The United States Experience in Decentralized Coastal Management: Lessons for Indonesia

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Executive Summary

This report describes the findings and important lessons of an integrated coastal management (ICM) international study tour (IST) to the United States, undertaken by a group of senior Government of Indonesia (GOI) officials from national and provincial governments on September 11-22, 2000. Proyek Pesisir, the Indonesian Coastal Resources Management Program of the USAID/Indonesia Natural Resources Management Program, sponsored the IST. The Coastal Resources Center of the University of Rhode Island (the implementing organization for Proyek Pesisir) conducted organization of the IST in the United States. The IST was designed to take advantage of increased opportunities resulting from changes in government in Indonesia. Especially important for coastal resources management is the passage of Indonesian Law 22/1999 initiating increased regional autonomy and the subsequent creation of the Ministry of Marine Affairs and Fisheries, the first ministry exclusively focused on marine and coastal affairs.

Under Law 22/1999, Indonesia is diverging from the past 50 years of poor natural resources management and embarking on a new path, that of decentralizing natural resources management to the regulators and stakeholders most closely connected with these resources. The IST provided an overview of how the United States has evolved its decentralized coastal management programs from a starting point in America's history 30 years ago. As a result, the IST was rated by the participants as an extraordinarily appropriate and well-planned experience that exposed new options in coastal management at a time when these ideas are most applicable and useful in Indonesia.

While obviously different in many respects, the United States dealt with many of the same issues that Indonesia must now face in terms of decentralized coastal resources management. This similarity became apparent to tour participants as they progressed through the IST schedule. The experience culminated with IST participants understanding the considerable correlation in 'coastal management program development' in the United States and 'coastal program development needs' in Indonesia. The principle lessons derived by the participants from the IST are highlighted in this document. Following are some of the more salient conclusions drawn by the IST participants.

Lessons for National Law Contributions to Decentralized and Strengthened Coastal Resources Management

- The key to effective protection and use of coastal land and water resources is full participation of local authorities and local public in decisions governing the use and preservation of these resources.
- The role of the national government is to encourage decentralized authorities and the public to exercise full authority over the coastal zone. These decentralized authorities and public should to establish minimum requirements for coastal land and water use programs, united policies, criteria, standards, methods and processes, for dealing with coastal use decisions of local and beyond local significance.
- An integrated national coastal zone management law can effectively promote voluntary compliance at the provincial (*provinsi*), district (*kabupaten*) and village (*desa*) levels, through the use of financial and jurisdictional incentives for provincial and district programs meeting certification requirements.
- Provincial level coastal zone management laws can effectively promote voluntary compliance standards at the district level and below, through financial and jurisdictional incentives, while ensuring coordination across districts regarding development issues.
- The goal of district level coastal zone management laws and regulations is to empower communities to wisely manage coastal resources by establishing clear rules and regulations, while certifying minimum standards of performance in terms of coastal planning and resources use.
- Requirements for national certification of a coastal program do not dictate specific regulations but in-

stead guide the processes of: a) collecting information and setting definitions; b) establishing institutional and organizational arrangements, establishing procedures; and c) establishing effective planning requirements and processes.

- An integrated national coastal management law must clarify authority and jurisdiction in terms of coastal land and water uses of local, provincial and national concern, and should ensure institutional arrangements for integration and coordination across ministries/sectors and between provinces relative to these uses.
- Spatial planning is a key tool for district level coastal programs and a national law should set minimum standards for establishing comprehensive spatial plans (land use plans) in coastal areas that give priority consideration to coastal-dependant uses (i.e., appropriate uses).
- Minimum standards for certification of local CZM plans must require identification of areas of special concern, development of special management plans for these areas (e.g., marine sanctuaries, small islands, sensitive or critical habitat, etc.), and provide for increased resources protection within these areas, while providing for reasonable coastal dependent economic growth.
- Joint national, provincial, district and local co-management of coastal resources provides the biggest opportunity for effective coordination and progress in ICM in Indonesia.
- National and local interests in coastal resources and ICM will change and a national coastal zone management law should include a mechanism to adapt to changing priorities, such as periodic review and reauthorization.
- A national coastal zone management law is an important tool to leverage funding for coastal management.
- Provincial and local governments must ensure that enough funding is made for coastal management activities and local budgets to reflect the importance of coastal management needs.
- Enforcement and monitoring is a pre-requisite of sustained coastal management effectiveness and should be addressed at each level of government.
- An integrated national law must ensure a process for transparency and public participation in coastal planning and development decisions.
- National and local level coastal management programs must include mechanisms to ensure timely and effective notification for public participation in coastal management decision making in order to effectively achieve co-management of coastal resources.
- Planning and implementation for coastal management must be tailored to match institutional and organizational capacity.

Acknowledgments

The IST participants, the staff of Proyek Pesisir (the Indonesian Coastal Resources Management Program supported through their USAID/Indonesia Natural Resources Management Program), the Coastal Resources Center of the University of Rhode Island (CRC/URI) and many other people were involved in scheduling and encouraging commitments to support the tour. As a result, special acknowledgment of their efforts must be made.

Planning and coordination, as well as substantive support, was received from the University of Rhode Island and the Coastal Resources Center. The tour benefited from the initial planning of Brian Needham, Indonesia Program Desk Officer at CRC/URI, who established the initial IST itinerary. Stephen Olsen, Director, and Lynne Zeitlin Hale, Assistant Director of CRC both played important roles in obtaining cooperation and participation of high level personnel normally not available for study tours of this type. Dr. Corothers,

president of the University of Rhode Island graciously hosted a dinner at his home to welcome the IST participants to America and Rhode Island. This also provided the venue for signing of the Memorandum of Understanding between the University of Rhode Island and the Indonesian Ministry of Marine Affairs and Fisheries. Brian Crawford provided critical briefing information to all United States hosts and helped in aspects of planning for the tour. Special recognition and appreciation goes to Rhode Island Senators Jack Reed and Lincoln Chafee who sponsored Minister Sarwono's United States State Department presentation and to the Women's Aquatic Network that organized this event.

