

CORAL REEF INITIATIVE COORDINATING COMMITTEE



Update on CRI Activities
August 27, 1996

To: Vincent P. Arriola, Bureau of Planning
Michael L. Ham, Bureau of Planning
Gerry Davis, Department of Agriculture
Mel Borja, Guam EPA
Robert Richmond, UOGML
Michael Gawel, TPC

Following is a brief listing of current CRI issues, and points for discussion by the Guam Coral Reef Initiative Coordinating Committee.

1. **REQUESTS FOR FUNDS:** Dr. Michael Crosby has identified funds within NOAA and NMFS for local CRI projects. Guam applied for three projects totalling \$12,000, and is now submitting full proposals for all three projects. See attached for discussion.
2. **LETTER OF SUPPORT FOR NANCY FANNING:** Because Dr. Crosby indicated DOI was backing away from CRI efforts, we wrote a letter to Stayman supporting Nancy Fanning's efforts. While it wasn't necessary, (as it turned out), it was still good in that it helped cement the relationship further.
3. **NOAA'S TRAINING IN HAWAII:** Info only.
4. **YEAR OF THE CORAL REEF PLANNING MEETING:** Mike Gawel's report on Fiji trip.
5. **ICRI REPORT:** Status report on Secretariat.
6. **LETTER OF SUPPORT FOR FUNDING:** Birkeland-Paulay project
7. **DRAFT GUAM INITIATIVE:** For discussion.

CORAL REEF INITIATIVE COORDINATING COMMITTEE

Update on CRI Activities August 27, 1996

ATTACHMENTS FOR DISCUSSION TOPIC 1

THE FY96 NOAA CORAL REEF INITIATIVE

BACKGROUND

In response to a critical need for resources to support the U.S. Coral Reef Initiative (CRI), \$3M for a NOAA CRI was included in the Administration's FY96 budget request to Congress. The \$3M for the CRI was initially (at the CEH/SHC team level) evenly divided within the NMFS and NOS FY96 budgets, but finally included as part of the total COP budget request of \$18M. The COP budget that has come out of Congressional Conference Committee has been reduced from the original \$18M request to \$11.5M.

Given the priority being placed on the U.S. CRI by the Administration, the strong letters of support endorsing local implementation of the U.S. CRI from several Governors to Dr. Baker, and the legislative responsibilities that NOAA has regarding federal/state partnerships in managing of our marine and coastal zone resource, is critical that NOAA demonstrate tangible support of local activities as part of the U.S. Coral Reef Initiative. It is also extremely important that activities associated with the CRI address the critical needs identified by the two regional workshops with the Governors' CRI points of contact in the Caribbean (Virgin Islands, Puerto Rico, Florida and Texas) and the Pacific (American Samoa, Guam, Commonwealth of the Northern Mariana Islands, and Hawaii), as well as the NOAA Draft CRI Strategy. A strong NOAA commitment to the U.S. CRI should be demonstrated by:

- implementing new (and enhancing ongoing) domestic programs which will serve as models for management of coral reef ecosystems as part of sustainable development strategies having local, national and global applications;
- providing linkages between local, national and international science, education and management programs so that our coral reef management strategies will have a basis in sound science, promote sustainable economies and communities along with environmental health, and develop new partnership amongst all stakeholders.

As a result of a memo from Diana Josephson (12/12/95) requesting that NOAA LOs identify how they will provide leadership and FY96 fiscal support for the U.S. CRI at the \$500K level, the NOAA CRI Program Management Committee LO/PO representatives were requested to provide descriptions of what new FY96 activities they are willing and able to undertake, with their own budgeted funds, that will directly address the key priorities given in the NOAA Draft CRI Strategy. It is important to recognize that under this scenario, none of the \$3M in CRI funds requested as part of the COP budget are available.

Results: NESDIS - Satellite-derived SST monitoring for coral reef bleaching; \$45K (see attached)

OAR - 2 coral bleaching research projects; \$200K (see attached)

NMFS - Workshop on CITES Implementation/Enforcement; \$81K (see attached)

NOS - Implementation of NMS coral reef monitoring program; \$75K (see attached) 7- SACT. Budget
sea urchin restoration project; \$100K (see attached)
support for local-level CRI activities; \$75K (see attached) - CSC Charleston
CSC Director - Mary Dawson

COP - Cumulative effects of natural and anthropogenic stressors; \$350K (see attached) STAN JEFF
Asst Admin. for NOS mention OCRM Baker Congress CSO AL Gore

OGP - No newly initiated projects

HENCE, NEWLY INITIATED PROJECTS THAT DIRECTLY SUPPORT NOAA'S FY96 CRI CONSIST OF THE NOS, OAR, NMFS, NESDIS AND COP PROJECTS AMOUNTING TO A TOTAL OF \$926K.

on-going

NEWLY INITIATED
FY96 NOAA CORAL REEF INITIATIVE ACTIVITIES

Sponsoring LO: NESDIS

Title of Project: New Tropical [30N-30S] Satellite-derived SST analyses and related anomalies for assessment of coral reef bleaching potential

Principal NOAA Point of Contact: A. E. Strong [410-293-6566], astrong@nesdis.noaa.gov

Total Project Costs: \$45,000 [NESDIS contract for resident contractor]

Project Activity Time Schedule: Summer 1996

PI: A. E. Strong [NESDIS/ORR/SAL/MAB - E/RA28]

Partners: Mark Eakin [NOAA/OGP]
Dr. Ray Hayes [Howard Univ]
Dr. Tom Goreau [Coral Reef Alliance]
John Sapper [NOAA/NESDIS]

Relevance to NOAA draft CRI priorities: Will make operational satellite-derived SSTs and related anomalies available throughout the entire tropical belt [30N to 30S] available on the World Wide Web to foster exchange of in-situ coral reef data.

Sponsoring LO: NMFS

Title of Project: "Regional Workshop on CITES Implementation and Enforcement of Coral Requirements" one shot

Principal NOAA point of contact: Phil Williams/Ned Cyr [OPR/NMFS]

Total Project Costs: \$80,700

Project Activity Time Schedule: Spring, 1996

PI: not yet available

Partners: USFWS

Relevance to NOAA draft CRI priorities: This project will help achieve the vision of the Coral Reef Initiative Strategy to conserve, restore and effectively manage coral reef ecosystems by establishing partnerships with coral range states and increasing coordination among parties to conserve their coral resources.

Sponsoring LO: OAR

Title of Project: "The effect of small-scale temporal and spatial variation in the environmental factors causing coral bleaching" (UNCW 9621)

Principal NOAA point of contact: David Stein [OAR/NURP]

Total Project Costs: \$139,788 Keys

Project Activity Time Schedule: 1 January 1996 - 31 December 1996

PI: Edmunds, P. J. [CSU Northridge]
Partners: Gates, R.D. [UCLA]
Gleason, D. [Univ. Houston]
J. Leichter [Stanford]

Relevance to NOAA draft CRI priorities: These projects directly address CRI "Understand the Problem", Item 2, "Bleaching from high temperature, UV and other climate scale stress".

Sponsoring LO: OAR

Title of Project: "Ultraviolet radiation induced DNA damage in coral reef microbial communities" (UNCW 9627)

Principal NOAA point of contact: David Stein [OAR/NURP]

Total Project Costs: \$59,375 Keys

Project Activity Time Schedule: 1 April 1996 - 31 March 1998

PI: Jeffrey, W.H. [UWF]

Partners: Coffin, R.B. [USEPA]
Miller, R.V. [Oklahoma SU]
Mitchell, D.L. [UT]
Karentz, D. [U San Francisco]

Relevance to NOAA draft CRI priorities: This project directly address NOAA CRI "Understand the Problem", Item 2, "Bleaching from high temperature, UV and other climate scale stress".

N.B.: Owing to a 1/3 budget cut, and present unapproved status, the NURP budget has not yet been formulated. Therefore, Centers do not yet have their budgets and have not prepared and submitted final proposals for FY 1996 funds. Although we will make every effort to insure support for the two proposals above, budgetary considerations may preclude their support.

Sponsoring LO: NOS

Title of Project: "Initiating a coordinated U.S. Coral Reef Monitoring Program"

Principal NOAA point of contact: Michael P. Crosby [OCRM/NOS]

Total Project Costs: \$75,000

Project Activity Time Schedule: Summer, 1996

PI: M. P. Crosby [OCRM/NOS]

Partners: FKNMS
FGBNMS
GRNMS
FBNMS
JBNERR
National Park Service
Hughes Wildlife Sanct.

Relevance to NOAA draft CRI priorities: Both the U.S. Coral Reef Initiative and the U.S. Coastal Global Ocean Observing System are attempting to developing long-term monitoring programs that will assist in the management of coastal resources. A coordinated coral reef monitoring effort by the NMS can form the basis of a major NOAA cooperative effort with the National Biological Service, form the basis of a significant part of the developing Coastal GOOS, and be a significant player in the new CRI Global Monitoring Program.

Sact. #

Sponsoring LO: NOS

Title of Project: "Support for Local-level Coral Reef Initiative Activities"

Principal NOAA point of contact: Michael P. Crosby [OCRM/NOS]

Total Project Costs: \$75,000

Project Activity Time Schedule: Summer, 1996

PI: not yet finalized

Partners: Paul Scholz [CSC/NOS]
State, Territory and Commonwealth CRIs

Relevance to NOAA draft CRI priorities: The focus of proposed projects must be in the areas of 1) education, outreach, training and strengthening management capabilities in support of local CRI initiatives, and 2) assessment of existing and/or implementation of new local management strategies for the long-term conservation and sustainable use of coral reef environments.

*Coral Reef Initiative
CSC*

Sponsoring LO: NOS

Title of Project: "Restoration of Sea Urchin Populations in Florida Keys NMS"

Principal NOAA point of contact: Charles M. Wahle; [OCRM/NOS]

Total Project Costs: \$100,000

Project Activity Time Schedule: begin in Spring, 1996

PI: C.M. Wahle

Partners: University of Miami

Relevance to NOAA draft CRI priorities: This project will make the first coordinated attempt to re-establish this critical species in the reefs of Florida. The work will involve three major components: (i) an urchin larval raising hatchery; (ii) field tests of conditions favoring their successful reintroduction and survival in the wild; and (iii) pathology studies to further our understanding of the cause(s) of the basin-wide population crash.

Sanct. #

Sponsoring PO: COP

Title of Project: "Human-Environment Linkages in the South Florida Ecosystem: Effects of Natural and Anthropogenic Stressors"

Principal NOAA point of contact: Larry Pugh, NCOPO

Total Project Costs: \$800,000 (350,000 new in FY96)

Project Activity Time Schedule: FY95-00

PI: Mark A. Harwell (University of Miami, RSMAS)

Partners: NOAA, EPA, USGS, Harbor Branch Foundation, University of North Carolina, Florida Atlantic University, and Smithsonian Institution. Collaborators include the managers of the Florida Keys National Marine Sanctuary and the Biscayne National Park and representatives from state and local governments.

Relevance to NOAA draft CRI priorities: The project addresses the three main threats facing coral reefs, i.e., nutrient over-enrichment, sedimentation/turbidity, and overfishing, along with a suite of other environmental parameters such as temperature, salinity, hurricanes and storms. Focused on support to management and decision-making, the project is designed as a multi-institutional, interdisciplinary landscape-level research program to: 1) characterize physical, chemical, and biological stressors of the region; 2) develop and validate new indicators of stress for key organisms or ecological processes; and, 3) characterize cumulative stress effects.

on-going



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Silver Spring, Maryland 20910

April 10, 1996

MEMORANDUM FOR: U.S. Coral Reef Initiative Principal Points of Contact

FROM: Dr. Michael P. Crosby *Michael Crosby*
National Research Coordinator

SUBJECT: Revised CRI Funding Announcement

Attached is an updated draft copy of the NOAA Announcement of Availability of Funds to support local-level Coral Reef Initiatives (CRIs). I have made revisions based on the results of our meeting last month in Washington D.C. As we agreed at that meeting, I am asking for your final comments on this draft. Since the pre-proposal date is May 15, I would appreciate receiving your comments ASAP. If you feel that the dates should be delayed, please let me know. If you have any questions, please feel free to contact me via phone (301-713-3155, ext 114), fax (301-713-4012) or internet (mcrosby@coasts.nos.noaa.noaa).

