

Illustrating
natural science

196



Fish plates and fitness

204



Species responses
to climatic shifts

206



LETTERS | BOOKS | POLICY FORUM | EDUCATION FORUM | PERSPECTIVES

LETTERS

edited by Jennifer Sills

A Call to Action for Coral Reefs

AT THE 11TH INTERNATIONAL CORAL REEF Symposium (ICRS) held in July in Fort Lauderdale, Florida, midway through the International Year of the Reef, more than 3500 experts from 75 countries assembled to face some hard truths: Coral reefs are teetering on the edge of survival, and it is our fault. High levels of carbon dioxide in the atmosphere can produce a lethal combination of warmer seawater and lower pH. Pervasive

overfishing, pollution, coastal development, and physical damage further undermine reef health—and consequently the health of the people and ecosystems depending upon them (1).

Coral reefs feed, protect, and provide livelihoods for hundreds of millions of people around the world. They create homes for billions of fish and other animals, buffer coastlines from the ravages of storms, and provide rich economic opportunities through tourism and fishing. Their value to society has been estimated at more than \$300 billion per year. Reefs are the dynamic centers of the most concentrated biodiversity on Earth.

It is not too late to save coral reefs. A consensus emerged at the 11th ICRS that society has both the knowledge and the tools to bring coral reefs back from the brink. We have a real—but rapidly narrowing—window of opportunity in which to take decisive action. We must immediately: (i) Cut CO₂ emissions by lowering our carbon footprint and ask our policy-makers to commit to low carbon economic growth. (ii) Eliminate open-access fisheries in coral reef ecosystems and instead establish and enforce regulations on user rights, total allowable catch, individual catch quotas, nondestructive gear, and other sustainable fisheries regulations. (iii) Protect coral reef herbivores, including parrotfish, by banning the harvesting of these species for sale and commercial consumption. (iv) Establish and strictly enforce networks of Marine Protected Areas that include No-Take Areas. (v) Effectively manage the waters in between Marine Protected Areas. (vi) Maintain connectivity between coral reefs and associated habitats; mangroves, sea grass beds, and lagoons contribute to the integrity of reef ecosystems and their continued production of ecosystem services. (vii) Report regularly and publicly on the health of local coral reefs. (viii) Recognize the links between what we do on land and how it affects the ocean. (ix) Bring local actors together—including members of industry, civil society, local government, and the scientific community—to develop a shared vision of healthy reefs and a road map for getting there.

Only by taking bold and urgent steps now can we hope to ensure that reefs will survive to enrich life on Earth, as they have for mil-

lions of years before us. By failing to act, we risk bequeathing an impoverished ocean to our children and future generations (2).

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References and Notes

1. An overview of the 2632 papers presented can be found on www.nova.edu/ncri/11icrs/outcomes.html.
2. Please add your name to sign up for this Call to Action. Go to www.thepetitionsite.com/1/11th-international-coral-reef-symposium-call-to-action.
3. R.E.D. is the Chair of the 11th ICRS Local Organizing Committee (LOC); C.B., M.H., J.K., S.R.P., and O.H.-G. are Super Chairs of the 11th ICRS Mini-Symposia. R.v.W. is the Science Chair of the LOC. J.C.O. and B.D.C. are LOC organizers, R.B.A. is the President of the International Society for Reef Studies, and F.S. is Coordinator of the International Year of the Reef 2008.