Heidi Schuttenberg, intern at CRC and coordinator for the entire tour was invaluable. Without her organization, logistics and follow-up on commitments from United States host-organizations and personnel, the IST would not have as successfully achieved its objectives. In addition, her contributions to this report were critically important in terms documenting the meetings and resulting potential lessons for Indonesia. Ruth Validofsky and Cindy Moreau handled all financial and accounting responsibilities and ensured compliance with all USAID and Rhode Island requirements. Chip Young did a superb job at handling publicity and event coordination. Kim Kaine deserves recognition for supporting the study tour administration and logistics.

Many others outside of Rhode Island played key roles in supporting various parts of the study tour. In Washington, D.C, Dr. Margaret Davidson, Bud Ehler, Dr. Arthur Patterson and Lynne Mersfelder at NOAA, as well as Richard Volk and Alan Hardiss of the G/Env Bureau of USAID, were gracious with there time and efforts to ensure that all meetings were specifically developed to be useful to the study tour participants. Joanne Delaney from NOAA led the organization of the Florida Keys National Marine Sanctuary meetings and discussions. Billy Causey and author Dr. John Clark generously made time in their schedules to spend time with the participants and engage in detailed conversations on specific topics of interest to the tour participants. Dr. Sylvia Earle, National Geographic Explorer in Residence, graciously received the study tour participants and engaged them in discussing the importance of research programs to provide scientific data for coastal and marine management and public education. Steve Tilley and the Puget Sound Water Quality Action Team, showed enormous commitment to the cause of coastal management in Indonesia by setting up the entire Washington State portion of the tour.

In Indonesia, tour preparations and logistics were coordinated through the Jakarta Office of Proyek Pesisir. Particular recognition is due to Ms. Esthy Jonathan for help with all the difficult and complicated travel arrangements, clearances and visas and compliance with all Government of Indonesia, USAID and CRC/URI regulations. At USAID/Indonesia, Mr. Fred Pollock and Mr. Priyanto Santoso played a pivotal role by encouraging the flexibility and providing the support necessary to plan and execute the United States IST. Finally, but not least, special recognition goes to Dr. Ian Dutton who undertook the initial tour planning through which the tour was realized, assisted with the implementation of the IST in the United States, and edited the final draft of this report.

The information contained in this report was compiled through two weeks of condensed meetings and conversations. As such it omits many details and inevitably contains some errors. However, it is hoped that it provides sufficient summary of the IST experience and lessons learned to stimulate creative discussions concerning the future of ICM in Indonesia.

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List of Acronyms

CBNRM	Community-based Natural Resources Management
CRC	Coastal Resources Center (University of Rhode Island)
CRMC	Coastal Resources Management Council
CRMP	USAID/Indonesia Coastal Resources Management Program
CZMA	United States Coastal Zone Management Act of 1972
FKNMS	Florida Keys National Marine Sanctuary
ICM	Integrated Coastal Management
INCUNE	Indonesian Coastal Universities Network
IPB	Institute Pertanian Bogor (Bogor Agricultural Institute)
IST	International Study Tour
Law 22/1999	Indonesian Regional Autonomy Law of 1999
Law 25/1999	Indonesian Fiscal Decentralization Law of 1999
LoPS	Life of Project Strategy
MOU	Memorandum of Understanding
NEP	National Estuarine Program
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NOS	National Ocean Service (NOAA)
NRDA	Natural Resources Damage Assessment
NMSP	National Marine Sanctuaries Program
OPA	Oil Pollution Act
Proyek Pesisir	CRMP/Indonesia Project Name
RFAC	Regional Fisheries Advisory Council
SAMP	Special Area Management Plan
URI	University of Rhode Island
USAID	United States Agency for International Development

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Attachments

1.0 Introduction

1.1 Background

This report describes the findings and conclusions of an integrated coastal management international study tour (IST) to the United States undertaken by leading Indonesian national and provincial level government officials. The study tour was organized as an integral part of the USAID/Indonesia Coastal Resources Management Program known in Indonesia as Proyek Pesisir. The objectives of the tour were to:

1) Explore the United States experience in decentralized coastal resources management and its applicability within the Indonesian context;
2) Educate United States institutions on current developments in Indonesia and their implications for United States foreign help and relations regarding coastal and marine management; and
3) Foster development of professional networks between the two countries.

Evidence of success in meeting these interim goals can be seen in the participant reflections of the study tour lessons and the formalization of partnerships with United States counterparts through three Memorandums of Understanding and one Letter of Interest (Attachments A-D). The ultimate goal of the IST was to contribute to stronger, integrated coastal management (ICM) through the implementation in Indonesia of principles and tools explored during the study tour. This report documents these principles and tools, and draws applicable lessons to support implementation of an integrated coastal management program in Indonesia.

The study tour was designed as an integral part of Proyek Pesisir's dual-track local and national program. The timing of the IST was precipitated by increased opportunities resulting from Indonesia's new emphasis on decentralization and the creation of a dedicated coastal and marine ministry: The Ministry of Marine Affairs and Fisheries (DKP). The schedule also was designed around the needs of Provincial Planning Boards (BAPPEDA) and this new ministry to develop a vision of the roles and responsibilities of different levels of government and stakeholders under a decentralized coastal management system.

Recent political events represent a dramatic institutional shift in Indonesia relative to natural resources management, creating both exciting opportunities for democratization and empowerment and simultaneously a significant demand for Indonesian vision in devolving coastal resource management and planning (Dahuri and Dutton, 2000). This shift has given the United States experience in coastal and marine resource governance a increased relevance for Indonesia. Through a ten-day tour to Washington, D.C., South Florida, Rhode Island, and Washington State, the study tour exposed Indonesian participants to the United States coastal governance experience. These experiences are described briefly in 1.2-1.7 below.

1.2 National Program

Throughout the IST, the participants were involved in discussions concentrated on the importance of the National Coastal Zone Management Act of 1972 (CZMA) in setting a national coastal management agenda in the United States. The CZMA resulted in states, local governments and stakeholders focusing their attention, efforts and financial resources on coastal zone management. Especially emphasized was the way the national law was designed to encourage states, local governments, Indian tribes and the general public to exercise their full right and authority in appropriately managing and developing coastal resources. This includes clarifying the specific roles of different levels of government, ensuring minimum standards of performance through voluntary certification of programs and guaranteeing opportunities for public participation.