Chccrs!

cc: P. Scholz



AN ANNOUNCEMENT OF AVAILABILITY OF FUNDS FOR SUPPORT OF LOCAL-LEVEL CRI PROGRAMS

The National Ocean Service (NOS) of the National Oceanic and Atmospheric Administration (NOAA), in partnership with American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, Hawaii, Puerto Rico, and the U.S. Virgin Islands (hereafter called Partners) announces the availability of funds (~ \$75,000) for supporting implementation of the Partners' local-level Coral Reef Initiatives (CRIs). The focus of proposed projects must be in the areas of:

- 1) education, outreach, training and strengthening management capabilities in support of local CRI initiatives, and
- 2) assessment of existing and/or implementation of new local management strategies for the long-term conservation and sustainable use of coral reef environments.

Examples of potential projects include: production and distribution of local-level CRI education/outreach materials (pamphlets, videos, etc.), local-level CRI forums/workshops, training of local volunteers for coral reef monitoring and assessments, in-service training for teachers, installation of mooring buoys in critical coral habitats, and other activities. Projects will only be considered that are one year in duration, although it is expected that the final one-year product will provide a strong basis for future activities in direct support to local-level CRIs.

A pre-requisite for funding under this announcement is that prospective applicants must develop their proposals in close consultation/collaboration with the Governors Principal Points of Contact (POCs) for the U.S. CRI and State CZM Program, and, where appropriate, National Estuarine Research Reserve System or National Marine Sanctuary Sites. It is envisioned that individual projects will not exceed \$5,000-\$10,000, each, and that the total amount of funds distributed to individual Partner projects will not exceed ~ \$12,000. Collaborative projects between more than one Partner will also be considered. NOAA/NOS is very supportive of collaborative projects that demonstrate direct applicability to the National and Partners' CRI Programs, and have entered into this partnership to jointly encourage and support such efforts whenever possible. NOAA/NOS will also seek to leverage additional funds for this effort from other programs, organizations and agencies with similar interests. However, at this time no additional funding is available and the award of funds under this initiative is subject to availability of NOAA FY96 funds. While matching funds are not required, financial commitments by the applicant institution will enhance the likelihood of receiving NOAA funding. Due to the low level of funding available for this initiative, no indirect/overhead charges will be allowed.

CRI Proposal Time-line and Format

Pre-proposals

Pre-proposal (NTE 3 pages) must be postmarked by May 15, 1996. A single title page (not included in the 3 page limit) must include: project title, project location, project period, principal and co-principal investigators (name, institutional affiliation, address, phone, fax, and e-mail), any other collaborators (name, institutional affiliation, address, phone, fax, and e-mail), total funds requested from NOAA, and total matching funds (if any). The three page pre-proposal must include the following sections in sequence: Statement of the Problem or Need, Method for Addressing the Problem or Need, Final Product and how it addresses the Problem or Need, Collaboration with other CRI-related Activities, and Principal Investigator Qualifications.

Full Proposals

A sub-set of pre-proposals will be requested to submit full length proposals (NTE 10 pages) which must be postmarked by July 15, 1996. A single title page (not included in the 10 page limit) must include: project title, project period, project location, principal and co-principal investigators (name, institutional affiliation, address, phone, fax, and e-mail), any other collaborators (name, institutional affiliation, address, phone, fax, and e-mail), total funds requested from NOAA, and total matching funds (if any). The ten page proposal must include the following sections in sequence: Statement of the Problem or Need, Method for Addressing the Problem or Need, Final Product and how it addresses the Problem or Need, Collaboration with other CRI-related Activities, Budget (detailing requested and matching costs for personnel, travel, supplies, etc.), and Budget Justification (why each of the budget items is required). Maps, tables, and figures are to be included as part of the ten page limit. A one page curriculum vitae for each principal investigator and co-principal investigator, a Statement of Support for the project from the local CRI POC, and a list of any literature cited in the proposal, must also be included but will not count as part of the ten page limit.

Both pre- and full length project proposals will be reviewed and final funding approval given by NOAA/NOS (Office of Ocean and Coastal Resource Management in partnership with the Center for Coastal Services), in consultation with the Governors' CRI POCs. Project start dates should be in late 1996. For further information, please contact your local CRI POCs listed below. All pre- and full length proposals must be sent to Dr. Michael P. Crosby at the address given below.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Silver Spring, Maryland 20910

May 16, 1996

MEMORANDUM FOR: U.S. Coral Reef Initiative Principal Points of Contact

FROM: Dr. Michael P. Crosby *Michael P. Crosby*
National Research Coordinator

SUBJECT: Final CRI Funding Announcement

Attached is a final copy of the NOAA Announcement of Availability of Funds to support local-level Coral Reef Initiatives (CRIs). I have made revisions based on the results of our meeting earlier this year in Washington D.C., and subsequent verbal, written and e-mail input from each of you and OCRM and CSC staff. As we have previously discussed, I will rely on each of you to distribute this announcement to all appropriate individuals, institutions and organizations in your region. Please keep in mind that since each of you will be involved in the review of the proposals, it is not appropriate for you to also be listed as a Principal Investigator on any of the proposals. I will continue to seek additional funds from both within and outside of NOAA to support this effort, but have not received any additional commitments at this time. If you have any questions, please feel free to contact me via phone (301-713-3155, ext. 114), fax (301-713-4012) or internet (mcrosby@coasts.nos.noaa.noaa).

Cheers!

cc: P. Scholz
J. Uravitch
N. Fanning



AN ANNOUNCEMENT OF AVAILABILITY OF FUNDS FOR SUPPORT OF LOCAL-LEVEL CRI PROGRAMS

The National Ocean Service (NOS) of the National Oceanic and Atmospheric Administration (NOAA), in partnership with American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, Hawaii, Puerto Rico, and the U.S. Virgin Islands (hereafter called Partners) announces the availability of funds (~ \$75,000) for supporting implementation of the Partners' local-level Coral Reef Initiatives (CRIs). The focus of proposed projects must be in the areas of:

- 1) education, outreach, training and strengthening management capabilities in support of local CRI initiatives, and
- 2) assessment of existing and/or implementation of new local management strategies for the long-term conservation and sustainable use of coral reef environments.

Examples of potential projects include: production and distribution of local-level CRI education/outreach materials (pamphlets, videos, etc.), local-level CRI forums/workshops, training of local volunteers for coral reef monitoring and assessments, in-service training for teachers, installation of mooring buoys in critical coral habitats, and other activities. Projects will only be considered that are one year in duration, although it is expected that the final one-year product will provide a strong basis for future activities in direct support to local-level CRIs.

A prerequisite for funding under this announcement is that prospective applicants must develop their proposals in close consultation/collaboration with the Governors Principal Points of Contact (POCs) for the U.S. CRI and State CZM Program, and, where appropriate, National Estuarine Research Reserve System or National Marine Sanctuary Sites. It is envisioned that individual projects will not exceed \$5,000-\$10,000, each, and that the total amount of funds distributed to individual Partner projects will not exceed ~ \$12,000. Collaborative projects between more than one Partner will also be considered. NOAA/NOS is very supportive of collaborative projects that demonstrate direct applicability to the U.S. and Partners' CRI Programs, and have entered into this partnership to jointly encourage and support such efforts whenever possible. NOAA/NOS will also seek to leverage additional funds for this effort from other programs, organizations and agencies with similar interests. However, at this time no additional funding is available and the award of funds under this initiative is subject to availability of NOAA FY96 funds. While matching funds are not required, financial commitments by the applicant institution will enhance the likelihood of receiving NOAA funding. Due to the low level of funding available for this initiative, no indirect/overhead charges will be allowed.

CRI Proposal Time-line and Format

Pre-proposals

Pre-proposal (NTE 3 pages) must be postmarked by June 10, 1996. A single title page (not included in the 3 page limit) must include: project title, project location, project period, principal and co-principal investigators (name, institutional affiliation, address, phone, fax, and e-mail), any other collaborators (name, institutional affiliation, address, phone, fax, and e-mail), total funds requested from NOAA, and total matching funds (if any). The three page pre-proposal must include the following sections in sequence: Statement of the Problem or Need, Method for Addressing the Problem or Need, Final Product and how it addresses the Problem or Need, Collaboration with other CRI-related Activities, and Principal Investigator Qualifications.

Full Proposals

A sub-set of pre-proposals will be requested to submit full length proposals (NTE 10 pages) which must be postmarked by July 19, 1996. A single title page (not included in the 10 page limit) must include: project title, project period, project location, principal and co-principal investigators (name, institutional affiliation, address, phone, fax, and e-mail), any other collaborators (name, institutional affiliation, address, phone, fax, and e-mail), total funds requested from NOAA, and total matching funds (if any). The ten page proposal must include the following sections in sequence: Statement of the Problem or Need, Method for Addressing the Problem or Need, Final Product and how it addresses the Problem or Need, Collaboration with other CRI-related Activities, Budget (detailing requested and matching costs for personnel, travel, supplies, etc.), and Budget Justification (why each of the budget items is required). Maps, tables, and figures are to be included as part of the ten page limit. A one page curriculum vitae for each principal investigator and co-principal investigator, a Statement of Support for the project from the local CRI POC, and a list of any literature cited in the proposal, must also be included but will not count as part of the ten page limit.

Both pre- and full length project proposals will be reviewed and final funding approval given by NOAA/NOS (Office of Ocean and Coastal Resource Management in partnership with the Coastal Services Center), in consultation with the Governors' CRI POCs. Project start dates should be in late 1996. For further information, please contact your local CRI POCs listed below. All pre- and full length proposals must be sent to Dr. Michael P. Crosby at the address given below.

BUREAU OF PLANNING

SETBISION MAMPLANEHA

Government of Guam



Carl T.C. Gutierrez
Governor of Guam

P. O. Box 2950 Agana, Guam 96910

Tel: (671) 472-4201/3

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Madeleine Z. Bordallo
Lieutenant Governor

Vincent P. Arriola
Director

JUN 21 1996

Dr. Michael P. Crosby
National Research Coordinator
Office of Ocean and Coastal Resource Management
NOAA
1305 East West Highway
SSMC-4, 11th Floor, Rm. 11437
Silver Spring, MD. 20910

Dear Dr. Crosby:

Enclosed are the following proposals from Guam, for the use of the Coral Reef Initiative money. The three proposals are for projects which have regional or larger benefits.

All three projects will be useful in developing public policy and increasing public education on Guam's Coral Reef issues. These projects have all been reviewed and approved by Guam's Coral Reef Coordinating Committee. Your positive review of these projects will be appreciated.

Sincerely,


VINCENT P. ARRIOLA
Director

PROPOSAL TO TEST WHETHER OR NOT
CORAL RECRUITMENT HAS REALLY DIMINISHED ON GUAM

Dr. Charles Birkeland and Dr. Gustav Paulay
University of Guam Marine Laboratory
Mangilao, Guam 96923

FAX (671) 734-6767

TEL (671) 735-2184

Coral colonies die from both natural factors (typhoons, crown-of-thorns starfish predation, overgrowth by sponges or algae) and man-made causes (sedimentation, pollution, anchor-damage). There always has been a natural turnover, and the dead colonies are replaced by juvenile corals. However, there are indications that coral recruitment has greatly diminished over the years. Birkeland, Rowley and Randall set out 525 fouling panels in the waters around Guam in 1979 and 278 coral colonies settled, underwent metamorphosis and started to grow. In 1991, Charles Birkeland and Kazuhiko Sakai set out 468 panels for a comparable length of time, but only 2 corals settled. In 1992, Paul Chirichetti set out 224 fouling panels, but also found only 2 corals to settle. In 1979, there were 0.53 corals per panel. Twelve and 13 years later, only 0.004 and 0.009 corals per panel were found, 1/124th and 1/59th as many.

Divers and marine biologists on Guam are under the impression that the coral reefs of Guam are being degraded, slowly dying by attrition, i.e., those corals that die from natural and man-made causes are not being replaced by recruitment. Recruitment can be inhibited by a variety of human activities that result in sedimentation, eutrophication, and pollution of the coastal waters. The results of the three studies noted in the previous paragraph are rather extreme, perhaps unbelievable. Whether recruitment of corals around Guam and the potential of reefs to recover from damage has truly diminished is a very important issue that needs to be decided.

We propose to set out the exact same kinds of fouling panels in the same locations and at the same time (May, a month before coral spawning) in order to rigorously test whether corals are not recruiting now as abundantly as they were in the late 1970s, two decades ago. Birkeland and Paulay are jointly submitting this proposal for \$6,000 in order to pay for supplies (plexiglass for fouling panels, construction blocks, nuts and bolts for mounting the plates, telephone wire for fastening to the reef), for boat time, and to hire a student helper. We will set out the plates in May 1997 and collect them in November 1997. This effort will benefit both public education and management effort.

