

JOHN A. GULLAND, FRS, 1923-1990

Network member John A. Gulland passed away on 24 June 1990. His numerous achievements (see box) had made him the world's leading fisheries scientist, a position reflected in his being elected a Fellow of Britain's Royal Society, and numerous other honors.

John Gulland studied mathematics at Cambridge and received his B.A. degree in 1951. The same year, he joined the staff of the Fisheries Laboratory at Lowestoft, then the Mecca of Fisheries Sciences. He left Lowestoft in 1966 to become chief of FAO's Fish Stock Evaluation Branch, in Rome, Italy. He was Chief, Marine Resource Service when he retired from FAO on 30 September 1984.

John's work at FAO confronted him with fishes other than the cod, herring and plaice which then formed the staple of North Sea fishery scientists.

Some key scientific contributions of John A. Gulland

- Introduced Virtual Population Analysis (VPA), now the standard method for assessing stocks of long-lived fishes, especially in Europe and North America.
- Demonstrated in quantitative terms, when called upon by the International Whaling Commission (IWC) in the 1960s, that the whaling fleets of the IWC member countries were grossly over-exploiting the resources they depended upon.
- Compiled, edited and wrote the widely-acclaimed book "The Fish Resources of the Oceans" published in 1970 as FAO Fish. Tech. Pap. No. 97 (later published as a book by Fishing News International), which estimated all of the world's fisheries resources - inclusive of the tropical world, until then much ignored.
- Wrote a widely-used and widely-translated manual initially published by FAO and now available as "Fish Population Dynamics: a manual of basic methods" from John Wiley and Sons.
- Edited numerous other influential books, notably "Fish Population Dynamics", a classic now in its second edition.
- Introduced (with L. Boerema) the " $F_{0.1}$ concept" now widely used as a proxy for Maximum Economic Yield in data-sparse situations.
- Developed a number of short-cut methods and approximations, much used for assessing tropical stocks.

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ICLARM
Membership Nomination Form
for the
NETWORK OF TROPICAL FISHERIES SCIENTISTS

Name: Dr John A. Gulland
Personal mailing address:
Institution: FAO
Position: Chief, Marine Resource Service
Cable address:
Telex no.:

Academic background

University attended	Degree attained	Date awarded
<u>Cambridge</u>	<u>(Mathematics)</u>	<u>BA</u>
	<u>(Biology)</u>	<u>Ph.D</u>
		<u>1951</u>
		<u>1970</u>

Publications and reports (attach list if space is insufficient)

Books

Manual of methods of fish stock assessment FAO 1965
Management of Marine Fisheries Swarthmore, 1974
Fish Resources of the Oceans Fishing News (Add Hk) 1970
Fish Population Dynamics (ed) John Wiley 1977
+ 100 papers in scientific journals

Fig. 1. Facsimile of John Gulland's application form for the NTFs.

The application of his enormous skills to tropical fish stocks, in areas where FAO ran national or regional fisheries development projects or had initiated Fisheries Commissions had a crucial impact on these various bodies; John Gulland was in many cases their major scientific resource. He largely created tropical fisheries science in the process.

He had planned to lead an active "retirement" and to this aim, he joined the Renewable Resources Assessment Group, at the Imperial College of Science and Technology, London, a base from which to write and undertake consultancies throughout the world.

Both the Royal Society and FAO can be expected to publish extensive biographies of John Gulland, and complete lists of his achievements and publications. What can be done here, though, is to honor John Gulland as an NTFs member (see Fig. 1) and as a personal friend, to illustrate the way he related to and supported younger colleagues.

In 1989, a compilation of the publications of 120 NTFs members who had responded to a questionnaire we had sent to about 800 NTFs members was performed at ICLARM, the point being to probe for links between these responses

and specifics of the respondents, including their age, academic degree and publications.

In the process, we identified and coded John Gulland's nearly 200 publications, and computed the sum of his "publications credits" (number of pages * weighting factors; highest for journal articles and lowest for grey literature). John Gulland received 16,420 of these credits; - by far the most of all NTFS members, way on the right tail of a skewed distribution with modes at 0 (zero!) and about 800 credits.

My personal relationship with John Gulland started in 1976 at the workshop on the fishing resources of the Malacca Straits, held from 29 March to 2 April 1976 in Jakarta, Indonesia (one of those routine meetings of which he probably wrote his report long before it began...)

Like most young fisheries scientists, I was in awe of the man and his reputation and while we talked a bit, I was much too intimidated to have made much sense.

Over the following years and through many more meetings, things gradually improved, and we entered into a professional and personal relationship from which I benefited a great deal; among other things, John arranged for me to join in

numerous meetings to which I would not have been invited on my own merits. On the other hand, and increasingly so since the mid-1980s, John felt he ought to prevent me from going overboard; our debates in Fishbyte and elsewhere attest to the resulting exchanges. Here is a snippet from a letter he sent me in January 1988:

"Dear Daniel,

It was good to see you again in Kuwait. I hope you did not feel upset by some of my comments about ELEFAN - it is not the use of ELEFAN that worries me, but the possible misuses. I think you share this concern, but perhaps need to take greater account of the risk of misuse when disseminating computer packages and other instructional material."

Obviously, he was right.

A cruel disease has taken him from us, cutting short what could have been many more years of work unfettered by the bureaucratic constraints he disliked so much.

I shall miss him, and so will all other colleagues who had the opportunity to interact with him.

Daniel Pauly
August 1990