Certification of all state and local coastal zone management (CZM) programs is a pivotal feature of the integrated United States program. The requirements for voluntary certification of state and local programs under the CZMA can be broadly categorized as processes related to information and definitions, institutions and organization, procedures and planning. By setting out the process and elements that must be included in each of these broad categories, the United States national government ensures an orderly and effective approach to decentralization of coastal management. In addition, the United States federal government lays out incentive structures that provide enough encouragement for all states to voluntarily enter the national certification programs. These incentives are financial and jurisdictional (in terms of federal, state and local consistency with approved coastal plans).

1.3 State and Local Programs

State and local programs that offered excellent and diverse examples of decentralized CZM implementation were visited. Options investigated included the distribution of authority among state and local level agencies and mechanisms for inter-agency coordination. There was particular emphasis on the mechanics of local land-use planning and community participation within state and local programs leading to good governance in terms of coastal management decisions. The IST participants met with leaders involved in important examples of how the United States national government works in coordination with state, local governments and stakeholders to accomplish specific state and local level needs. These cases demonstrated how issues were solved that otherwise would have been beyond the ability of local or state government and stakeholders to achieve without federal help.

The participants also explored the role of national governments in supporting federal-state funding mechanisms, and the role of state governments in supporting state-local funding schemes. This included arrangements by which some funds are assessed, collected, and distributed (e.g., per passenger charges of US$3.00 assessed on cruise ships docking in Key West).

1.4 Special Management Areas

Many special management areas are administered through the National Marine Sanctuaries Program (MSP), National Estuary Programs (NEP) and through local spatial planning. Discussions focused on roles of national and state agencies regarding program coordination, funding, planning and implementation. An important part of these discussions was the role played by the CZMA in encouraging identification of special management areas that require a higher level of specificity in terms of protecting the sensitive and critical resources and habitat within these areas. In the United States, land management and spatial planning is a strong right of local governments. As a result, the identification of special management areas and the establishment of special area management plans always involves local government and stakeholders, and in the case of the NEP and MSP programs, the national government, through a transparent process involving all stakeholders.

1.5 Public Participation

Public participation of communities, universities, non-governmental organizations and the private sector in coastal and marine management was a constant feature of the CZM program in the United States. The role of the national and state governments in ensuring the process for broad participation in coastal management was highlighted in every site visit. The IST participants were regularly presented with the opportunity to witness how effective co-management of coastal resources was achieved through effective public participation. Meetings held between IST participants, citizen councils and non-governmental organizations (NGOs) demonstrated their leading roles in organizing and voicing stakeholder values related to management of coastal resources.

1.6 Monitoring for Research, Enforcement and Surveillance

Discussions focused on topics such as monitoring for research, enforcement and surveillance in the organizational structures, operational strategies for implementing coordinated data collection, resource mapping and shared databases across agencies.

1.7 Infrastructure and Economic Development Issues

Infrastructure and economic development issues related to coastal management planning, permitting and coastal use were constantly emphasized by United States hosts. The importance of recognizing that infrastructure investments always lead to increased development and pressure on the environment was a key feature in talking with planners (for example Key West's increase in wastewater processing capacity led to increased population). As in Indonesia, the most attractive areas for development in the United States coastal zone are also often the most sensitive in terms of ecosystem importance. Issues such as economic development, tourism, coastal hazards, pollution and land ownership rights were a regular topic of discussion between Indonesian IST participants, United States host organizations and individuals. Effective co-management processes are often required for making decisions about appropriate economic development (sustainable development) and related infrastructure investment. These decisions are critical in addressing or avoiding problems such problems such as massive beach erosion, tremendous loss of property and life from natural disasters and loss of economically critical habitat. These are all serious problems resulting from economic and infrastructure development in the United States coastal zone and which are addressed in the United States integrated coastal management system.

1.8 Report Organization

The following sections of this report further articulate the lessons learned and provide more detail on the content of especially useful meetings and discussions, in an attempt to draw salient lessons for Indonesia from the United States experience in coastal management.

Section 2.0 provides an overview of coastal management in the United States as described through IST meetings and discussions, and describes the organization of the IST as an organization.

Sections 3.0 to 6.0 discusses the lessons learned relative to the most important management outcomes that DKP and the provinces are currently trying to achieve and which Proyek Pesisir and CRC/URI is advocating through USAID support.

Section 7.0 describes the key experiences of the tour participants as expressed in formal and informal reflections/conversations throughout the tour.

Section 8.0 provides some recommendations arising from the tour that are directed to coastal management partners at all levels of governance. Additional material relating to the tour is presented in Attachments A – I as listed in the Table of Contents.

2.0 Overview of Coastal Management in the United States and Related International Study Tour Activities

2.1 U.S. Federalism: Development of the Coastal Zone Management Act of 1972 and the Evolution of the United States Coastal Zone Management Program

The United States is founded on a federalist system of government that has successfully devolved considerable control to the states and local governments. The national government retains control, or at least strong influence, over those issues that pertain to national interest and the equitable access and distribution of certain public goods such as education, health, clean water and other elements of environmental and social welfare.

After World War II, the economy and the population of the United States began to expand very rapidly. The overall average age of the population was becoming younger and the post-war economy was making American citizens more financially secure. At the same time, education and awareness of political power and process was increasing. The growing role of television and other media played a major role in the development of increased awareness of issues, including environmental issues.

Tracking these development trends was another very significant societal phenomenon. The evolution of the United States environmental movement, the increasing political power of environmental NGOs and citizen-led groups in the 1960s and 1970s became important. Some of these groups had been in existence for many years and operated on very specific charters established at the time the organization started. Other groups were newly formed with the explicit purpose of influencing environmental policy. A natural division of focus between these organizations evolved based on resources, membership and location in the country. Some of these NGO and other organizations focused on the coastal zone in response to the growing pressure from population and development.

