

# **Haven or Hazard:**

## ***The Ecology and Future of the Salton Sea***

Michael J. Cohen  
Jason I. Morrison  
Edward P. Glenn

A report of the



PACIFIC INSTITUTE  
FOR STUDIES IN DEVELOPMENT, ENVIRONMENT, AND SECURITY

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Pacific Institute for Studies in  
Development, Environment, and Security  
654 13th Street  
Preservation Park  
Oakland, California 94612  
[www.pacinst.org](http://www.pacinst.org)  
(510) 251-1600 (telephone)  
(510) 251-2203 (fax)



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## About the Pacific Institute

The **Pacific Institute for Studies in Development, Environment, and Security** is an independent, non-profit center created in 1987 to do research and policy analysis in the areas of environment, sustainable development, and international security. Underlying all of the Institute's work is the recognition that the pressing problems of environmental degradation, regional and global poverty, and political tension and conflict are fundamentally interrelated, and that long-term solutions must consider these problems in an interdisciplinary manner. The Institute's mission is to conduct and distribute meaningful and usable research and policy suggestions on the interactions among these issues. The organization seeks to produce quality, impartial research and to make sure it is accessible not only to public and private-sector decision-makers, but also to community groups and the public at large. The ultimate objective of the Pacific Institute's work is to contribute to equitable and sound development, the reversal of environmental degradation, and regional and international peace and security.

## About the Authors

**Michael Cohen** is a Research Associate of the Pacific Institute. He holds a Master's degree in Geography, with a concentration in Resources and Environmental Quality, from San Diego State University. His graduate studies focused on the impacts of institutions on the environment, especially water use in the West. He received a B.A. in Government from Cornell University, and served as a Peace Corps Volunteer in Guatemala, prior to working as a Legislative Assistant on Capitol Hill. His current research focuses on the sustainable management of freshwater resources and water planning in the southwestern U.S. and the Colorado River border region.

**Jason Morrison** is a Senior Associate of the Pacific Institute. He holds a Master's Degree from Boston University's Center for Energy and Environmental Studies and a B.A. in Philosophy from the University of California, San Diego. In 1994, Mr. Morrison was a fellow with the *Americans and World Affairs Fellowship Program* in Berkeley, California. Mr. Morrison has published widely in scholarly and popular publications, and is the lead author of a United Nations-funded report entitled *The Sustainable Use of Water in the Lower Colorado River Basin*. In addition to working on issues relating to western water policy, he heads the Pacific Institute's *Economic Globalization and the Environment Program*, where he is currently studying the public policy implications of the international environmental management standards – ISO 14000.

Professor **Edward P. Glenn** is an environmental biologist in the Department of Soil, Water and Environmental Science at the University of Arizona. Since 1991, he has worked with Mexican and other United States scientists on studies of the ecology of the Colorado River delta and upper Gulf of California marine zone. The focus of their research has been to define the water needs of the remaining riparian and wetland habitats of the delta region and develop restoration strategies for the delta, using waste flows of water from the United States and Mexico. Their research has been published in *Conservation Biology*, *Ecological Engineering*, *Aquatic Botany*, *Southwestern Naturalist* and other scientific journals.

Special thanks to **Dale Pontius**, who worked as a consultant on the project. Mr. Pontius is an attorney and consultant specializing in western water, natural resources, and endangered species law and policy. Most recently, he completed a report on the critical issues in the Colorado River

basin for the Western Water Policy Review Advisory Commission. From 1992 to 1995, he was Vice President for Conservation Programs and Southwest Director for American Rivers, a national conservation organization. He served as Executive Assistant to Governor Bruce Babbitt of Arizona from 1978 to 1980, where he was involved in the development and enactment of the Arizona Groundwater Management Act. Mr. Pontius received his law degree from the University of Arizona and his B.A. and M.A. in Political Science from Indiana University.

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**Cover image:** The Salton Basin, showing the Coachella, Imperial, and Mexicali valleys. The city of Mexicali is visible as a gray-blue area in the lower central portion of the image, with a distinct upper boundary marking the U.S.-Mexico border. In this false color composite image, green vegetation appears red.

The North American Landscape Characterization (NALC) image was obtained from the Earth Resources Observation Systems (EROS) Data Center Distributed Active Archive Center (EDC DAAC), located in Sioux Falls, South Dakota. This Landsat 4 Multispectral Scanner (MSS) Satellite image was acquired on June 30, 1992 (Path 39 Row 37). The NALC MSS data were resampled to 60-meter pixels in a UTM projection.

EDC DAAC's Home Page provides detailed technical and ordering information about each data set distributed. The URL address is: <http://edcwww.cr.usgs.gov/landdaac>

Special thanks to Aljean Klaassen for helping to obtain this image.