction of non-native species through shipping.

Work on developing sustainable blue economies through the UK GMEP Programme include field studies, laboratory and data analysis and policy advice.

working with
Bahrain • Oman • Qatar • United Arab Emirates



WORKING IN THE GULF

on global marine issues



CASE STUDY

ROPME: CLIMATE CHANGE

The Regional Organisation for Protection of the Marine Environment (ROPME) launched a 3-year Regional Action Plan on marine climate change adaptation and mitigation in 2019 to provide evidence to support the ROPME States address climate change.

The Regional Action Plan is building a co-ordinated evidence base of the social and economic risks associated with marine and coastal climate change. It is also outlining the options for building climate resilience including through nature-based solutions.

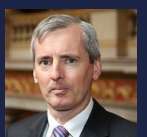
The ROPME Secretariat is leading the Regional Action Plan with technical support from Cefas' International Marine Climate Change Centre and experts across the region.

Through the Regional Action Plan the UK Gulf Marine Environment Partnership (GMEP) Programme has conducted the first regional risk assessment of climate change impacts and blue carbon inventory.

The next stage of the Regional Action Plan is to advise on best practice in climate adaptation and management of blue carbon habitats.

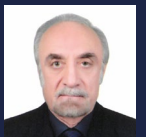


“Working with ROPME, this programme has brought together the GCC states, Iran and Iraq to build a consensus on the risk climate change poses to their shared marine environment.”



Sir Laurie Bristow
COP26 REGIONAL AMBASSADOR TO CHINA MIDDLE EAST EASTERN EUROPE AND CENTRAL ASIA

“ROPME in collaboration with Cefas have worked to identify those sectors most at risk from climate change. Together we have outlined the potential for blue carbon reserves to contribute to a regional, nature based solutions, approach to tackle the issue.”



Dr Hassan Mohammadi
COORDINATOR OF ROPME



CASE STUDY

OMAN: SUSTAINABLE AQUACULTURE

Aquaculture is both an important source of food and an industry that enables economic diversification and job creation. The government of Oman has identified fisheries and aquaculture as one of the five pillars for national economic diversification.

There are many examples of major economic losses caused by disease outbreaks in aquaculture around the world. As such, disease outbreaks are a significant risk to the developing aquaculture sector in Oman.

Working with the Ministry of Agriculture and Fisheries, the UK GMEP Programme is supporting the National Aquaculture Health Management Project. This project is part of Oman's national economic diversification programme.

Through this work Cefas has drafted revised legislation for aquaculture health management, provided technical training to Ministry staff in aquaculture disease diagnosis, initiated a baseline study of aquatic diseases and supported the development of the farm biosecurity surveillance programme.

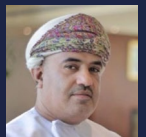


“Working with the Ministry of Agriculture, Fisheries & Water Resources, Cefas are using their international scientific expertise to build resilience in a fast growing sector of Oman's economy.”



Hamish Cowell
BRITISH AMBASSADOR TO OMAN

“The aquaculture sector is increasingly important to Oman's fisheries sector. Working with Cefas' expert staff we are building critical capability to develop national aquatic animal health plans for this sector.”



Dawood Al Yahyai
DIRECTOR GENERAL OF FISHERIES RESEARCH MINISTRY OF AQUACULTURE, FISHERIES AND WATER RESOURCES OMAN



CASE STUDY

BAHRAIN HEALTHY SEAS

The UK Gulf Marine Environment Partnership (GMEP) Programme and Bahrain's Supreme Council for Environment (SCE) are working together to address the challenges of marine environmental management. They are doing this by strengthening regulation, developing the evidence to inform decision making, and building capacity.

This work is supporting **Bahrain** to sustainably use their significant marine resources and realise the potential of their marine based economies. Projects include joint field monitoring campaigns to characterise marine pollution, reviewing SCE monitoring data and developing institutional capacity for pollution monitoring and environmental status assessments.

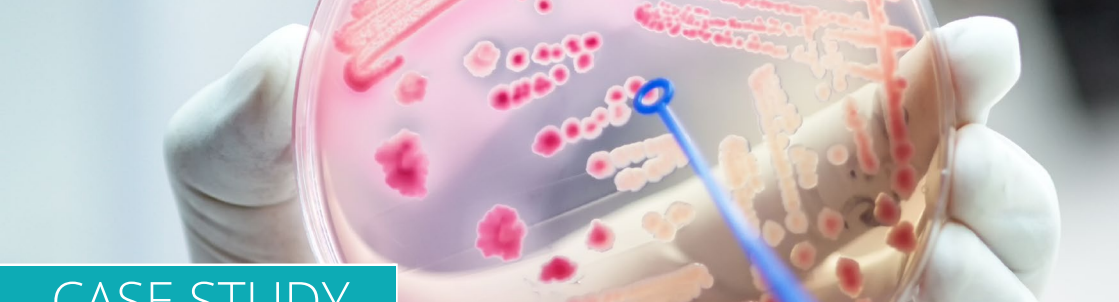
We are advising on environmental standards and revisions to the Bahrain national marine environmental monitoring programme. Key outputs include original research papers and national state of the marine environment reporting.



"We are pleased to have been working with Cefas through the UK GMEP Programme. This ongoing government to government partnership will strengthen our capacity to manage the marine environment, supporting economic diversification and sustainable development."