Monitoring Proposal to Establish Permanent Monitoring Stations in areas where Coral Reseeding and Transplantation has occurred

The University of Guam, Marine Lab and Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) have developed techniques for fertilization of coral in laboratory conditions. Reef areas in Southern Guam and in Tumon Bay where extensive sedimentation has lead to dramatic declines in live coral colonies and low to zero rate of successful recruitment became candidate for reseeded experimentation. Dry Typhoons in 1992, help to resettle sedimentation away from the reef thus making new recruitment plausible.

University of Guam in 1995 began reseeded of coral colonies in Tumon Bay and in selected areas of Southern Guam. Monitoring however has only been possible on an occasional basis. The University and DAWR propose to establish permanent monitoring stations in order to evaluate and more fully analyze the success of reseeded efforts.

This effort would lead to benefits in management and repair of damaged reefs and would be transferable not only to island in the pacific region, but through all coral areas of the world. Proposed cost of efforts \$3,000.00 dollars.

Dubbing and Distribution of Education Video of Coral Reefs

The Guam Division of Aquatic and Wildlife Resources (DAWR) in collaboration of the University of Guam, Marine Lab, recently produced an educational video on Coral Reefs. This 24 minute video covers a variety of topics from the value of reefs to the effects of human activities on their survival. The video is aimed at middle school students, but is also appropriate for older and more educated audiences.

The video focuses on the Reefs of Micronesia, but the information presented is applicable to reefs throughout the world. Printed copies of the script are available to allow other islands to translate the English version into their native language. This proposal requests \$3,000.00 dollars in order to make sufficient copies to distribute to all schools, ngo's, and agencies throughout the region. This effort will increase opportunities for public education and awareness of human impact on reefs and reef resources.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Silver Spring, Maryland 20910

Mike

June 21, 1996

MEMORANDUM FOR: U.S. Coral Reef Initiative Principal Points of Contact

FROM: Dr. Michael P. Crosby
National Research Coordinator

SUBJECT: Review of CRI Pre-Proposals

Attached are copies of the local-level Coral Reef Initiative (CRI) pre-proposals received from the state/territory for which you are a CRI Principal Point of Contact (POC). Please review all of the submitted proposals carefully, and rank the proposals in the relative order of importance to your local CRI efforts. If the state/territory for which you are a POC has submitted only one pre-proposal, please review the proposal to determine whether the proposed project is potentially valuable to the local CRI program and warrants funding. Please let me know of your ranking or endorsement status for the attached pre-proposal(s) by July 12, 1996.

Thank you for your continued participation in the CRI effort.

cc: N. Fanning
J. Uravitch



U.S. Coral Reef Pre-Proposals

Project Title	Principal and Co-Principal Investigators	State/Territory	Funds Requested
<i>Educational Video on Conserving American Samoa's Coral Reefs</i>	American Samoa Coral Reef Core Group	American Samoa	\$12,000
<i>CNMI Implementation of U.S. Coral Reef Initiative Elements</i> A) <i>Education and outreach capabilities in support of local CRI initiatives</i> B) <i>Training in coral reef research methods</i>	John Furey (PI, Project A) Jessica Tomokane (PI, Project B) Carlos Ketengembang (Co-PI, Project B)	Commonwealth of the Northern Mariana Islands	\$10,000
<i>Proposal to Test Whether or Not Coral Recruitment has Really Diminished on Guam</i>	Charles Birkeland (PI) Gustav Paulay (PI)	Guam	\$6,000
<i>Monitoring Proposal to Establish Permanent Monitoring Stations in Areas Where Coral Reseeding and Transplantation has Occurred</i>	University of Guam, Marine Lab Department of Agriculture, Division of Aquatic and Wildlife Resources	Guam	\$3,000
<i>Establishing the Hawai'i Coral Reef Network on the Internet: providing a forum for education and research</i>	Brian Tissot (PI) Eric Brown (PI) Other Collaborators: Carl Stepath Dave Raney	Hawaii	\$6,000
<i>Inventory Catalogue of Hawai'i's Coral Reefs</i>	Carl Berg (PI) Hannah Bernard (PI)	Hawaii	\$5,000
<i>Marine Educational Video in Support of the Hawaii Coral Reef Initiative: Hawai'i's Coral Reefs: The Problems and the Solutions</i>	Chris Evans (PI) Karl Huneke (Co-PI)	Hawaii	\$8,200
<i>Ocean Pulse Coral Reef Monitoring Project: Establishing a Model for Community Involvement in Coral Reef Monitoring for Education and Research</i>	Carl Stepath (PI) Donald Heacock (PI) Other Collaborators: Brian Tissot James Maragos Pollette Phillips Steve Solrysik	Hawaii	\$5,000

<i>Establishing a community-based/government partnership for the implementation of a coral reef long-term ecological monitoring program for island of Kaua'i, Hawai'ian Islands</i>	Donald Heacock (PI) Brian Tissot (Co-PI) Kimberly Lowe (Co-PI) Allen Tom (Co-PI)	Hawaii	\$6,000
<i>Protect our Reefs: Poster and Sign Project</i>	Gina Aranki (PI) Wendy Wiltse(PI)	Hawaii	\$7,500
<i>Teacher Training in Low-Impact Coastal Field Trips and New Marine Multimedia CD-ROM</i>	Maura O'Connor (Co-PI) Carol Hopper (Co-PI)	Hawaii	\$5,000
<i>Public Education: Understanding Maui's Coral Reef Eco-Systems</i>	Eric Brown (PI) Meagan Jones (PI) Robin Newbold (PI) Other Collaborators: Maui Activity Owner's Association	Hawaii	\$5,000
<i>A Guide to Hawai'i's Coral Reefs</i>	Eric Brown (PI) Meagan Jones (PI) Anne Rillero (PI) Other Potential Collaborators: Hawai'ian Islands Humpback Whale NMS Maui Visitors Bureau Maui Ocean Center Maui Activity Owner's Association County of Maui	Hawaii	\$10,000
<i>Coral Reef Awareness Video Project</i>	Hannah Bernard (Co-PI) Carl Berg (Co-PI)	Hawaii	\$15,000
<i>Technical Workshop on Coral Reef Community Characterization and Monitoring</i>	Jorge Gargia Sais (PI)	Puerto Rico	\$12,000
<i>Coral Reef Educational Video</i>	Department of Planning and Natural Resources University of the Virgin Islands, Eastern Caribbean Center	Virgin Islands	\$10,000

Monitoring Proposal to Establish Permanent Monitoring Stations in areas where Coral Reseeding and Transplantation has occurred

The University of Guam, Marine Lab and Department of Agriculture, Division of Aquatic and Wildlife Resources (DAWR) have developed techniques for fertilization of coral in laboratory conditions. Reef areas in Southern Guam and in Tumon Bay where extensive sedimentation has lead to dramatic declines in live coral colonies and low to zero rate of successful recruitment became candidate for reseeded experimentation. Dry Typhoons in 1992, help to resettle sedimentation away from the reef thus making new recruitment plausible.

University of Guam in 1995 began reseeded of coral colonies in Tumon Bay and in selected areas of Southern Guam. Monitoring however has only been possible on an occasional basis. The University and DAWR propose to establish permanent monitoring stations in order to evaluate and more fully analyze the success of reseeded efforts.

This effort would lead to benefits in management and repair of damaged reefs and would be transferable not only to island in the pacific region, but through all coral areas of the world. Proposed cost of efforts \$3,000.00 dollars.

PROPOSAL TO TEST WHETHER OR NOT
CORAL RECRUITMENT HAS REALLY DIMINISHED ON GUAM

Dr. Charles Birkeland and Dr. Gustav Paulay
University of Guam Marine Laboratory
Mangilao, Guam 96923

FAX (671) 734-6767
TEL (671) 735-2184

Coral colonies die from both natural factors (typhoons, crown-of-thorns starfish predation, overgrowth by sponges or algae) and man-made causes (sedimentation, pollution, anchor-damage). There always has been a natural turnover, and the dead colonies are replaced by juvenile corals. However, there are indications that coral recruitment has greatly diminished over the years. Birkeland, Rowley and Randall set out 525 fouling panels in the waters around Guam in 1979 and 278 coral colonies settled, underwent metamorphosis and started to grow. In 1991, Charles Birkeland and Kazuhiko Sakai set out 468 panels for a comparable length of time, but only 2 corals settled. In 1992, Paul Chirichetti set out 224 fouling panels, but also found only 2 corals to settle. In 1979, there were 0.53 corals per panel. Twelve and 13 years later, only 0.004 and 0.009 corals per panel were found, 1/124th and 1/59th as many.

Divers and marine biologists on Guam are under the impression that the coral reefs of Guam are being degraded, slowly dying by attrition, i.e., those corals that die from natural and man-made causes are not being replaced by recruitment. Recruitment can be inhibited by a variety of human activities that result in sedimentation, eutrophication, and pollution of the coastal waters. The results of the three studies noted in the previous paragraph are rather extreme, perhaps unbelievable. Whether recruitment of corals around Guam and the potential of reefs to recover from damage has truly diminished is a very important issue that needs to be decided.

We propose to set out the exact same kinds of fouling panels in the same locations and at the same time (May, a month before coral spawning) in order to rigorously test whether corals are not recruiting now as abundantly as they were in the late 1970s, two decades ago. Birkeland and Paulay are jointly submitting this proposal for \$6,000 in order to pay for supplies (plexiglass for fouling panels, construction blocks, nuts and bolts for mounting the plates, telephone wire for fastening to the reef), for boat time, and to hire a student helper. We will set out the plates in May 1997 and collect them in November 1997. This effort will benefit both public education and management effort.

Chillie Luster

② H. H. H.

③ Grant for
N9146
-98-

75% Cont. New Lab
65% Nat. Atm. Chm
Funding



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Silver Spring, Maryland 20910

July 30, 1996

MEMORANDUM FOR: NOAA Coral Reef Initiative Funding Applicants

FROM: Dr. Michael P. Crosby
National Research Coordinator

SUBJECT: Results of CRI Pre-proposal Review

Thank you once again for your submission of a pre-proposal in response to the NOAA Announcement of Availability of Funds to support local-level Coral Reef Initiatives (CRIs). After a careful review of the pre-proposals by various NOAA staff and each of the Governors' Points of Contact for the U.S. CRI, I would like to invite you to submit a full length proposal for further consideration. A complete listing of pre-proposals that have been requested to submit full length proposals is attached. It should be emphasized that this is NOT a notice of award nor in any way a commitment to fund your proposed work at any future time. This is simply a notification that your pre-proposal was ranked high enough to invite submission of a full length proposal. Following a review of all full length proposals, you will be notified as to funding decisions.

Crosby

We expect to receive full length proposals that total approximately \$130,000 in requested funds. Since NOAA only has approximately \$70,000-\$75,000 available to support this effort, it will be impossible to fund all of the proposals that we received. I am, therefore, quite pleased to announce that the National Fish and Wildlife Foundation (NFWF) has joined NOAA in a partnership to leverage additional funds to support this CRI effort. The NFWF seeks to forge partnerships between the public and private sectors to support activities that examine various environmental problems. The format for the full length proposals has been slightly modified to provide information that NFWF can use in their efforts to secure funds from outside of NOAA. The attached revised full length proposal instructions describe a standard format required for all proposals. I hope that you will accept our invitation to submit a full length proposal and enter into the next round of reviews.

② to copy Guyan Main lab
Good luck and Cheers!

① Manny Port
H. H. H.

min - 2nd 12,000
Aug 31

130
75
65-

cc: CRI POCs
J. Clark
N. Fanning
J. Uravitch
P. Scholz

too many people too
look into

④ M. Hammett

⑤ Other

SPREP strategy
1997

- pilot training May 1995 Hawaii
- training manual
- exp. funding

We have Resources - ...