America's governmental focus on the coastal zone can be pinpointed to 1966, with the creation of the United States Congress of the Commission on Marine Science, Engineering and Technology (MSET Commission). This commission was charged with making recommendations to congress about major issues of marine policy. However, the focus of inquiry for the commission was coastal issues of the United States. Recognizing that land use management in the United States is historically a matter for local government, the MSET Commission's 1969 report clearly emphasized the need to take a more proactive, national approach to coastal zone management (CZM), as a result of its importance to the economic security of the nation:

> "The coast of the United States is, in many respects, the Nation's most valuable geographic feature. It is at the juncture of the land and the sea that the great part of the Nation's trade and industry takes place. The waters off the shore are among the most biologically productive regions of the Nation." [United States Coastal Zone Management Act of 1972]

The commission's report found that the value of the coastal zone was threatened by increased population pressure resulting from housing, recreational use and industrial development of all kinds: small, medium and large. The commission concluded in its report that the coastal zone was itself a national resource and that the national government had an 'obligation in the national interest of current and future generations' in the conservation and appropriate economic development of the coastal zone.

In 1970 the United States responded to these all these influences by embarking on a new road to environmental protection and improvement with the creation of the United States Environmental Protection Agency.

The United States Congress followed this with a number of pieces of sweeping legislation that forever changed environmental management in the United States. One of the most significant was the National Coastal Zone Management Act of 1972 (CZMA). The CZMA was passed to "preserve, protect, develop, and where possible, to restore or enhance, the resources of the Nation's coastal zone for this and succeeding generations" (CZMA, 16 U.S.C.A. 1451-1464).

Working in conjunction with the CZMA are the National Estuarine Program and the National Estuarine Research and Reserve (NERR) System. The 1987 amendments to the Clean Water Act gave authority to the USEPA to establish the National Estuary Program. USEPA's Office of Water administers this voluntary program and today has 28 programs nationwide working on specific (site-based) conservation and management plans for bays and estuaries. To participate in the NEP, state governors submit a nomination package to USEPA (in response to a call for proposals) and agree to provide 25%-75% state-federal co-financing for approved programs. The NERRs are used as field laboratories to provide greater understanding of estuaries and how they function and are impacted by human activities.

The Office of Ocean and Coastal Management (OCRM) within NOAA's National Ocean Service (NOS) offers financial help to states and territories to develop and administer coastal programs and to designate NERRs. Coastal programs address and help manage for competing land uses in the coastal zone as well as protection of coastal resources. NOAA's leadership role at the federal level involves integrating and coordinating CZMA capabilities with other federal agencies and the private sector to promote coastal resource stewardship and balanced application of federal policies.

The NERR currently includes 22 designated reserve sites in 18 states and territories encompassing almost 440,000 acres of estuarine water, wetlands and uplands. The purpose of the reserve system is to provide areas representative of indicator examples of key habitat and ecosystems for natural field laboratories for research. The goal of NERR research is to enhance understanding of ecosystem and species level functioning and create opportunities for general education on estuarine issues. Federal-state partnerships are available to acquire lands for inclusion in the NERR. State governors nominate areas for consideration and NOAA makes determinations as to whether the nominated areas are included in the NERR, based on their representation of critical coastal or estuarine habitat and their suitability for long-term research and education uses. Once admitted to the system, states must ensure that laws are enough to protect the NERR areas for research and education.

Building on tools developed at the state and local government levels, the NOAA CZMP encourages states and territories to develop programs that meet their individual needs. At the same time, CZMP ensures they simultaneously confront such issues as coastal hazards, coastal erosion, declining water quality, wetland loss, increasing public awareness and participation and waterfront development and revitalization. Today, 32 approved state and territorial coastal programs cover 99 percent of the United States oceans and Great Lakes shoreline. These states and territories are partners in CZM with federal and other decentralized authorities.

2.2 The United States Coastal Zone Management Act of 1972

The national coastal zone management program is the most significant feature of the Coastal Zone Management Act of 1972 and has resulted in tremendous changes in behavior and development in United States coastal regions. However, the CZMA was not implemented through mandatory compliance with detailed and federally derived standards, as other many other federal regulations. Instead, the United States Congress found that:

"The key to more effective protection and use of the land and water resources of the coastal zone is to

encourage the states to exercise their full authority over the lands and waters in the coastal zone by helping the states, in cooperation with Federal and local governments and other vitally affected interests, in developing land and water use programs for the coastal zone, including unified policies, criteria, standards, methods, and processes for dealing with land and water use decisions of more than local significance." [United States Coastal Zone Management Act of 1972 Section 302 (i)]

In encouraging states to assume their authority over coastal resources, the CZMA again differed from other Congressional Statutes. Participation was voluntary, and the states were given broad flexibility in program design and execution while still being able to achieve federal certification of their programs. For example, certifiable plans under the federal program could be based on direct state control, or local or regional control of coastal waters and lands.

The CZMA did not attempt to control the details of design and execution of state and local coastal management programs. Instead, congress intended that minimum requirements for certification were 'process based'. The CZMA determines that these processes revolve around specific categories of activities that congress felt was crucial to transparent and participatory decision making. These categories of process requirements can be loosely described as follows:

- **Definition of Coastal Zone**
  An important point for the CZMA is the definition of the coastal zone. Rather than concretely defining the coastal zone, the CZMA defines the coastal zone generally as the territorial sea and adjacent lands "to the extent necessary to control shore lands, the uses of which have a direct and significant impact on coastal waters" and ecosystems. As a result, each state interprets what this means relative to local conditions and sets the boundaries of its 'coastal zone' based on individual local needs.

- **Informational and Definitional Requirements**
  These requirements set minimum standards related to information collection (i.e., knowledge). For example, on types and extent of coastal resources, the sources of stress on these resources, identification of areas of special concern (e.g., critical habitat or areas of national concern), and inventories of areas preserved for public access as well as others. They also included requirements for clearly defining the boundaries of the coastal zone, defining appropriate and acceptable land and water uses, and other definitions useful for administering the programs.

- **Institutional and Organizational Requirements**
  To be eligible for national certification each program must clearly define the legal authority and the organizational arrangement (implementation mechanism) by which the state can carry out its CZM program. This includes among others an inventory of the potentially overlapping jurisdictions, and how these will be resolved or used to support the coastal management program. For certain arrangements, state legislatures are required to provide institutional agreements with the force of law.

- **Procedural Requirements**
  For national certification of local CZM programs, the program must include clear coordination and procedures that ensure intergovernmental cooperation and public participation in coastal resource management decision making. This normally includes acquiring and documenting that appropriate memoranda of understanding are established between federal, state or local agencies and approved by relevant government agencies or legislatures.