H.E Dr Mohamed bin Mubarak Bin Daina

SPECIAL ENVOY FOR CLIMATE AFFAIRS AND CHIEF EXECUTIVE - SUPREME COUNCIL FOR ENVIRONMENT



CASE STUDY

GCC: ONE HEALTH AND AMR

The UK GMEP Programme is working with Gulf Cooperation Council (GCC) partners to develop a framework to assess the threats, impacts and mitigation measures associated with the environmental components of antimicrobial resistance (AMR).

Adopting a "One Health" based approach experts from Cefas, the UK's International Reference Centre for AMR, are supporting Gulf states in their efforts to address the profound challenges AMR presents.

Work has included the first regionally co-ordinated survey of AMR in the marine environment, which has built understanding and capacity to address the environmental and veterinary components of AMR, and establishing a network of researchers across the GCC.

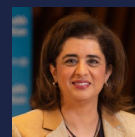
The UK GMEP Programme is engaging with ministries across Gulf states to support the development of their AMR National Action Plans to counter the global threat to human health from antimicrobial resistance.



"The UK GMEP Programme is providing essential support to key stakeholders across the GCC, enabling them to work with UK centres of excellence to adopt a One Health approach to tackle this globally recognised threat to human health"

Prof Hanan Balkhy

ASSISTANT DIRECTOR-GENERAL AMR DIVISION WORLD HEALTH ORGANIZATION AND DIRECTOR OF THE GCC CENTRE FOR INFECTION CONTROL SAUDI ARABIA



"Through the UK GMEP Programme we are working with UK Government experts to better understand the environmental aspects of AMR, with the aim of using this information to support the implementation of Bahrain's AMR National Action Plan."

Dr Jameela Al-Salman

CHAIR OF THE ANTIBIOTIC COMMITTEE, SUPREME HEALTH COUNCIL, BAHRAIN



Roderick Drummond
BRITISH AMBASSADOR TO BAHRAIN



CASE STUDY

PLASTIC POLLUTION IN THE GULF

While the presence of marine litter across the Gulf’s marine environment is evident, there is limited information about its abundance, source and impact of marine litter to inform action.

To address this the UK Gulf Marine Environment Partnership (GMEP) Programme has worked with regional stakeholders to identify the drivers for waste generation in region. The programme has also reviewed the extent, distribution and impact of marine litter within the Gulf.

In the **United Arab Emirates**, we have contributed towards a single use plastic pollution reduction policy through the development of a framework for national and regional marine litter action plans. In **Kuwait** we have worked with the Kuwait Foundation for the Advancement of Science (KFAS) to explore public understanding of marine litter, in recognition that changes in consumer behaviour are key to reducing waste. In Oman we have undertaken surveys of marine litter in protected areas to investigate the extent and source of litter in the area.

Key outputs include - original research papers, policy briefs and public outreach activities.



“We have worked successfully with Cefas through the GMEP programme to develop both national and regional action plans to address the threat marine litter poses to the Gulfs marine environment.”

Winston Cowie

ENVIRONMENT AGENCY ABU DHABI MARINE POLICY-REGULATIONS AND PLANNING TERRESTRIAL & MARINE BIODIVERSITY



CASE STUDY

MARINE PROTECTED AREAS

Marine Protected Areas (MPAs) are an important tool for biodiversity conservation and the UK is leading international efforts to protect 30% of the worlds oceans in MPAs by 2030.

The UK GMEP Programme is working with the Environment Authority (EA) in **Oman**, and the Environment Protection Authority (EPA) in Kuwait to develop management plans and management capacity for MPAs.

In Oman, Cefas are working with the EA to develop a management plan and conduct biodiversity surveys for the globally significant Al Wusta Wetland Nature Reserve. The reserve is home to the world’s largest monospecific coral reef, and Oman’s largest seagrass beds and mangrove forests. The reserve is also one of the most important migratory birds areas in the Middle East. In **Kuwait**, Cefas are working with the EPA to survey and develop a management plan for the Jahra Pools Nature Reserve and mapping important sea grass beds in Kuwait’s southern waters.

The outputs of this work are supporting biodiversity conservation and building climate resilience across the Gulf.



“I’m delighted to see Cefas working through the UK GMEP programme continuing to collaborate with local stakeholders to protect important marine ecosystems and promote nature based solutions as a tool in the fight against climate change”

Michael Davenport

BRITISH AMBASSADOR TO KUWAIT



“Our marine environment is very precious and is instrumental to our economy and way of life. We have been working with Cefas to develop management plans to help project our marine environment and meet our biodiversity protection goals.”

Dr Abdullah Al Zaidan

DEPUTY DIRECTOR GENERAL, EPA



“In collaboration with the UK GMEP Programme we have worked to address the threat marine litter poses to the Gulf, identifying those policies and interventions that may ultimately turn the tide in our fight against plastic pollution.”

Eng. Dina Al Nakib

KFAS PROGRAM MANAGER FLAGSHIP PROJECTS PROGRAM



Together we are working for a sustainable blue future



Centre for Environment
Fisheries & Aquaculture
Science



Cefas (Centre of Environment Fisheries and Aquaculture Science) is the UK government's marine and freshwater science expert.

We help keep our seas and oceans healthy and productive and our seafood safe and sustainable by providing data and advice to the UK government and our overseas partners.

In the UK we are based in laboratories in Lowestoft and Weymouth. Overseas, our scientists work in Commonwealth countries, UK Overseas Territories, South East Asia and the Middle East.

Contact us for more information on the UK Gulf Marine Environment Partnership (GMPEP) Programme or Cefas in general:

uk-gmep@cefas.co.uk
www.cefas.co.uk



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