NOAA Coral Reef Initiative Full Length Proposals
(listing order has NO relation to relative ranking)

Project Title	Principal and Co-Principal Investigators	State/Territory
<i>Educational Video on Conserving American Samoa's Coral Reefs</i>	American Samoa Coral Reef Core Group	American Samoa
<i>CNMI Implementation of U.S. Coral Reef Initiative Elements</i> A) Education and outreach capabilities in support of local CRI initiatives B) Training in coral reef research methods	John Furey (PI, Project A) Jessica Tomokane (PI, Project B) Carlos Ketengembang (Co-PI, Project B)	Commonwealth of the Northern Mariana Islands
<i>Proposal to Test Whether or Not Coral Recruitment has Really Diminished on Guam</i>	Charles Birkeland (PI) Gustav Paulay (PI)	Guam
<i>Monitoring Proposal to Establish Permanent Monitoring Stations in Areas Where Coral Reseeding and Transplantation has Occurred</i>	University of Guam, Marine Lab Department of Agriculture, Division of Aquatic and Wildlife Resources	Guam
<i>Dubbing and Distribution of Education Video of Coral Reefs</i>	University of Guam, Marine Lab Department of Agriculture, Division of Aquatic and Wildlife Resources	Guam
<i>Technical Workshop on Coral Reef Community Characterization and Monitoring</i>	Jorge Gargia Sais (PI)	Puerto Rico
<i>Coral Reef Educational Video</i>	Department of Planning and Natural Resources University of the Virgin Islands, Eastern Caribbean Center	Virgin Islands
<i>Establishing the Hawai'i Coral Reef Network on the Internet: providing a forum for education and research</i>	Brian Tissot (PI) Eric Brown (PI) Other Collaborators: Carl Stepath Dave Raney	Hawaii

**INSTRUCTIONS TO APPLICANTS FOR FULL LENGTH PROPOSALS
UNDER A JOINT NOAA AND NFWF PROGRAM
TO SUPPORT LOCAL-LEVEL CRI PROGRAMS**

The National Ocean Service (NOS) of the National Oceanic and Atmospheric Administration (NOAA), in partnership with American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, Hawaii, Puerto Rico, and the U.S. Virgin Islands (hereafter called Partners) previously announced the availability of funds (~ \$75,000) for supporting implementation of the Partners' local-level Coral Reef Initiatives (CRIs). The focus of proposed projects must be in the areas of:

- 1) education, outreach, training and strengthening management capabilities in support of local CRI initiatives, and
- 2) assessment of existing and/or implementation of new local management strategies for the long-term conservation and sustainable use of coral reef environments.

Examples of potential projects include: production and distribution of local-level CRI education/outreach materials (pamphlets, videos, etc.), local-level CRI forums/workshops, training of local volunteers for coral reef monitoring and assessments, in-service training for teachers, installation of mooring buoys in critical coral habitats, and other activities. Projects will only be considered that are one year in duration, although it is expected that the final one-year product will provide a strong basis for future activities in direct support to local-level CRIs.

A prerequisite for funding under this announcement is that prospective applicants must develop their proposals in close consultation/collaboration with the Governors Principal Points of Contact (POCs) for the U.S. CRI and State CZM Program, and, where appropriate, National Estuarine Research Reserve System or National Marine Sanctuary Sites. It is envisioned that individual projects will not exceed \$5,000-\$10,000, each, and that the total amount of funds distributed to individual Partner projects will not exceed ~ \$12,000. Collaborative projects between more than one Partner will also be considered.

NOAA/NOS has entered into a partnership with the National Fish and Wildlife Foundation (NFWF) to further leverage additional non-NOAA funds to support this effort. Both NOAA and NFWF are very supportive of collaborative projects that demonstrate direct applicability to the U.S. and Partners' CRI Programs, and have entered into this partnership to jointly encourage and support such efforts whenever possible. The NOAA/NFWF partnership will seek to leverage

additional funds for this effort from other programs, industries, organizations and agencies with similar interests. However, at this time no additional funding is available and the award of funds under this initiative is subject to availability of NOAA FY96 funds. While matching funds are not required by the applicant, financial commitments by the applicant institution will enhance the likelihood of receiving NOAA funding. We are, however, requesting that each application identify potential funding contributors (i.e., companies, individuals, foundations, agencies) that will be contacted directly by NFWF to explore funding potentials. Due to the low level of funding available for this initiative, no indirect/overhead charges will be allowed.

CRI Proposal Time-line and Format

Full Proposals

No applications that have not been previously reviewed during the pre-proposal phase of this program will be considered. Full length proposals (NTE 10 pages) must be postmarked by August 31, 1996. In addition to three hard copies of each complete proposal application, applicants must also submit an electronic version (in any standard word processing format on a standard floppy disk) of each proposal. Notification of award results is expected by October 1, 1996.

THE FOLLOWING FORMAT IS REQUIRED OF ALL APPLICATIONS.

A single title page (not included in the 10 page limit) must include: project title, project period, project location, principal and co-principal investigators (name, institutional affiliation, address, phone, fax, and e-mail), any other collaborators (name, institutional affiliation, address, phone, fax, and e-mail), total funds requested from NOAA, and total matching funds (if any).

The proposal (not to exceed 10 pages) must include the following sections in sequence:

1) Statement of the Problem or Need, 2) Method for Addressing the Problem or Need, 3) Final Product and how it addresses the Problem or Need, 4) Collaboration with other CRI-related Activities, 5) Budget (detailing requested and matching costs for personnel, travel, supplies, etc.), 6) Budget Justification (why each of the budget items is required), and 7) Potential funding contributor names, addresses, telephone and fax numbers, e-mail addresses (if available), and an individual who is the point of contact.

- Maps, tables, and figures are to be included as part of the ten page limit.

- A one page curriculum vitae for each principal investigator and co-principal investigator, a Statement of Support for the project from the local CRI POC, and a list of any literature cited in the proposal, must also be included but will not count as part of the ten page limit.

CORAL REEF INITIATIVE COORDINATING COMMITTEE

Update on CRI Activities
August 27, 1996

ATTACHMENTS FOR DISCUSSION TOPIC 2

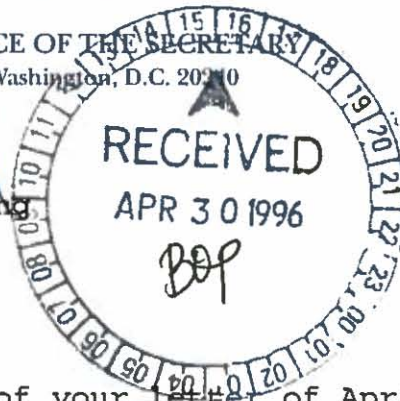


United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, D.C. 20310

APR 22 1996

Mike
Mr. Vincent P. Arriola
Director, Bureau of Planning
Government of Guam
Agana, Guam 96910



Dear Mr. Arriola:

I am in receipt of a copy of your letter of April 11 to Mr. Allen Stayman, and I am humbled and deeply appreciative of your very kind remarks. I agree with you the partnership formed on the Coral Reef Initiative is a model for federal and state/territorial relations.

Let me hasten to correct what appears to have been a misrepresentation or misunderstanding. I am still and will continue to be directly involved in the Coral Reef Initiative, at whatever level the work demands. I have a personal interest in the issue and want to ensure that insular areas and affected states are involved as full partners in the initiative and that their jurisdiction, interests, and coral reef ecosystem activities, whether planned or underway, are recognized. There is much that you can share with other areas in the United States and worldwide, and I want to do everything I can to make sure those opportunities are available to you.

It is regrettable there is little new funding for the initiative. As a result, the level of activity within the Federal Government has been reduced. However, we will continue to work towards leveraging the small amounts of funding. I have talked with Michael Crosby about the possibility of jointly funding some projects, once this office's FY 1996 budget is approved.

I am sorry I missed seeing the island representatives at the recent Coastal Zone Management meeting; unfortunately, while Mike Crosby and I had talked about it weeks before, I did not know until the night before the coral reef discussion was scheduled and had a conflict.

I look forward to continuing to work with you and Mike Ham on the Coral Reef Initiative.

Sincerely,

Nancy L. Boone Fanning
Nancy L. Boone Fanning
Director of Policy
Office of Insular Affairs

The Honorable Allen P. Stayman
Assistant Secretary
Office of the Secretary
U.S. Department of the Interior
Washington, D.C. 20240

Hafa Adai Mr. Stayman:

At a recent meeting in Washington, the U.S. island, points-of-contact for the U.S. Coral Reef Initiative learned that Ms. Nancy Boone-Fanning, of your office, was no longer actively involved in the domestic Initiative effort. Not only are we disappointed, but we feel that an important part of what has become a model, federal-state relationship is now missing.

The U.S. Coral Reef Initiative began more than two years ago on a very sour note. Those States and Territories in whose waters the majority of U.S. coral reefs lie, were deliberately left out of the process of management and protection. In response to very angry reactions by those proper entities, your office and the Office of Ocean and Coastal Resource Management (NOAA), worked very hard to create a trust between parties, and to move the Initiative forward at the proper levels. Ms. Fanning was one of a very small group of federal officials responsible for the creation of a partnership which has been hailed as a model for future partnerships between the federal and state governments.

While we understand Ms. Fanning certainly has a full desk of other, equally important tasks, we are hopeful that her participation in the Initiative partnership can be maintained. She has earned our trust and our gratitude.

Sincerely,

VINCENT P. ARRIOLA
Director

Dr. Michael P. Crosby
National Research Coordinator, and
NOAA CRI Chair, Domestic Committee
Office of Ocean and Coastal Resource Management
1305 East West Highway
SSMC-4, 11th Floor, Rm. 11437
Silver Springs MD. 20910

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Manager, ASCZMP
American Samoa Economic Development and Planning Office
American Samoa Government
Pago Pago, American Samoa

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Mr. Manuel Sablan
Director
Coastal Resources Management Office
Department of Lands & Natural Resources
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Mr. Douglas S.Y. Tom
Chief, Coastal Zone Management Program
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State of Hawaii
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CORAL REEF INITIATIVE COORDINATING COMMITTEE

Update on CRI Activities
August 27, 1996

ATTACHMENTS FOR DISCUSSION TOPIC 3



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT
Silver Spring, Maryland 20910

April 16, 1996

MEMORANDUM FOR: Mr. Manuel Sablan, CNMI Coastal Resources Management Office
Mr. Lelei Peau, American Samoa Coastal Management Program
Mr. Douglas S.Y. Tom, Coastal Zone Management Program
Dr. Noa Emmett Aluli, KIRC Advisory Committee
Mr. Keoni Fairbanks, Kaho'olawe Island Reserve Commission
Mr. Mark Hodges, Kaho'olawe Island Reserve Commission
Dr. Davianna McGregor, Ethnic Studies Department, UH
Mr. David Raney, The Nature Conservancy, Hawaii
Mr. Allen Tom, HHWNMS

FROM: Dr. Michael P. Crosby *Michael P. Crosby*
OCRM National Research Coordinator

SUBJECT: Technology Transfer of "Low-tech" Coral Reef Monitoring Method

As you know Dr. Ernst Reese (Department of Zoology, UH) and I are anxious to initiate the pilot training program we have designed to instruct volunteers in the "low-tech", indicator species methods we are using at Kaho'olawe and Molokini Islands. This pilot training project is being sponsored by the Marine and Coastal Ecosystem Directorate of the U.S. Man and the Biosphere Program, NOAA and the Department of Defense. As you may recall, our research project at Kaho'olawe Island has been designed with the hope of transferring the long-term monitoring effort of the coral ecosystem to local Hawaiians under the auspices of the Kaho'olawe Island Reserve Commission and/or the Protect Kaho'olawe Ohana. We also believe the indicator methodology has great promise for wider use as an "early warning" system for change in the ecological conditions on coral reefs throughout the Pacific. Hence, we are also inviting participation from the American Samoa Coral Reef Initiative (CRI) and the Commonwealth of the Northern Mariana Islands CRI. By training local individuals from the American Flag Pacific Islands in this inexpensive, simple, yet sensitive method, we are directly supporting the objectives of local island and U.S. Coral Reef Initiatives.

You should plan on arriving in Honolulu on Wednesday, May 29. A UH check-out dive will be required on Thursday May 30 for all individual who need to meet that requirement. Our initial pilot training sessions are scheduled to occur during the Friday, May 31 - Friday June 7 time period. There will be three sets of trainees:

- 3 trainees (combined) identified jointly by KIRC and the Protect Kaho'olawe Ohana,
- 3 trainees identified by the Hawaiian CRI Point of Contact (Doug Tom), and
- up to 4 trainees (combined) from American Samoa and CNMI,



There will be a single day of classroom instruction that all participants must attend on Friday, May 31 on Oahu (probably at the University of Hawaii). Friday evening Dr. Reese, Mr. Javier Mendez (a UH Ph.D. student who will assist in the field training), and I, along with the trainees from CNMI and American Samoa will fly to Maui. Field training for this set of trainees will occur over the next two days (June 1-2). Each of the remaining trainees will fly to Maui the night before their scheduled training dates. June 3-4 will constitute the second field training session for either the KIRC/Ohana group or the Hawaiian CRI group (scheduling will be worked out with the individuals involved). Field training for the final group will occur on June 5-6. If we experience bad weather during this week we may have to delay 1 or more field training sessions by a day. Hence, we are holding Friday June 7 as a reserve date. Due to diving safety regulations, each diver will be required to stay overnight in Maui after their final day (in other words, departure flights should be scheduled for the next day). It is important to work within this time-frame given above since we must reserve condominiums on Maui, as well as the boat charter, some time in advance.