- **Planning**

  Planning processes must be developed for prioritizing uses in specific areas of the coastal zone. This involves inventorying of resources and identifying areas of conservation, recreational, ecological, historical and aesthetic value" and developing plans for preserving these special areas. Certification also requires identifying areas of significant degradation and erosion with corresponding plans for dealing with these losses. Importantly, plans receiving national certification must include a process for "adequate consideration of national interests" such as activities related to siting energy facilities and other such important national development priorities.

- **Funding**

  The CZMA provides Program Management Development Grants to encourage states to initially undertake planning for their coastal management program. Initially, these grants required states to commit to a 4:1 match in federal to state funds in order qualify for the development grant. A state is not allowed to receive more than four grants, and successive grants are conditional upon significant progress in developing a coastal management plan. Administrative grants are also available based on a similar set formula, provided certain requirements were met, including matching funds by the state. By 1990, most coastal areas were covered by coastal management plans. As a result, the Coastal Zone Enhancement Grant Program encourages states to focus on improving their programs in a number of areas. These areas include coastal wetlands protection, management in high hazard areas, public access, control of marine pollution and debris, special area management planning and ocean resources planning.

2.3 Success of Voluntary Certification Under CZMA

The CZMA has been hugely successful in terms of states voluntarily submitting their programs to the federal government for review and certification. As of 1999, 99 percent of United States coasts and coastal areas in eligible territories manage coastal resources through integrated coastal management programs (ICMP) that are certified by the federal government. Now, the federal government and states are focusing on improving program components directly related to coastal ecosystem health and quality of life for current and future generations.

The are two main reasons for the overwhelming number of states volunteering for federal review and certification of their programs. Initially, funding incentives (grants) were made available on a cost-sharing basis with states developing their coastal management programs under the guidelines for certification by the national government. Most importantly, under the CZMA, the federal government provided the federal consistency guarantee to states with certified programs.

The CZMA Federal Consistency Requirement guarantees states that, with only certain exceptions, federal agency activities and activities funded, sponsored, or permitted by the federal government will be consistent with state or locally-created coastal zone management plans that are approved by the federal government. Furthermore, under the CZMA, once the federal government has approved the state plan, the federal government cannot put in place additional requirements to meet new federal government requirements in the future as a condition for continued certification federal compliance, except in situations of great national interest. This recognizes the importance of local control and governance of coastal resources and compels the federal government to comply with local values and wishes in terms of coastal land and water uses. The federal consistency clause fosters, and in many cases requires, cooperation and coordination between state agencies and federal agencies.

While the voluntary nature of the CZMA is one of the reasons for its success, there are some issues from a

federal perspective that bear noting. Mentioned several times with IST hosts at the national level, was the very low practical ability of the national government to monitor implementation and administration of state and local coastal programs. Once programs are certified there is little recourse for the federal government to be involved in decisions at the local level or in review of the management aspects of the program. Federal personnel noted this would help the overall development of the United States ICMP.

2.4 State and Local Response to the CZMA Through Integrated Coastal Management Programs

The coastal zone of United States and territories generally includes lands and waters from the territorial limit of three nautical miles to sea, to some inland boundary which may correspond to political boundaries (e.g., the inland boundary of all coastal counties), administrative boundaries (e.g., the nearest roadway), functional boundary (e.g., important ecosystem boundary) or some combination of these. This CZMA requires only that the coastal zone boundary be defined and allows state and local governments to decide on the appropriate method according to local conditions.

Many states use a tiered approach for defining the coastal zone, usually two tiered. The first tier includes the area with the 'most direct interaction with the coast' or the 'zone of primary influence'. Tier two includes the rest of the coastal zone considered to have indirect interaction with the coastal zone. Permitting in Tier one usually requires that any proposed development use be designated as a 'coastal dependent use' before being considered appropriate for near coastal zone. Tier two would then consider for permitted use those developments that are less dependent on being located immediately adjacent to the shore. Meetings between IST participants and the Coastal Commission of Rhode Island, a smaller state than most others, revealed a three tiered approach. These include a "zone of primary influence, a second zone delineated by the inland borders of the coastal counties and a third that includes the entire state in the coastal zone". Florida and Hawaii also designate the entire state as coastal zone except for federal lands and Indian Tribal lands.

Under the CZMA, the management structure for receiving national certification is not determined. Approaches range from complete direct state control of all designated coastal lands and waters, to regional agreements among various agencies for to co-management. Generally, states do not manage their coastal zones as one contiguous, all encompassing unit. Usually, coastal zone management authority is divided among various state and local authorities to which a considerable amount of coastal management review and permitting authority is delegated. In some states these local units are county or municipal governments, others are special management area commissions that manage areas that cross political boundaries (e.g., dividing the state into regional zones which may be individually managed). However, in all cases, a lead agency retains oversight of these local programs through some mechanism.

There is widespread use of state-local administrative relationships in United States coastal states and territories. Usually local county or municipal (city or township) authorities create local coastal zone management programs with technical help from the state level. Once these local programs are approved, some degree of permitting and enforcement authority is delegated to the local level with continued but loose oversight from the state lead agency.

In Florida these partnerships also include federal government agencies in win-win partnerships with state and local agencies. In Key West, continued development resulted in heavy impacts on the adjacent coral reefs from human waste discharges. These reefs are the only reefs in the United States adjacent to the mainland and are of tremendous value in terms of tourism and other benefits. However, the local population was so small (approximately 80,000) they could not bear the US$50 million cost of installing a sewage

treatment facility. A partnership was reached with the federal government to declare the Key West reefs a National Marine Sanctuary. This resulted in federal funds being made available to finance protection and management of the reefs, including major financing for a municipal sewage treatment facility.

The use of Special Area Management Plans (SAMPs) is widespread and occurs in almost all state coastal management programs. SAMPs are used to protect a wide range of habitat and ecosystem functions from mangroves and wetlands in Florida, to the Puget Sound and its watershed in Washington State. SAMPs are also sometimes used in protection of indigenous rights of Indian tribes. In Washington State's Puget Sound Watershed Area, the state worked with federal officials to declare the Nisqually Indian Tribe lands as a national wildlife refuge. This provided the Nisqually Indians with special use rights, while protecting the watershed in terms of impacts on water quality in Puget Sound. SAMPs are uniquely diverse, with varying structures, a broad range of descriptive names and a wide range of program elements. SAMPs are alternatively called marine sanctuaries, marine or wetland protected areas, wildlife refuges or areas of particular concern. They provide a higher degree of specificity in terms of acceptable uses within the designated areas.

