

Chapter 2

Understanding and managing complex systems: historical perspectives and lessons from the Millennium Ecosystem Assessment

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ABSTRACT

Throughout human history, people have shared experiences and knowledge. However, since the rise of both economic specialisation through markets and scientific specialisation a century and a half ago, people no longer share as many experiences or as much knowledge. Environmental management requires shared understanding across stakeholders and with the public at large. Although most scientists and the public believe that science will someday lead to some sort of universal understanding available to all, in fact no such unified, accessible understanding exists. The Millennium Ecosystem Assessment organised more than a thousand scientists from multiple disciplines to work together to collectively understand environmental complexities and suggest management options.

INTRODUCTION

Integrated mission-directed research (IMDR) both draws on and contributes to how we – applied researchers, scholars, environmental managers