Enclosed is a packet of information from Dave Pence, University of Hawaii Diving Safety Officer. It is self-explanatory. All trainees must be NAUI or PADI or equivalent certified, pass a First Aid and CPR training class, pass the physical examination, and pass a U.H. check-out dive (to be done at HIMB on Coconut Island) in order to become U.H. Certified and thereby eligible for participation in the training program.

Our project budget will enable us to provide funds for airfares, condominium rentals, meals, and charter boat expenses for the number of KIRC/Ohana and CNMI/American Samoa CRI trainees given above. Unfortunately, we cannot provide funds to cover these costs for the Hawaiian CRI group. In addition, we do not have funds for diver certification charges for any individuals. These costs must be borne by the organizations with whom the divers are affiliated.

I hope that each of your organizations can send representative to participate in the innovative activity. Please send the names of the individuals who you are nominating as trainees to Dr. Reese as soon as possible (Dr. Ernst S. Reese, Department of Zoology, University of Hawaii, Honolulu, Hawaii 96822). Also feel free to contact either Dr. Reese (phone: 808-956-8677, fax: 808-956-9812) or myself (phone: 301-713-3155 ext. 114, fax: 301-713-4012, e-mail: mcrosby@coasts.nos.noaa.gov) if you have any questions at all.

cc: N. Fanning
M. Ham
G. Ishikawa
E. Reese
R. Soles
G. Vest

encl.

CORAL REEF INITIATIVE COORDINATING COMMITTEE

Update on CRI Activities

August 27, 1996

ATTACHMENTS FOR DISCUSSION TOPIC 4

TERRITORIAL PLANNING COUNCIL

GUAM COMPREHENSIVE
DEVELOPMENT PLAN



Land Use Plan
Community Design Plan
Transportation Plan
Zoning Plan
Public Facilities Plan
Public Lands Plan
Public Buildings Plan
Housing Plan
Development Plan
Conservation Plan
Creation Plan
City Plan
Urban Plan
Development Policy Plan
Public Improvements Plan
Policy Statements Plan
Other Elements

July 19, 1996



MEMORANDUM

To: Coral Reef Initiative Committee
Attention: Vince Arriola
Bob Richmond
Mike Ham
Jerry Davis
Melvin Borja

From: TPC Planner

Subject: Year of the Coral Reef Planning Meeting

July 8 to July 12, I represented Guam at the planning meeting in Nadi, Fiji, for the 1997 Year of the Coral Reef Pacific Islands Campaign. Sixteen South Pacific Regional Environmental Programme (SPREP) member states were represented as well as numerous non-governmental and regional organizations (list attached).

This meeting was called to plan and organize for a regional Pacific Island campaign for the Year of the Coral Reef (YOCR). The meeting's agenda is attached.

A slogan and key messages for the campaign were developed (attached), key audiences for regional and national campaigns were identified and a tentative launching date for the regional YOCR activities was set at February 11, 1997. Decisions were made at this meeting to prioritize regional support activities to be undertaken by SPREP to help Pacific Islands participate in the YOCR. These are to be incorporated into a planning document and are listed in the attached four pages of the Regional Campaign Framework.

Discussions on national campaigns were held. A Guam Campaign Plan is required by SPREP by the end of September, 1996, incorporating information on:

- 1) Who the active partners will be in planning and carrying out YOCR activities,
- 2) What process will be followed to support the activities, and

TERRITORIAL PLANNING COUNCIL

Memorandum to Coral Reef Initiative Committee
July 19, 1996
Page 2

- 3) What the activity will be, under categories of (a) Communication Activities, (b) Policy Initiatives, (c) Resource Production, and (d) Reporting, Monitoring and Evaluation.

I request that we discuss this regional plan at the next meeting on the Guam Coral Reef Initiative Committee to be convened by Bureau of Planning in the next couple of weeks.

A handwritten signature in cursive script, reading "Mike Gawel".

MIKE GAWEL

Attachments (3)

M. K. Gaud
updated on 10 July, 1996



South Pacific Regional Environment Programme

Call for nominations to the Planning Meeting for the
"1997 Year of the Coral Reef", 8 - 12 July 1996,
Nadi, Fiji.

List of Participants

AMERICAN SAMOA

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RAROTONGA
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MARSHALL ISLANDS

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NIUE

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ALOFI
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1997 Year of the Coral Reef Campaign Planning Meeting

8-12 July 1996

Tanoa International Hotel, Nadi, Fiji

Provisional Agenda

Working Hours:
8:30 - 10:00
10:30 - 12:00
1:30 - 3:00
3:30 - 5:00

Monday 8 July

8:00 - 9:00	1. Registration
9:00 - 10:00	2. SPREP Welcome Statement
	3. Prayer
	4. Opening Statement
	5. Election of a Chairperson
10:00 - 10:30	Morning Tea
10:30 - 12:00	6. Workshop objectives, procedures, agenda.
	7. Adoption of Agenda
	8. ICRI Update - International Year of the Coral Reef
12:00 - 1:30	Lunch
1:30 - 5:00	9. Campaigning Planning, Process and Implementation - An Overview
	10. Participants' introductions and aspirations for YOCF.

Evening cocktail function hosted by Tanoa International Hotel (6:00pm)

Tuesday 9 July

8:30 - 10:00	11. Key Coral Reef and Related Habitat issues in the Pacific Islands Region - Setting the Scene for targeting campaign elements
	12. Campaign Structure - slogan, key messages development - Working Groups
10:00 - 10:30	Morning Tea
10:30 - 12:00	Item 12 continued.
12:00 - 1:30	Lunch - Video showing of ICRI "Fragile Ring of Life "
1:30 - 3:00	13. Presentation from Working Groups and Discussion on campaign slogan, key messages. Meeting to decide on campaign slogan and key messages.
	14. Development of Regional Campaign Framework and Activities - Working Groups.
3:30 - 5:00	Item 14. continued. Note: overnight SPREP will compile a draft Campaign Plan based on the ideas of Working Groups.

Wednesday 10 July

8:30 - 10:00	15. Presentation of draft Campaign Plan followed by Working Group discussion and prioritization of the plan and its activities.
10:00 - 10:30	Morning Tea
10:30 - 12:00	Item 15. continued
12:00 - 1:30	Lunch
1:30 - 3:00	16. National Campaign Planning and Process Overview. Note that after this presentation the Meeting will break so that delegates can begin to prepare their own draft national/ngo campaign plans. SPREP will compile Working Group feedback from Item 15 in to a final draft Regional Campaign Plan during this time.

Thursday 18 April

8:30 - 10:00	17. Media Training Module
10:00 - 10:30	Morning Tea
10:30 - 12:00	Item 17 continued.
12:00-1:30	Lunch
1:30 - 3:00	Item 17 continued.
3:00 - 3:30	Afternoon Tea .

3:30 - 5:00

18. Presentation and discussion of draft Campaign Structure and draft Regional Campaign Plan (so that participants can look at these overnight and prepare and finalise their input on Friday morning)

Evening cocktail function hosted by SPREP (6:00pm).

Friday 19 April

19. Discussion and adoption of Regional Campaign Plan (note that SPREP will need the opportunity after the meeting to fine tune this document and look at budget implications before it is completely finalized)
 20. Agreement and on process and timeline for 1996 early 1997 for campaign implementation.
- Other matters.
Close of meeting.

Pacific "1997 Year of the Coral Reef" REGIONAL CAMPAIGN PLAN



CORAL REEFS : THEIR HEALTH, OUR FUTURE

Sections to come - introduction/background (campaign is..) , key audiences, key messages, Pacific YOCC campaign network

The 1997 Pacific year of the Coral reef is aimed at helping people to understand, appreciate, support and take immediate action for coral reef conservation and wise use through the use of a range of communication methods by a network in 1997

Key Audiences:

Planners, Politicians, Government officials, Subsistence and commercial fisher people, School children and educators, Developers, Traditional leaders, Tourists, Farmers, Military, Press and Media, Tour operators, Mining industry, Shipping industry, Religious leaders, Parents, Logging industry, Resource owners.....

Campaign Slogan

CORAL REEFS : THEIR HEALTH, OUR FUTURE

Key Messages:

Coral reefs are in danger!

Healthy coral reefs are living communities - corals are living animals.

Healthy coral reefs provide food for our families.

Healthy coral reefs build beaches and islands and protect our homes from the sea.

Pollution kills our coral reefs.

Using fish poison kills our coral reefs.

Dynamiting kills coral reefs and blows up our families' future.

Soil is precious on land but kills life on coral reefs.

Taking too much from the reef today steals from our children's future.

Together our coral reefs, mangroves and seagrasses protect and support each other: we need them all.

Protecting our coral reefs helps secure our future and is everyone's responsibility.

REGIONAL CAMPAIGN FRAMEWORK

1. Support to national and ngo campaign plans

SPREP to co-ordinate PYOCR campaign network and :

- 1.1 Actively seek new and additional funding, technical assistance and in-kind support for PYOCR, especially to support the implementation of national/ngo campaign plans.
- 1.2 Disseminate information about level and availability of funding (including a format/guidelines for application).
- 1.3 Provide expert and timely advice for national/ngo campaign plan development.
- 1.4 Support local and national workshops that are part of national/ngo campaign plans.
- 1.5 Act as a clearing house for information and contacts. Collate information and/or provide contact information on resource persons that can respond to specific issues e.g. bleaching, marina development, starfish outbreaks, marine protected areas, monitoring, EIA's, bio-monitoring, best management practices, water quality monitoring, model legislation.
- 1.6 Encourage Heads of Government/Ministers to launch national campaigns.
- 1.7 Encourage national/ngo campaigns to have a patron.

2. Communication Initiatives

Scheduled activities:

- 2.1 Regional media launch (11 February 1997) of PYOCR that uses the information from the Status of the Reefs report, ICRI Pacific Regional Strategy etc.
- 2.2 Launch documentary video and companion advertisement (30 second clip, including audio tape for radio) and promote its use on TV, in schools, airlines and other media outlets.
- 2.3 Presentation at 1996 and 1997 Pacific Island News Association Conference.
- 2.4 Use every opportunity to promote the campaign at relevant regional/international meetings e.g. Pacific Science Association Inter-Congress, Fiji Oceans Promotion, SPC, TCSP, SOPAC, Forum meetings.
- 2.5 Integrate and promote the campaign in the development of the Sixth Conference on Nature Conservation and Protected Areas (Federated States of Micronesia, 1997)
- 2.6 Provide media based campaign wrap up (11 February 1998) at the official end of the PYOCR.

Unscheduled activities:

- 2.7 Use every opportunity to promote the campaign and its work to journalists (TV, radio, newspaper, print).
- 2.8 Establish dialogue and provide information to the Pacific Council of Churches on the campaign.

- 2.9 Promote use of campaign information in magazine feature articles e.g. Island Business, Pacific Islands Monthly and women's magazines etc. and other organisation's newsletters.
- 2.10 Promote news coverage of national campaign achievements at the regional and international levels.
- 2.11 Promote news and campaign coverage on airline in-flight entertainment programmes (TV and magazine) including translation Japanese and other languages for incoming tourists. Information should focus on tourists interactions with coral reefs and unsustainable/illegal practices e.g. coral/shell trade, collecting, damaging and touching corals etc..
- 2.12 Provide information on the campaign to travel agents and tourist agency networks.
- 2.13 Hold a regional art competition in 1996 to highlight the forthcoming campaign. Entries to be returned to country campaign focal points. Competition to have three sections: primary school, secondary school and adult.
- 2.14 Support to use village based theatre, including puppet groups, as part of national/ngo campaign plans.
- 2.15 Encourage commercial producers of tourist items e.g. t-shirts to use the PYOCR theme.
- 2.16 Encourage and provide information to Philatelic Bureaus to produce PYOCR stamps in partnership with national/ngo campaigns.
- 2.17 Internet - if possible SPREP or a campaign network member to link with the website and the PYOR internet mailing list and see that information about activities in the Pacific make it to this page and that information relevant to the region feeds back to those in the region who do not have the internet.
- 2.18 Hold regional workshop for national curriculum developers to focus on coastal marine conservation.