Federal, state and local consistency plays a prominent role in federally certified state coastal management programs. This requires that federal, state and local activities and actions are consistent with the requirements and policies of each approved state CZM program. As the IST participants learned during the Washington meetings, NOAA plays an important role in ensuring consistency between state and local coastal programs of federal agencies, projects sponsored by federal agencies, projects permitted by federal agencies and projects funded with federal funds.

In each state, the lead coastal management agency reviews federal activities to ensure compliance. If they do not comply, the lead coastal management agency contacts the agency responsible for the non-compliant activity and notifies NOAA. In this way potential conflicts are resolved or avoided. Helping in consistency compliance, and providing conflict resolution help among federal and state agencies, is one of the most important services NOAA provides to states with certified programs.

Several program elements in the states bear special note. In Rhode Island, violations of the coastal management plan are recorded on the deeds of property for specific owners. This places limits on certain actions that the owner can undertake while these violations remain in effect, for example, assuming mortgages.

While not visited during the study tour, American Samoa's Village Liaison/Facilitator Program is another example that effectively maintains a village-centered traditional government that incorporates centralized coastal management regulations. Each village selects a village liaison while the coastal management program selects a facilitator. This allows effective discussion of issues and resolution of conflicts within and across traditional village laws similar to Indonesian *adat* laws.

Essential among state programs are the approaches that have contributed to effective public/stakeholder involvement, successful co-management or joint decision making processes, conflict resolution processes and coordination and harmonization processes (including consistency with the CZM program by state agencies). Each state and territory is different in how this is accomplished. The states and programs visited provide some insight into some of the institutional arrangements that are used.

2.5 Design of the Study Tour and Selected Comments on Information Exchanges

The specific locations of the IST were tailored to the interests and needs of the participants within the framework of Proyek Pesisir's goals and objectives. Following is a listing of sites visited with the general

theme and objective of each location.

· Washington, D.C. – September 12-15, 2000

A primary objective of the IST was to provide the Indonesian participants with a picture of what an integrated coastal management program looks like in practice and how it is executed. As a result, the IST included meetings with coastal management managers and leaders working at the national level at the beginning of the study tour. Discussions focused on United States national programs in coastal and marine resource management and provided a forum for Indonesian participants to inform the international development community in Washington of the changes occurring and opportunities unfolding in Indonesia. The agenda emphasized the legal and financial mechanisms used to achieve national coastal management objectives, through integrated efforts with state and local counterparts and special area management initiatives, such as the marine sanctuaries and national estuary programs. Distribution of authority among agencies and arrangements for inter-agency coordination were stressed, as well as organizational structures and operational strategies for implementing the national program.

Meetings with NOAA revealed important details about their operations. According to NOAA staff, US$60 million per year of federal funding goes to states through NOAA programs. Of this, about US$20 million is used for the CZMP program. Most states then match this funding from state level budgets. Funds dedicated for coastal research are not included in this budget. Additional points included:

- NOAA operates and maintains continuous surveillance and monitoring activities in the coastal zone;
- The organization works to create greater efficiencies in monitoring and management,
- NOAA strives to create public-private partnerships,
- NOAA invests in scientific research and focuses on the needs of coastal and marine populations through programs designed for coastal and marine management and development.
- NOAA's National Ocean Service is divided into two offices: 1) Special Management Areas (SMAs), including protected areas; and 2) Overall and general coastal management.

NOAA maintains a system of Marine Protected Areas around the entire border of the United States as a result of presidential decree. The process for establishing this system included an inventory of existing areas, identification of gaps in the system and areas overlooked, development of science-based management for these areas, and engaging public and stakeholders in decisions to designate protected areas. Included in marine protected areas are coral reef resources, also protected through presidential decree.

An important lesson that was discussed by the head of the coastal management program for NOAA was the difficulty in pushing states to improve the quality of content in their CZM programs without some level of limited review and evaluation authority. NOAA oversight is limited to plans that states have already submitted and approved, thus encouraging incremental improvement is difficult. NOAA is currently trying to expand its authorities and improve its indicators for how well coastal management programs are being implemented and how well they meet their objectives. This was considered an important point in the planning for an Indonesia integrated coastal management program at the national level.

An important discovery of the United States CZM program was the contribution of non-point source pollution to degradation of coastal waters and habitat. In fact, it was discovered that non-point source pollution, that is pollution that does not originate from a single source such as street water runoff or agricultural runoff, potentially contributed more to degradation of coastal waters and habitat than point source pollution. Thus, the 1990 Clean Water Act brought NOAA and the United States Environmental Protection Agency (USEPA) together to implement non-point source pollution controls through the CZMA in coastal areas.

In addition to meetings on coastal management, discussions were also held with key staff of the NOAA's National Marine Fisheries Services (NMFS) concerning fisheries management and the need for data and science-driven decision making in fisheries management. The United States experience with regional fisheries advisory councils (RFACs) was discussed and the current review of the councils' progress in maintaining fishing stocks. The RFACs were highlighted as a United States program that had not succeeded in its mission to ensure levels of fish stocks. Due to the make up of council membership, the councils were encouraged to maximize fish harvest returns above sustainable yields.

NMFS staff also discussed fishing licensing procedures in the United States, handled mostly on a state-by-state basis. Fishing companies wishing to operate in multiple states must acquire multiple fishing licenses. This licensing system also applies to recreational fishing from state-to-state. However, monitoring of larger commercial fishing boats indicates that they move out to Exclusive Economic Zone (EEZ) areas to fish before crossing into another state's waters. There are no federal licensing requirements except for fishing in the EEZ.

One of the largest problems identified by NMFS staff is lack of information for formulating accurate policy for fisheries management. As a result, through federal legislation the NMFS is required to manage fisheries stocks under a precautionary principle.

