



sustainable fisheries management





© M. Page

enabling better fisheries management decisions

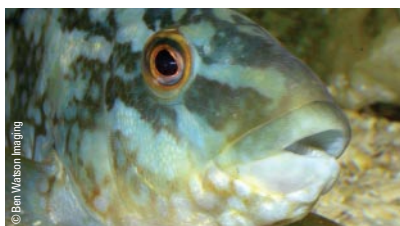
the need for fisheries management Fish stocks are complex and precious resources. Extensive knowledge and experience of such stocks and the influences upon them is required in order for fisheries to be managed in a sustainable manner.

Management is made difficult by the fact that the resources are largely invisible until harvested, impacts are frequently long-term, and the causes of problems can be hard to identify. Additionally, marine and freshwater species may be migratory, stocks may be shared or straddling between countries or areas, and numbers vary naturally from year to year.

a wealth of experience CEFAS has a wealth of international experience providing solutions to marine and freshwater fisheries management problems throughout the world.

Advice is provided to fishery managers, policy makers and governments on local, regional, national and international policies, management strategies, capacity building, and institutional development necessary for the successful management of natural and farmed resources.

integrated management solutions Our aims are to provide integrated fisheries management solutions, contributing to our customers' wider economic and environmental policies. A wide range of services and outputs are delivered to high standards.



© Ben Watson Imaging

monitoring and assessing stocks and habitats

stock assessment and monitoring Stock assessment is the first step in the development of a sustainable fisheries policy.

Appropriate stock assessment techniques are developed, organised and applied. The resulting knowledge is invaluable in subsequent modelling and analysis forming the basis of management strategies.

fisheries and ecosystem modelling Modelling is a key tool for management under uncertainty. Models are applied to acquire a greater understanding of fish stock dynamics and behaviour over a variety of timescales. Outputs contribute to key policy and legislative recommendations, such as stock recovery plans.

ecosystem effects of fishing Understanding the aquatic environment and the influences upon it are critical to the successful management of resources and systems. Policy makers must balance the impacts of fishing against the benefits in the short, medium and long term.

Effects of fishing on habitats and species, from plankton to predator, are assessed to determine impacts of fishing on ecosystems. Results are incorporated in management strategy proposals.

Impacts of non-fishing-related activities and influences on fish stocks are considered, from long-term effects requiring management policies, to one-off disaster recovery situations.

Assessments are included in biological and economic fisheries analyses for stakeholders.



management, productivity and control

farmed fish and fish health Although farmed fish can alleviate the pressure on wild stocks, unsustainable aquaculture can exacerbate the environmental problems in marine coastal areas as well as contribute to fishing pressure on other fish species.

Advice is provided on the development and management of sustainable aquaculture, to ensure that fish and shellfish farm managers maximise the opportunity for food production whilst minimising environmental impacts to produce a healthy product.

fishery management Management advice is provided in relation to the sustainable utilisation of fisheries resources. Complex, multi-species, multi-fleet fisheries models are constructed to address key management concerns. Advice on levels of commercial catch and catch rates, quota management and control in single and co-managed fisheries is given.

monitoring control and surveillance Monitoring, Control and Surveillance systems are essential tools providing the necessary information to enforce integrated fisheries management policies.

Licensing and Vessel Monitoring Systems for control and surveillance of fishing vessel activity are supplied. These systems ensure that registered vessels adhere to management measures such as marine protected areas, closed seasons and no-take zones.



developing capabilities

tagging, tracking and technology Developments in electronic fish tags and telemetry systems bring new insights into fish behaviour, with a range of benefits to fisheries management decisions and policies.

Our in-house teams advise on, develop and implement a range of advanced tagging and instrumentation products for clients. Customer specific scientific research and monitoring programmes provide fish behavioural information for stakeholders.

data gathering and management advice Sustainable fisheries management requires the collection, integration and interpretation of large volumes of data generated from disparate sources. We provide full data handling, collection and interpretation solutions and 'tailor-made' software, including internet-based GIS applications.

training Developing capabilities is key to the future of sustainable fisheries management, and individually customised training courses are provided for clients across the range of fisheries services.



contact us

Dr. Geoff Tingley
Fisheries and Aquaculture Business
Development Manager,
CEFAS Lowestoft, Pakefield Road,
Lowestoft, Suffolk NR33 0HT, UK

Tel +44 (0) 1502 524345

or +44 (0) 7769 670965

Fax +44 (0) 1502 524569

Email g.a.tingley@cefas.co.uk

or marketing@cefas.co.uk

about us

CEFAS is a multi-disciplinary scientific research and consultancy centre providing a comprehensive range of services in fisheries management, environmental monitoring and assessment, and aquaculture to a large number of clients worldwide.

We have more than 500 staff, 3 laboratories and 2 ocean-going research vessels, and over 100 years of fisheries experience.

We have a long and successful track record in delivering high quality services to clients in a confidential and impartial manner. (www.cefas.co.uk)

CEFAS Technology Limited (CTL) is a wholly owned subsidiary of CEFAS specialising in the application of CEFAS technology to specific customer needs in a cost effective and focussed manner.

CTL systems and services are developed by teams that are experienced in fisheries, environmental management and aquaculture and in working closely with clients to ensure that their needs are fully met. (www.cefastechnology.co.uk)

customer focus

With our unique facilities and our breadth of expertise in environmental and fisheries management, we can rapidly put together a multi-disciplinary team of experienced specialists, fully supported by our comprehensive in-house resources.

Our existing customers are drawn from a broad spectrum with wide ranging interests. Clients include:

- international and UK government departments
- the European Commission
- the World Bank
- Food and Agriculture Organisation of the United Nations (FAO)
- oil, water, chemical, pharmaceutical, agro-chemical, aggregate and marine industries
- non-governmental and environmental organisations
- regulators and enforcement agencies
- local authorities and other public bodies

We also work successfully in partnership with other organisations, operate in international consortia and have several joint ventures commercialising our intellectual property.