3. Policy initiatives

- 3.1 Seek endorsement for the PYOCR campaign for the SP Forum, SPC in 1996. Prepare 1997 briefing paper with key actions for Heads of Government (Forum, SPC) in 1997. SPREP to bring to the attention of the Forum & SPC Heads of Government for its recognition/endorsement the following:
 - * importance and endorsement of Integrated Coastal Management (*note that this has been endorsed by Convention On Biological Diversity - includes 11 Pacific Parties*), in particular the importance of a legislated EIA process.
 - * need for a ban on the international trade in live non cultured coral, and the use of cyanide/poisons for the live coral reef fish trade.
 - * importance of coral reefs and associated ecosystems and the lack of information/understanding/research.
- 3.2 Promote interaction (and accession if appropriate) with relevant conventions e.g. CITES (international trade issues e.g. for live corals, turtles, giant clams etc.), CBD, Ramsar. Provide information to the PYOCR campaign network on relevant international agreements and how they can support campaign objectives. Emphasise SPREP input on priority campaign issues with international aspects to decisions made under these conventions in 1996/7/8.

- 3.3 Support and focus attention on the Global Coral Reef Monitoring Network in its efforts to establish a regional node in the Pacific and help secure resources to support this.
- 3.4 Encourage and assist countries wishing to develop legislation for the management, conservation and wise use of coral reefs and related ecosystems, including Marine Protected Areas. Where appropriate promote community based management and customary laws in advice to government departments.
- 3.5 Encourage scientific and technical organisations to provide resources and assistance to both regional and national campaigns and initiate programmes in response to identified management issues.
- 3.6 Encourage and support management, research and capacity building proposals to address problems and issues identified in the ICRI Pacific Regional Strategy (eg. USP, UPNG, UoG, SPC, FFA, GBRMPA, Unitech, SOPAC, Univ. Hawaii, AIMS, SPREP).
- 3.7 Collaborate with the relevant Population agencies and programmes to highlight impacts of increasing population pressure on coastal resources for the purpose of strengthening policies and actions of these programmes.
- 3.8 Encourage governments/ngos to use Environment Week/Days or similar to focus on the Year of the Reef campaign.

4. Resource Production

- 4.1 SPREP to produce regional campaign -
 - HIGH: poster, video, t-shirt, fact sheets, sticker.
 - MEDIUM: radio audio tape, calendar (based on art competition), children's colouring book/comic book
 - LOW: slide show (use existing SPREP slide show as basis and add examples showing human induced impacts and activities)
- 4.2 SPREP to provide logo that may be used for national/ngo campaigns to produce t-shirts, caps.
- 4.3 Joint production of the Wan Smol Bag 'On the Reef' video as part of package to schools.
- 4.4 Develop a school PYOCR campaign resource information kit which will include copies of campaign resources e.g. posters, videos but also to develop specific school activities through lesson plans and teacher training. Encourage and help develop ongoing curriculum based lessons and material covering coral reef, mangrove etc., conservation and wise use.
- 4.5 Guam video to be made available as a resource to other member countries.

Guiding Principles:

Encourage and assist reproduction of existing materials useful to the campaign. Encourage and produce local language versions to meet specified needs in national/ngo campaign plans. Use materials to show good and bad examples coastal management in the Pacific or from other areas to example key issues. [Attention is drawn to an ICLARM Solomon Islands study of fish in protected and unprotected areas.] In developing information tools e.g. fact sheets ensure that relevant information in the scientific literature in scientific jargon but relevant to sustainable management practices could be translated into plain English and disseminated.

5. Reporting, Monitoring and Evaluation

SPREP to:

- 5.1 Every two months provide fax/e-mail update on campaign progress and upcoming events, including news from national/ngo campaigns, to the campaign network.
- 5.2 Quarterly campaign update PEACESAT session.
- 5.3 Prepare a campaign report for a Review and Evaluation meeting scheduled for early 1998.
- 5.4 Secure funding and prepare for a campaign review and evaluation meeting in 1998.

Pacific YOOR campaign network members to:

Provide by the 15th of every second month a campaign update (i.e. 15 February, 15 April, 15 June etc....). SPREP to provide format for reporting progress and distribution to other countries. Reporting during year about progress should be brief and not onerous.

National/ngo campaign co-ordinators to:

- * keep a log of feedback and response to all initiatives undertaken in the campaign.
- * prepare a campaign report for a Review and Evaluation meeting scheduled for early 1998.

Ensure SPREP has copies of locally produced materials for campaign review meeting.

Note that those campaigns receiving funding will be required to provide a comprehensive report as part of the Letter of Understanding.

6. Interaction with the International Year of the Reef (IYOR)

SPREP should be a co-ordinating link feeding back and forth information about the IYOR to the Pacific YOOR campaign network. This should include accessing and disseminating information from IYOR to the network, sending Pacific campaign information to IYOR, and helping Pacific YOOR members access IYOR contacts and initiatives.

CORAL REEF INITIATIVE COORDINATING COMMITTEE

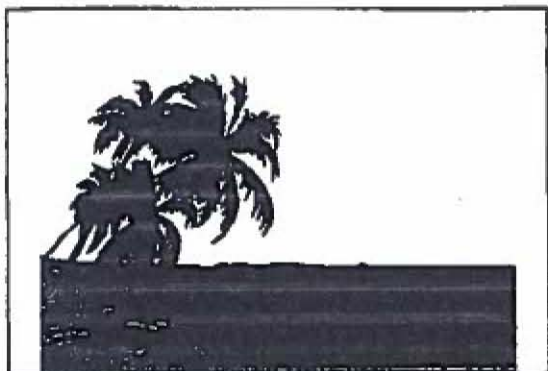
Update on CRI Activities
August 27, 1996

ATTACHMENTS FOR DISCUSSION TOPIC 5

FAX MESSAGE

from

INSULAR POLICY



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U.S. Department of the Interior
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Washington, D.C. 20240
Phone: (202) 208-6816
Fax: (202) 501-7759

Mike

Date: 7/29/96

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Carmen Gonzalez, Puerto Rico	1 (809) 853-4618
Larry McKinney, Texas	1 (512) 389-4394
Paul Thomas, USVI	1 (809) 775-5706

From: *Nancy L.B. Fanning*
Co-Chair, CRI Domestic Management Task Group

Number of pages: 10

MESSAGE:

Attached is for your information.

THE INTERNATIONAL CORAL REEF INITIATIVE

July 26, 1996

TO: International Coral Reef Initiative EPC
FROM: Peter O. Thomas 
SUBJECT: Transfer of ICRI Secretariat from the United States to Australia

The ICRI Secretariat has received positive responses to the request for EPC concurrence to the transfer of the ICRI Secretariat office to Australia from seven of eight ICRI founding partner governments (one did not respond). The IUCN and the World Bank have also responded with endorsement and Jamaica, in expressing its concurrence, indicated that there had been some consultations on the matter with the Caribbean Environment Program office in Kingston.

At the Australia - U.S. bilaterals today, July 26, U.S. Secretary of State Warren Christopher delivered a statement (attached) in an ICRI Secretariat transfer event with Australian Foreign Minister Downer. On this occasion congratulations on the continued strength of the initiative must go out to all the EPC members, the ICRI founding governments and institutions, and to all participants in ICRI workshops and events. We must recognize the strength of the commitment that has been mobilized to address the threats to coral reefs and related ecosystems around the world.

Our thanks go to Australia for taking on the Secretariat. We know from experience that this bodes very well for the future of the Initiative. At the same time Secretary Christopher's speech makes clear the continued strong U.S. commitment to ICRI and the importance of all ICRI partner governments and institutions to this endeavor. We must continue to broaden and strengthen this partnership.

In the working spirit of the Initiative, the transfer of the Secretariat function itself is underway through fax and e-mail communication channels. Address lists, important documents and documentation, and other materials are being compiled and sent along to the offices of Dr. Richard Kenchington at the Great Barrier Reef Marine Park Authority.

PLANNING COMMITTEE

AUSTRALIA • FRANCE • JAMAICA • JAPAN • PHILIPPINES • SWEDEN • UNITED KINGDOM • UNITED STATES
COBSEA • IDB • IUCN • SPREP • UNDP • UNEP • UNESCO • WORLD BANK

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Dr. Kenchington is overseeing the setup of the Secretariat operation in Australia and will be sending out communications and contact points very soon. Communications can be directed to him.

During the coming weeks both the old U.S. Secretariat and new Australian Secretariat welcome your correspondence and inquiries. There may be need for some adjustments to contact lists with the move. In discussions on the transfer we have been particularly mindful of the need to pay special attention to communication channels between Australia and Jamaica and the rest of the Caribbean. The old Secretariat stands ready to assist in this.

Here at the Department of State in Washington we will continue our active involvement in the operations of ICRI and the evolving EPC.

There are a variety of ICRI activities ongoing at the global and regional levels, including a recent meeting in the Pacific on the Pacific Year of the Reef. We encourage organizers of these activities to continue to report to the Secretariat on a regular basis, so news of progress can be disseminated widely.

At the International Coral Reef Symposium in Panama great progress was made on development of the Global Coral Reef Monitoring Network (GCRMN) and in launching the 1997 International Year of the Reef (IYOR). In Panama sessions on ICRI, the scientific community expressed great appreciation for the role ICRI has played to date in raising public and political awareness. They emphasized the need to continue these awareness raising efforts as ICRI moves into the future. The IYOR effort fits in well with raising global awareness of the plight of coral reefs and related ecosystems and, as evidenced by the workshop in the Pacific, with the implementation of regional strategies and action plans. Again, the organizers and collaborators in the GCRMN and IYOR should continue to provide updates to the Secretariat on these activities.

As part of the awareness raising efforts, the ICRI representatives in Panama held a press conference to highlight some of the important scientific information being presented on the State of the Reefs. The press release is attached. Please feel free to distribute this widely.

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Finally, many governments are working with their own national coral reef initiatives. It is important that we continue to share our experience and explore ways ICRI can catalyze and help to identify and leverage support for such activities through regional and global level cooperation.

On a personal note, as outgoing ICRI Coordinator I want to thank each and every one of you for your support of ICRI and your kindness to me over the past year. I must also note the immense contributions to the running of the Secretariat made by many in the U.S. government. Without the ready counsel and the hard work of Arthur Paterson, Conny Arvis, Mark Eakin, John Wilson, Ben Mieremet, and Wilma Hutchins, and of my predecessors Susan Drake and Karla Boreri, the job would not have gotten done. I will continue to be very actively involved in ICRI for the U.S. government. Please do not hesitate to call on me if I can be of help on any matter. And best wishes to all from me and from Wilma Hutchins here in the Secretariat as we move ICRI into the future.

ATTACHMENTS:

Statement by U.S. Secretary of State Christopher

ICRI Press release - June 29, 1996

U.S. DEPARTMENT OF STATE
Office of the Spokesman

Sydney, Australia

Text as Prepared for Delivery

July 26, 1996

Remarks Delivered at
Handover of ICRI
by
Secretary of State Warren Christopher

July 26, 1996

It is a pleasure to join Foreign Minister Downer today following the first session of our ministerial meeting. For almost half a century, the United States and Australia have stood together as treaty allies to safeguard the security and prosperity of the Asia-Pacific region. As our discussions this morning have made clear, our alliance is no less important in the post-Cold War world. While the risk of conflict in the region has been dramatically reduced, we face a growing range of important challenges.

These include emerging global threats such as the spread of weapons of mass destruction, international crime and narcotics, and damage to the global environment.

This afternoon, I am pleased to have the chance to highlight one aspect of our growing cooperation in these new areas by marking the transfer of the International Coral Reef Initiative, or ICRI, from American to Australian stewardship. There could hardly be a more appropriate host country for this initiative than Australia, whose Great Barrier Reef is the world's largest.

Today, scientists estimate that ten percent of the world's coral reefs have already been seriously damaged. Pollution, over-fishing, and over-use have put a much larger percentage under heavy strain. If current trends continue, much of the planet's reef resources could be lost during the next century. Their disappearance would destroy the habitat of countless species. It would unravel a web of marine life that holds the potential for new chemicals and medicines. It would have a devastating effect on coastal communities from Cairns to Key West, Florida, who depend on the reefs for food and a significant source of income from tourism.

The International Coral Reef Initiative is designed to avert that prospect. Founded in 1994 by Australia, the United States, and six other governments, the ICRI seeks to help nations fulfill an important commitment made at the 1992 Rio Conference to promote the sustainable use of marine resources. Through its workshops and research, the ICRI helps nations and regions devise strategies to conserve and manage coral reefs, and it supports and coordinates regional and global efforts to monitor their condition.