In response to a question from Minister Sarwono on how NOAA addressed building support within the United States Congress, the head of the NOAA coastal management program responded that United States Congressional constituencies arrived through local constituencies including coastal populations, NGOs, private sector groups and others. NOAA efforts started with school children and continued through ongoing engagement of the local and national media, as well as providing programs at the local level that benefited local communities such as the Sea Grant Program. In the end, NOAA felt that national support arrived through local efforts. Additionally, NOAA attributed results at the local level with financial resources available for activities at the local level.

The Sea Grant Program was started in 1966 as a way to bridge the gap between development and conservation of United States coastal resources. Today, Sea Grant Programs are located in 29 universities. A major goal is fostering development and improved economic competitiveness through global technologies. The United States National Sea Grant University Program, through integrated research, technology transfer and educational programs, contributes to sustainable development of marine resources, strengthens coastal communities and coastal businesses, and works with high technology businesses to implement research-based technologies.

The Sea Grant Program works in three major areas: 1) Advanced technology for commercial products and processes; 2) Seafood production; and 3) Coastal economic development. Sea Grant Universities contribute to a robust and growing United States economy, a viable and modern marine infrastructure and a stream of coastal and marine products based on the development and application of advanced technologies. Designation as a Sea Grant University is competitive and only one is designated per state. In addition, Sea Grant Universities often help local businesses with regulatory compliance and local governments with developing and passing appropriate legislation. A very important aspect of Sea Grant University Programs is that they can receive and operate with funds from sources other then NOAA, thus providing a contact point for other departments and sources to engage coastal and marine efforts.

Although not directly part of the CZMA, another interesting aspect of United States law relating to marine

and coastal development are the Natural Resources Damage Assessments (NRDA). The regulations supporting NRDAs was passed by the United States Department of Interior in 1986 and provided for major penalties against companies and other entities causing major and serious environmental damage as a result of their actions, particularly in terms of the release of hazardous or toxic substances into the environment. This was followed in 1990 by the Oil Pollution Act (OPA). The OPA is designed to require companies and others to be liable for restoration of environment resources and services to its original state after the serious release of oil. In addition, responsible parties must compensate for economic and environmental loss during the period of restoration. These two pieces of legislation serve to ensure restoration of environmental damage by responsible parties and are often used in coastal and marine areas (e.g., the Exxon-Valdez oil spill in Alaska).

Meetings also were held between Rear Admiral Busran Kadri, Director General for Monitoring, Surveillance and Enforcement and Captain Dave Westerholm, Chief of Emergency Response for the Commandant's Office, United States Coast Guard (USCG), in Washington, D.C. This provided an opportunity for direct interaction and discussion of coast guard authorities and responses to duties in the coastal zone. This included coast guard activities related to search and rescue, aids to navigation, marine environmental protection and emergency response, marine security, law enforcement relative to fisheries and smuggling, mobility (ice breaking) in northern United States marine areas and national defense authorities in times of war. The USCG also has responsibilities for ship safety and sea worthiness compliance and port control programs for foreign vessels in United States territories, including refugees. An important aspect of the USCG responsibilities includes oil and hazardous spill response capability that supports other agencies in marine and coastal emergency response.

Meetings with the United States Department of State were held (see IST Daily Agenda in Appendix G for details) in which Department staff stressed the importance of Indonesian compliance with international accords and treaties, especially protecting sea turtles, the potential negative economic impacts of non-compliance in terms of continued export of fisheries products to the United States by Indonesia. This is particularly important given that yearly certification must be maintained for countries exporting certain marine products. The United States State Department staff volunteered help in supporting Indonesia's efforts to maintain relevant certifications, especially those concerning turtle excluder devices or TEDs, as well as upcoming certifications on aquarium and coral reef fish harvesting and shipping.

While in Washington, the IST participants met with Hattie Babbitt, Deputy Administrator of USAID. The meeting focused on the success that Indonesia and the United States have shared in working together in the past and in particular on the six areas essential to Indonesia's rapid recovery from the Asian monetary crisis and continued development. These six areas include democratic transition, economic recovery, environmental management, health and nutrition, food aid, and increased employment. Ms. Babbitt emphasized the global importance of Indonesia's biodiversity and ecology. She reaffirmed USAID's commitment to supporting Indonesia's efforts toward responsible environmental management, especially during the increased environmental strains and pressure resulting from the monetary crisis. Ms. Babbitt emphasized the demonstration of this commitment through USAID support of the important work underway through a cooperative agreement with the University of Rhode Island's Coastal Resources Center. The group also discussed the importance of continued United States-Indonesia relations and Ms. Babbitt confirmed her commitment toward this objective.

· Baltimore Aquarium, Maryland – September 15, 2000

The National Aquarium in Baltimore (NAB) hosted a seminar for the delegation that focused on under-

standing processes of urban waterfront revitalization and the role of public education facilities such as aquariums. During the seminar, long-serving Aquarium Director, David Pittenger, and senior staff, Dr Valerie Chase, Glenn Page and Nancy Hotchkiss explained the key role played by the NAB in both contributing to the initial redevelopment of the Baltimore waterfront and as a leading national education and extension facility. The NAB is now one of the most successful aquariums in North America, however, it has to continuously 'reinvent itself' to stay relevant to the rapidly changing visitor market and to be commercially viable. Participants noted the many parallels between the NAB and the Seaworld Aquarium in Jakarta. However, they also noted that in the case of the NAB, there is a much broader role for the aquarium in 'ex-situ' public education and in research and training.

The well-recognized success of the NAB in promoting revitalization of the Baltimore city centre has had numerous spin-off benefits, many of which were not originally anticipated (e.g. decrease in crime, increased civic pride, etc.). During discussion of these benefits NAB staff explained the catalytic role of the aquarium designers in working with local government to achieve an integrated development concept, including integrated service systems for parking, landscaping, etc. Participants noted that such integration is very difficult to achieve in Indonesia. An interesting analogy was drawn between the Seaworld aquarium (which is developed on reclaimed land, isolated from the city center and what may have been possible in the old city heart (the Kota area of Batavia) if an approach similar to the NAB had been adopted.
In a similar context, participants were also intrigued by the prominent role played by the NAB in assisting with development of national marine education curricula and materials. NAB staff explained that through various professional networks, the NAB is able to both supply key resources and access expertise and information (e.g. on coral reefs) that is unavailable in Baltimore. Through this process of multi-level partnership with a variety of local, national and international organizations, the NAB commands a leadership role in marine education that has no parallel in Indonesia.

