

CHAPTER 16

LOCAL ECOLOGICAL KNOWLEDGE, SCIENCE, PARTICIPATION AND FISHERIES GOVERNANCE IN NEWFOUNDLAND AND LABRADOR: A COMPLEX, CONTESTED AND CHANGING RELATIONSHIP

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Abstract

Amidst the failures of fisheries across the globe and the perceived failure of scientific fisheries management, some recent scholarship has focused attention on the nature and collection of fishers' knowledge, and on the potential utility of that knowledge to fisheries management. This chapter summarises the results of recent research on fish harvesters' local ecological knowledge (LEK) and its interactions with fisheries science and management in Newfoundland and Labrador, Canada. We treat LEK, science and management as parallel, interacting socio-ecological knowledge systems that are internally complex and dynamic. We begin by characterising the dynamism of LEK in Newfoundland fisheries and then describe the rise of a linked fisheries science and management framework in Canada in the 1970s and 1980s that contributed to the marginalisation of fish harvesters' LEK, particularly that of small boat fishers. We then explore the changing interactions between LEK, governance and science in Newfoundland, associated with a recently shifting international discourse that highlights the need for participation and the devolution of some responsibility and authority for fisheries management from centralised state bureaucracies and government-funded and controlled fisheries science to harvesters and other 'stakeholder' groups. Two case studies, comparing and contrasting the role of harvesters and LEK in the management of Atlantic cod (*Gadus morhua*) and American lobster (*Homarus americanus*) fisheries in Newfoundland and Labrador since 1992, are then used as examples of the interactions between these actors and their knowledge systems in practice. We conclude with a discussion of some of the potential benefits and dangers associated with this emerging contemporary relationship between harvesters and their knowledge, fisheries science, participation and governance in Newfoundland and Labrador.

16.1 Introduction

The last several decades have seen the collapse of fisheries across the globe, and many others are fished to potentially unsustainable levels (McGoodwin 1990; Pauly and Maclean 2003). The collapse and closure of the 'northern' cod (*Gadus morhua*) fishery off Canada's east coast – once one of the largest in the world – is one of the more dramatic examples; an ecological and social catastrophe of sobering dimensions (Figure 16.1).

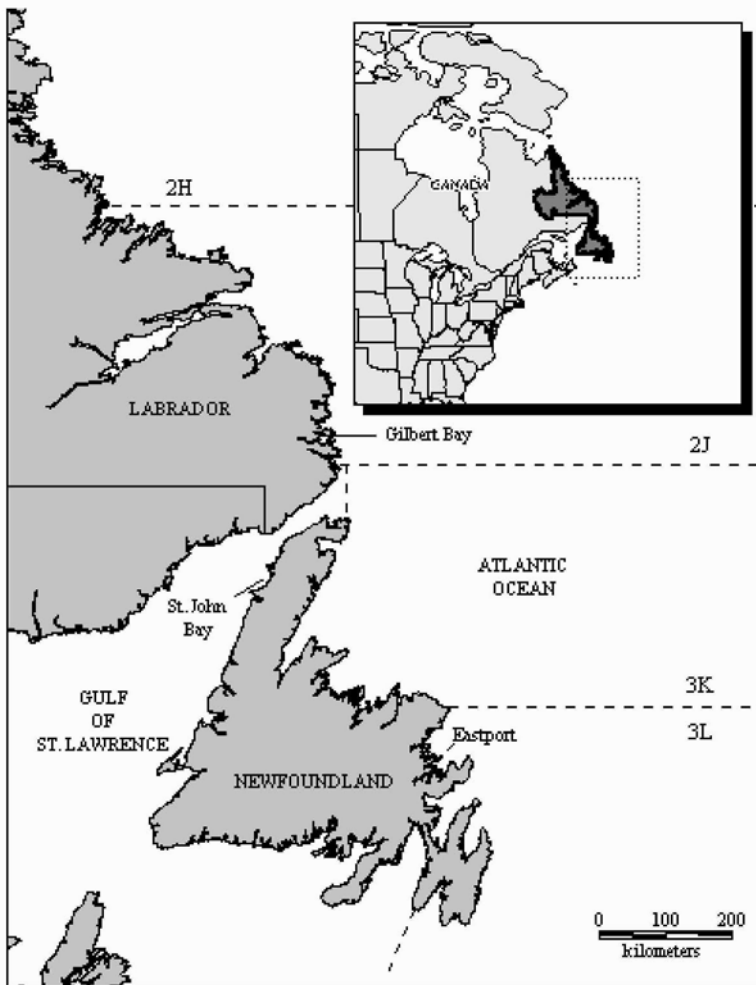


Fig 16.1. Map of the Northwest Atlantic Ocean off Newfoundland and Labrador, Canada illustrating NAFO (North Atlantic Fisheries Organisation) fisheries management divisions 2GHJ 3KL. The Northern cod stocks are generally referred to as those stocks encompassing NAFO divisions 2J3KL

Though differing explanations have been offered about what happened in Newfoundland to precipitate such a crisis, the preponderance of evidence suggests that the collapse stemmed primarily from over-fishing, coupled with inappropriate management measures based on erroneous stock assessments (see Hutchings 1996 for a description of competing hypotheses).