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In the Asia-Pacific region, for example, the ICRI has played a crucial role in galvanizing efforts to stop the destructive practice of using cyanide to harvest live coral reef fish. Around the world, more than 75 nations and scores of multilateral and nonprofit organizations and private companies have participated in ICRI programs to compile data bases, raise public awareness, and build new partnerships with the private sector. Under its auspices, the United States has helped Jordan develop a marine park in the Red Sea, trained coral reef surveyors in the South Pacific, and supported the creation of a coral reef researchers directory. We look forward to remaining closely involved in the ICRI as Australia takes over the Secretariat.

We also look forward to working with Australia on a range of other environmental issues. For example, our cooperation was instrumental in achieving a precedent-setting agreement at the United Nations to conserve fisheries. We are partners in the international climate change negotiations, where we will work cooperatively to reduce harmful greenhouse gas emissions.

Environmental forces transcend borders and oceans to threaten directly the health, prosperity and jobs of citizens of all nations. And natural resource issues are frequently critical to achieving political and economic stability. That is why I have launched an initiative at the U.S. State Department to integrate environmental issues and objectives into all aspects of American foreign policy.

On behalf of the United States, I would like to thank the Government of Australia for its willingness to assume leadership of the ICRI. The commitment we share, and the momentum we have generated, are the best guarantees that treasures and resources such as the Great Barrier Reef will endure for generations to come.

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PRESS CONFERENCE

The State of the Reefs and
The International Coral Reef Initiative

Saturday June 29

10:00 A.M.

Participants

Dr. Jeremy Jackson,
Co-Chair, Eighth International Coral Reef Symposium

Dr. Eric Jordan-Dahlgren,
University of Mexico

Dr. Edgardo Gomez,
Director, Marine Science Institute, University of the Philippines

Dr. John Ogden,
President, International Society of Reef Studies

Dr. Ian Dight,
United Nations Environment Program

Dr. Peter Thomas,
Coordinator, International Coral Reef Initiative

Location: Press Room

International Coral Reef Initiative materials will be
available in Spanish and English

Contact: Dr. Peter Thomas
June 29, 1996

The International Coral Reef Initiative

ICRI regional workshops have developed strategies for action in the coral reef regions of the world;

Governments and NGOs are developing new collaboration to stop cyanide fishing which destroys reefs and fisheries; and

The 1997 International Year of the Reef, in partnership with ICRI, will heighten global awareness of the urgent need for action.

"Such efforts are only the start of a long campaign that links vigorous local community action with government commitment to conserve and sustainably use coral reef ecosystems," said Dr. Edgardo Gomez of the Philippines.

Background on The International Coral Reef Initiative

The International Coral Reef Initiative (ICRI) is a partnership among nations and organizations seeking to implement Chapter 17 of Agenda 21, and other international conventions and agreements, for the benefit of coral reefs and related ecosystems. Founded by 8 governments in 1994, over 75 countries have participated in global and regional ICRI workshops. The Initiative has been welcomed by the Convention on Biological Diversity and the United Nations Commission on Sustainable Development.

The ICRI Call to Action and International Framework for Action addresses four priorities: coastal area management; capacity building; research and monitoring; and periodic evaluation of progress.

In his plenary speech on June 29, Dr. Ian Dight of UNEP identified the priority global needs for the conservation and management of coral reefs based on the outcomes of the five ICRI regional workshops. These include:

- Development of multi-stakeholder partnerships;

- Improved coordination at the national level;

- Improved data and information for management;

- Development and strengthening of public awareness and education programs; and

- Development of sustainable financing strategies and mechanisms.

Contact: Dr. Peter O. Thomas
ICRI Coordinator

202-736-7113 (U.S.A.)

202-647-5247 (fax)

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From Dr. C. Birkeland, University of Guam:

Dramatic declines in coral reef cover have occurred over large areas of the Pacific. Dr. K. Yamazato of Japan has studied coral reefs around Okinawa for over 30 years. From 1967 to 1990, coral cover has declined from near 100% to around 20%. Part of this is the result of crown of thorns starfish but human disturbance has most probably deterred reef recovery. Reefs in Taiwan have declined from 50% to 30% over the last five years. Guam and Palau have large regions that, once disturbed, have shown no sign of recovery.

From Dr. J. Cortes, University of Costa Rica:

The main culprit behind coral reef demise in Central America, and possibly most other regions, is siltation from deforestation, poor agricultural practices, road construction, mining, dredging and coastal developments. Sediments smother the corals or force them to use energy to shed the sediments -- energy that would otherwise go to growth, recovery or reproduction. Cahuita National Park on the Caribbean coast of Costa Rica has experienced a reduction in coral cover from 40 to 10% in the last 15 years. On Costa Rica's Pacific coast, areas that appear to have supported 50-60% live coral cover now have less than 8%. The problem of sediment loads is increasing as new land is altered throughout the tropics.

From Dr. T.R. McClanahan, The Wildlife Conservation Society, Kenya: About 5% of Kenyan reefs have received protection from fishing and resource use since before the mid 1970s. These reefs have maintained a high diversity of fish and corals. In contrast, overfishing on 80% of unprotected reefs has led to reduced coral and fish abundance and diversity, increases in sea urchins and high rates of erosion. Protection has proved useful for understanding the increasing destruction from demands for food and ornamental fish. The recent protection of an area outside Mombasa in 1991 has already recovered fish and coral resources. Increasing awareness of the problems and value of protection, and increased management of fisheries will help begin the recovery process.

From Dr. T.P. Hughes, James Cook University, Australia:

Jamaican coral reefs are among the best and longest studied in the world. Early researchers there found flourishing coral reefs with high diversity and high coral cover. Fishing had already removed many of the herbivorous (algae eating) fishes, but prevalent sea urchins kept algal abundances low. Starting with Hurricane Allen in 1980, coral reefs of Jamaica began a dramatic decline. Hurricanes are a normal part of Caribbean coral reef dynamics and recovery normally takes 10-20 years. In this case, recovery was prevented by further events. Over 95% of the black sea urchin, died throughout the Caribbean from an unknown disease. With few remaining urchins and high fishing pressure, Jamaica suffered an unprecedented algal bloom. Corals which survived the hurricane were overwhelmed by thick mats of algae. New coral recruits could not get started. Jamaica today has less than 10% of the corals present in 1970. The sea urchins have not yet recovered and overfishing continues.

CORAL REEF INITIATIVE COORDINATING COMMITTEE

Update on CRI Activities
August 27, 1996

ATTACHMENTS FOR DISCUSSION TOPIC 6

For Mike Ham

PROJECT TITLE: A TEST OF WHETHER OR NOT CORAL RECRUITMENT HAS
REALLY DIMINISHED ON GUAM

PROJECT PERIOD: February December
~~March - November~~ 1997

PROJECT LOCATION: Guam

PRINCIPAL INVESTIGATORS: Dr. Charles Birkeland
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TOTAL FUNDS REQUESTED: \$6,000

TOTAL MATCHING FUNDS : \$6,953

Statement of the Problem

Coral colonies die from both natural factors (typhoons, crown-of-thorns starfish predation, overgrowth by sponges or algae) and effects of human activities (sedimentation, pollution, anchor-damage). There always has been a natural turnover, with the coral colonies that die being replaced by juvenile corals. But now there are indications that coral recruitment on Guam has greatly diminished over the past two decades. There is some concern among residents of Guam that the condition of reefs are generally deteriorating, although particular events such as crown-of-thorns outbreaks and typhoons have been long enough ago that the coral communities would have been expected to have recovered. It has been suggested that the rates of mortality have been relatively normal, but the rates of recruitment have decreased considerably on Guam, leading to a substantial net population decrease in the coral populations without excessive mortality.

The quantitative indications of this trend in decreased recruitment of corals over the past 15 years are remarkable. Birkeland, Rowley and Randall set out 525 fouling panels in the waters around Guam in 1979 and 278 coral colonies settled, underwent metamorphosis, and started to grow (Birkeland et al. 1982). In 1991, Charles Birkeland and Kazuhiko Sakai set out 468 panels for a comparable length of time, but only 2 corals settled. In 1992, Paul Chirichetti set out 224 fouling panels, but also found only 2 corals to settle. In 1979, there were 0.53 corals per panel. Twelve and 13 years later, only 0.004 and 0.009 corals per panel were found, 1/124th and 1/59th as many.

Divers and marine biologists on Guam are under the impression that the coral reefs of Guam are being degraded, slowly dying by attrition, i.e., those corals that die from natural and man-made causes are not being replaced by recruitment. Recruitment can be inhibited by a variety of human activities that result in sedimentation, eutrophication, and pollution of the coastal waters. The results of the three studies noted in the previous paragraph are rather extreme, perhaps unbelievable. Whether recruitment of corals around Guam and the potential of reefs to recover from damage has truly diminished is a very important issue that needs to be decided.

Method for Addressing the Problem

We propose to set out exactly the same kinds of fouling panels in the same locations (Calalan Bank, Western Shoals, and Agana Bay, west coast of Guam) and at the same times of year (February and May) in order to rigorously test whether corals are recruiting substantially less now than they were in the late 1970s, two decades ago. We will construct fouling panels of the same materials (0.32 cm plexiglass in 5 X 15 cm plates) that were used in previous studies. The panels will be set at the same depths (6, 12, and 24 m). The plates will be left in the ocean

for 77 days to replicate the previous studies on Guam as well as studies done in the Caribbean and eastern tropical Pacific (Birkeland, 1977; Birkeland et al. 1982).

Auxiliary field data will be taken on the size distribution of coral colonies in the area in which the fouling panels are placed to determine if the recruitment patterns obtained on the panels generally reflect the pattern of recent years.

The lack of coral recruits in the 1991 and 1992 studies in comparison with the 1979 study may have been due in part to slight differences in technique, timing, and location. Furthermore, the lack of coral recruitment was noted a posteriori. Nevertheless, the results of the 1991 and 1992 studies lend credence to a general public concern for the deterioration of the state of coral communities around Guam. A rigorous a priori test of the null hypothesis that there has been no significant change in rates of coral recruitment around Guam in the last two decades would provide insight into a key issue of public concern.

Final Product

The final report for on comparison of rates of coral recruitment on Guam between 1979, 1991/1992 and 1997 will be published in a journal such as Marine Ecology Progress Series or Coral Reefs because long-term changes in rates of coral recruitment are of interest to coral-reef scientists and to the public.

Collaboration with other CRI-Related Activities

The Division of Aquatic and Wildlife Resources and the University of Guam Marine Laboratory are proposing to establish permanent monitoring stations in areas where coral reseeding and transplantation has occurred. This study will provide complementary sites for the long-term monitoring of rates of natural coral recruitment.

Literature Cited

- Birkeland, C. 1977. The importance of rate of biomass accumulation in early successional stages of benthic communities to the survival of coral recruits. Proceedings of the 3rd International Coral Reef Symposium, Miami 1: 15-21
- Birkeland, C., D. Rowley, and R.H. Randall. 1982. Coral recruitment patterns at Guam. Proceedings of the 4th International Coral Reef Symposium, Manila 2: 339-344

Budget and Budget Justification

Requested:

Graduate student assistantship (12.58 per hour - salary plus fringe benefits) for 10 hours per week for 46 weeks, 3 February to 5 December 1997\$5,787.00

Graduate student assistance is necessary for the construction of the fouling panels, assistance in placing and retrieving them at the study sites, and especially in the detailed examination of each fouling panel under the dissecting microscope in search for tiny juvenile corals.

Supplies

Plexiglas (1/4-inch thick, 4X8 ft sheet)	\$ 119.95
hardware cloth.....	\$ 50.00
telephone wire.....	\$ 32.00
nuts, bolts, washers.....	\$ 11.00

All the above materials are for construction of fouling panels and attachment in the field.

Total requested	<u>\$6,000.00</u>
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Matching:

Salaries of Principal Investigators:

C. Birkeland (2 hours per week for 46 weeks).....\$4,547.00

Supervision of the graduate student assistant, securing and retrieving the experiments at the study sites, and taking field data on size distributions of corals at the study sites, help with the statistical analysis of the data and the writing of the report.

G. Paulay (half hour per week for 46 weeks).....\$ 606.00

Help in identification of juvenile corals and recently metamorphosed corals on the fouling panels.

Boat and driver for 12 days in the field:

(\$150 per day for boat and driver)..... \$1,800.00

Total matching	<u>\$6,953.00</u>
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CORAL REEF INITIATIVE COORDINATING COMMITTEE

Update on CRI Activities

August 27, 1996

ATTACHMENTS FOR DISCUSSION TOPIC 7

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THE GUAM CORAL REEF INITIATIVE TAKING RESPONSIBILITY FOR OUR ENVIRONMENT AND FUTURE

Guam's coral reefs are the very essence of the economic, cultural, political, and social viability of the island. Our coral reefs, including the associated mangroves and seagrass beds, provide shelter for the land from typhoons and tsunamis, shelter for the shallow bays and lagoons which offer recreation and sustenance, nourishment for our beaches which support our economy, and habitat for the biodiversity which defines the soul of our community. Guam's coral reefs provided our forefathers with the majority of the food and the materials for their lattes, tools and implements.

There is evidence that Guam's coral reefs are under stress and are being degraded, both from natural climatological and man induced causes. Sea level rise, global warming, ozone depletion and coral bleaching affect coral reefs world wide. Guam's reefs are additionally stressed by inadequately designed and placed sewage outfalls, polluted runoff from increased impervious surfaces, siltation from poorly planned grading and land clearing practices, overloaded sewage treatment facilities located on or near reefs, poor agricultural practices including; lack of proper controls for animal wastes or over use of herbicides and fertilizers, and improper disposal of hazardous wastes such as oils and household cleaning products. Inadequate education and control of visitors has resulted in a destructive level of coral removal for souvenirs.

Degradation of Guam's reefs and near shore waters have resulted in toxification of seaweeds and fishes and have led to human fatalities. Coral reproduction and recruitment in some areas has been significantly reduced. Noxious and obnoxious over-growths of algae in near shore and estuarine waters, and over-production of species such as *Acanthaster* signal damage to water quality on reefs which negatively react beyond extremely narrow ranges of water quality variation. Reef fish stocks, like open ocean fish stocks, have been significantly reduced in part by poor reef and ocean management (over-fishing) and in part by poor land management (allowance of poor land use practices).

While every anthropogenic cause of reef and near shore water degradation can be prevented or significantly reduced, the failure to address "downstream", cumulative, or long term impacts of human actions, coupled with a governmental structure that encourages immediacy over sustainability, makes a failure to prevent and an economic incapacity to correct unavoidable.. The coral reefs and associated systems on Guam present the opportunity for ecosystem management difficult to achieve in terrestrial ecosystems.

Guam has taken initial steps to declare and implement its responsibility to properly manage its coral reefs through preservation, conservation and sustainable resource use and management. Guam's Commonwealth Draft Act iterates the right of the people of Guam to prevent marine

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pollution, to intelligently exploit the living and non-living resources in sustainable fashion, and to have an effective voice in national and international policy which may impact on Guam's rights and responsibilities. Additionally, Guam has taken a leadership role and has contributed significant language and direction in the development of the United States Coral Reef Initiative, the United States Coral Reef Initiative Draft Strategy, the International Coral Reef Initiative Call to Action and Framework for Action, and the Pacific Region Coral Reef Initiative Work Program.

This paper outlines a Coral Reef Initiative to address the challenge of the conservation and sustainable use of Guam's coral reefs and related ecosystems through the strategies of partnerships, coordination, integration, and capacity-building.

THE GUAM CORAL REEF INITIATIVE: VISION AND STRATEGIES

The long-term vision for the Guam Coral Reef Initiative is to build a comprehensive program for the conservation and effective management of Guam's coral reef ecosystem, including mangroves and sea-grass beds, utilizing existing activities, programs, laws and expertise to be augmented when necessary with new supports. The unifying concept is the principle of *sustainable* use and wise preservation in the present to maximize management opportunities for all future generations. This program is intended to reverse patterns of destructive practices through public and private partnerships in policy development, program implementation, and conflict resolution.

The implementation of the Initiative will depend of four strategies: partnerships, coordination, integration, and capacity-building.

Partnerships: This Initiative will build partnerships, ensuring that the full range of concerned parties are involved in the management of Guam's coral reef ecosystem. These parties include, but are not limited to, federal and Guam government agencies, organizations of commercial users, community representatives, non-governmental organizations, scientists, and tourism representatives. The primary objective is to foster innovative cross-disciplinary approaches to sustainable management of reef ecosystems through the development of cooperative relationships among the various stakeholders.

Because relationships between coral ecosystems exist on regional and international levels as well as the immediate local level, and because management regimes and policies are being developed at regional, national and international levels as well, partnerships between Guam and these other levels will also be built and supported through implementation of this Initiative. While such partnerships are premised on cooperation and experience sharing, they will continue to recognize the legal authority and responsibility of Guam to manage coral reefs within her jurisdiction.

Coordination: The Initiative will strive to ensure that existing and new activities among all

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players are fully coordinated to ensure that resources are used as effectively as possible to preserve, protect, and manage the coral reef ecosystems of Guam.

Integration: The Initiative will endeavor to ensure that all critical ecosystem components and linkages are taken into account, and that all elements of the problems and their solutions, including research, assessment, monitoring and management will be considered in a comprehensive manner.

Capacity Building: The Initiative will seek to strengthen local technical and human resources through cooperative education, training and infrastructure development (including the installation and use of new monitoring technologies as available). Particular attention will be given to the stimulation and enhancement of community-level efforts aimed at the sustainable management of coral reef ecosystems and sustainable use of coral reef resources.

In employing these strategies, the Initiative will undertake the full range of activities needed for the conservation and sustainable use of these ecosystems. These activities include research, mapping and resource assessment, monitoring, management for sustainable use (including protection and integrated coastal zone management, environmental damage assessment and restoration, and capacity building).

THE INITIATIVE AS A RESPONSE TO RECOGNIZED CONCERNS

The Initiative is being undertaken to address such environmental concerns as loss of biodiversity, land-based sources of marine pollution, and sustainable development.

Biodiversity: The Initiative recognizes that the maintenance of the biological diversity of the coral reef ecosystems and associated ecosystems is imperative for the quality of life and choices in today's generation, and for the protection of choices and opportunities for future generations. As part of the world community, Guam also recognizes the importance of biodiversity in reef ecosystems to address national concerns iterated through the U.S. International Biodiversity Strategy and to address international concerns iterated through the Biodiversity Chapter of Agenda 21.

Land-Based Sources of Marine Pollution: The Government of Guam has recognized that land-based sources of pollution, both point and nonpoint, are major causes of the degradation of coral reefs and related ecosystems. The Initiative provides a platform for addressing the inter-connectiveness of land-based practices to marine water and biological quality.

Sustainable Development: The call, in Chapter 17 of Agenda 21, for the sustainable use and conservation of marine living resources echoes the fundamental understanding underlying the

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environmental management of resources on Guam, as has been growing since 1984. Extraordinary explosions in population, development and economy have resulted in a resource demand and usage level which will be unsustainable even into the next generation. The Initiative will support efforts to control, rather than be controlled by, circumstances of human development.

ELEMENTS OF THE GUAM CORAL REEF INITIATIVE

A Program for Coral Reef Research and Monitoring: The quantitative environmental data necessary to understand the causes of coral reef degradation and to predict and respond to future changes are currently limited. This limitation on data often results in management and policy decisions begin made without an adequate understanding of the problem or full range of solutions. There is an urgent need to develop long-term monitoring sites as part of an integrated research agenda to provide:

- The data necessary to show how Guam's reef systems are changing
- The environmental data needed to identify sources of stress in disturbed reef areas.
- The environmental data needed for proper resource management.

An expanded coral reef research program will be initiated, building on research data compiled by and existing partnerships between Guam, National Science Foundation, National Oceanic and Atmospheric Administration and the National Biological Survey. Components of this research program will focus on areas of biological diversity and sustainable use, and would include:

- Ecosystem function, including research on the biology and ecology of "keystone" organisms (crown of thorns, etc.).
- Eutrophication, to provide information on the input of nutrients from upland sources; and,
- Sustainable use, including research on the sustainability of fisheries in order to understand the value of management areas for the conservation of fishery resources in these ecosystems.

The Initiative will foster the development of a monitoring program that will establish a coordinated monitoring network involving scientists and managers to facilitate the exchange of physical, chemical, biological and socio-economic data.

A Program for Improving the Health of Guam's Coral Reef Ecosystems: A second element of the Initiative is the establishment of a coordinated program to address problems facing Guam's coral reef system. Guam's corals are being increasingly stressed as development and visitor

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arrivals continue to increase. Important sources of stress include nutrient enrichment from sewage and agriculture, over-fishing, sedimentation from deforestation, earth moving, agriculture, vessel traffic and coastal runoff. Tourist related and navigational damage, urban pollution, harvesting of non-renewable reef resources, and destructive fishing have further aggravated reefs already stressed by natural disturbances and disease.

A comprehensive coral reef program will necessarily include both improved protection and proactive and innovative approaches to accelerating recovery rates of degraded habitats. This program element would include activities for assessing and restoring coral reef ecosystems damaged through anthropogenic events such as oil spills, ship groundings, etc. In addition, environmental economic valuation of reefs for both assessment and resource management activities is needed.

Specific tasks to accomplish this element of the Initiative, including; implementation of elements in the Guam Nonpoint Source Management Plan; development of plans for the creation of marine protected areas; amendments to existing fisheries management plans to address corals and reef associated plants and invertebrates, and to address management of live rock harvests; development of a habitat restoration program, and; development of a model for the sustainable use of coral reef ecosystem resources, will be developed by the partnerships described in this Initiative.

A Program of Capacity Building (Partnerships for Effective Management): Capacity building, focusing particularly on the concept of integrated coastal zone management, is integral to reef management. The overall objective of the capacity-building program as part of the Initiative is to improve the management of coral reefs and associated coastal ecosystems by:

- Developing education and outreach capabilities to elevate public awareness of the value of marine resources and thereby establishing the necessary support for their protection.
- Facilitating the development of necessary legislative frameworks, implementation and enforcement capabilities.
- Facilitating the development of private/public partnerships to develop educational and marketing programs for tourists and standard operating procedures for tour operators.
- Developing mechanisms to allow for the training and the participation of community residents and schools in the processes of monitoring, research, analysis, and priority setting for coral reefs and associated resources.
- Development, up-dating, expansion, or corrections to reef geologic, geographic and biologic mapping and GIS development.

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IMPLEMENTING THE GUAM CORAL REEF INITIATIVE

Implementation of the Guam Coral Reef Initiative shall be accomplished through a Point of Contact, the Guam Coral Reef Coordinating Committee, and the Guam Coral Reef Initiative Policy Advisory Committee.

Point of Contact: The Administrator for the Guam Coastal Management Program shall serve as Point of Contact for Coral Reef Initiative efforts. Guam's continued participation and coordination in regional, national and international Initiative's have created a history and precedence for Initiative related activities. On both the domestic and international levels, local Coastal Zone Management officials serve as local contacts, as these programs not only are developed to address these issues, but are established as coordinating mechanisms.

As Point of Contact, the Administrator will serve as a clearinghouse/dispersement point for CRI information on all levels, and shall be responsible for setting meetings for the Committees. The Point of Contact shall serve as chair for the Guam Coral Reef Initiative Coordinating Committee.

Guam Coral Reef Initiative Coordinating Committee (CRICC): The CRICC shall be composed of the following members, in addition to the Point of Contact.

Representatives for:

- Director, Bureau of Planning
- Director, University of Guam Marine Laboratory
- Director, Department of Agriculture
- Administrator, Guam Environmental Protection Agency

The CRICC shall meet at least once per month and shall be responsible for implementation of the Initiative. The CRICC may request other participants from the Government of Guam or private sector to participate in meetings as required.

Guam Coral Reef Initiative Policy Advisory Committee (CRIPAC): The CRIPAC shall provide suggestions for policy and direction to the CRICC. The CRIPAC would provide a forum for the development of specific proposals to strengthen coral reef management efforts. The CRIPAC shall meet once per quarter, and shall be comprised of the following members:

Members of the CRICC

Designated representatives for:

- Governor's Office
- Guam Legislature

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Director, Department of Parks and Recreation
Director, Guam Visitor's Bureau
Commercial Fisheries (deep water)
Commercial Fisheries (reef fisheries)
Maritime Industry (shipping)
Dive Shop Operators
Recreational Water Craft Operators
Locally based and registered Environmental NGO

Other members may be added as determined by the Committee. The representative for the Governor's Office shall serve as Chair of the CRIPAC. The Point of Contact shall serve as administrative support.