· South Florida – September 15-18, 2000

The Florida Keys National Marine Sanctuary (FKNMS) exemplifies the United States experience with national marine sanctuaries and highlights the role of federal and state agencies with regard to program coordination, funding, planning and implementation. The IST participants were provided with detailed discussions on coastal management planning that promotes sustainable development with regard to tourism, managing coastal hazards and pollution, emphasizing those actions with special relevance to the context of small islands. The sanctuary protects not only coastal and marine systems but also harbors the protected Key Deer and many sensitive wetland species.

There are about 90,000 residents in the Florida Keys and 2.5 million visitors each year, with an annual impact of US$1.2 billion. With the FKNMS attracting over one million visitors per year, there is a significant opportunity to generate revenues that help support the sanctuary. Cruise ships that dock in the sanctuary are assessed an environmental user fee of US$3.00 per passenger (there are plans are to raise this fee). This fee is assessed through contracts directly with the cruise ship companies so transparency is assured. Other fees are included in room charges at hotels that generate further revenue for the sanctuary.

Prior to the establishment of the FKNMS, the county was responsible for managing the entire Keys area consisting of a series of small islands. As such, decision making authority was located in the county capital outside the Keys. After the creation of the FKNMS, decision making authority was more focused specifically on the special needs of the Keys and functioned through co-management between local, state and federal authorities. The FKNMS is a very unique example of state-federal cooperation in small island management, an issue of key importance and relevance to Indonesia. This sometimes creates management diffi-

culties, but ultimately results in more competent management of the coastal and marine resources through the combination of state-federal expertise.

The FKNMS presents an interesting and important example of the federal government recognizing the value of a resource that was not under its jurisdiction, and taking proactive and progressive actions in conjunction with local authorities to preserve and protect these resources. Prior to creation of the FKNMS, raw sewage from expanding housing was entering coastal waters causing serious impacts to the fish and coral resources of the areas. However, the cost of expanding wastewater treatment capacity was enormous and beyond the funding ability of the small population. Working in conjunction with local and state authorities and stakeholders, the federal government designated the southern Florida Keys as a marine sanctuary that made available federal funding for expansion of wastewater treatment capacity in the area. Thus, through a federal-state-local partnership, the resources of the Florida Keys were protected. Designation as the FKNMS also made management, enforcement help and funding available, further preserving the tremendous value of the area.

The impetus for creation of the FKNMS was the grounding of three large boats on the Keys reefs within a short period of time causing considerable damage. Once the management plan was developed, the public had nine months to review and make comments. This included the work of an 18 member public advisory committee that informed on the plan and organized education efforts. The advisory council has continued to be instrumental in shaping the management plan. Education is a major component of the FKNMS program. All eighth grade students are given the opportunity to do coral reef classroom work and projects. This begins to establish among students an appreciation and understanding of the importance of the Keys as an integrated ecosystem and economic engine for the area.

NGOs work closely together to support the FKNMS. Friends of the Sanctuary, a local NGO, gives funding support for certain projects and helps with education. The Nature Conservancy organizes management beyond the sanctuary boundaries, and other NGOs work directly with the government to help in lobbying for funding and other needed support. IST participants were particularly interested in the economic contribution of the FKNMS and quickly noted the similarities between the FKNMS and Bunaken Marine Park in Northern Sulawesi.

Local NGO members operate patrol on their own with the objective of educating visitors to the part who may not understand the importance of following sanctuary rules. When violators are identified, NGO volunteers approach the violators and inform them of what they are doing wrong and why it is important to comply. This kind of compliance assistance plays an important part in maintaining the resources of the sanctuary.

In addition, local enforcement agents do not always ticket or penalize violators of park rules. Often, violations are seen as an opportunity to educate people on the regulations of the park and further helps them to understand regulations (e.g., fishers, boaters, swimmers etc.). When penalties fines are issued for violations, these penalty fees within FKNMS are channeled into proactive programs such as education. An important element supporting enforcement and monitoring is that boats seized for illegal fishing within the sanctuary are confiscated and made available to sanctuary managers for patrol and monitoring work within the sanctuary. Ninety-five percent of enforcement is still in state control.

One of the most enlightening portions of the schedule in Southern Florida was a visit to the office of the Monroe County Council in Big Pine Key. The IST recipients were able to engage directly in discussions

with county planners about processes and tools used to plan development in the Keys and build the Monroe County Comprehensive Plan which covers county planning through the year 2010. Elements of the plan included future land use, conservation, transportation, ports and airports, housing, fresh water, waste management, recreation, intergovernmental coordination and public participation. The IST group was especially interested in land use planning for the small island Keys and was able to view maps and other supporting documentation related to controlling development within the Keys. This included county land acquisition maps identifying land critical to sustainable development of the Keys (such as aquifer recharge areas) that is scheduled for buy by county government. Planners admitted that planning for the FKNMS is difficult due to the many interests and stakeholders that had to be included in the planning process. However, they also confirmed the importance of planning in the coastal zone by recognizing decisions that they should have made 20 years ago.

As an interesting note, planners also informed the group about state support and cooperation. The Florida Department of Environmental Protection (DEP) keeps and updates every five years a state coastal zone natural resource atlas (the entire state is designated coastal zone) that includes a natural areas inventory. DEP visits the site of each proposed project and using the information in the atlas makes determinations on the project. The Department of Community Affairs (DCA) makes certain reviews related to federal consistency occur and also acts as facilitator between agencies as well as local governments in conflict resolution and harmonization. Memoranda of Agreement are established between many state agencies and some federal agencies to ensure harmonization. There is considerable information sharing between state agencies. Regional councils develop plans that must be followed by the local governments in making their coastal management plans. The Florida Coastal Management Act requires public hearings and ensures government and public/stakeholder interaction and facilitates co-management of resources.

The final visit of the Southern Florida schedule was to NOAA's MOTE Marine Laboratory. Here, specialized research is carried out regarding coastal and marine ecosystem functions. They are engaged in important work on coral growth and rehabilitation. The MOTE Marine Laboratory can measure the rate of coral degeneration subjected to a wide range of stresses such as light conditions and temperatures. The information being generated is very valuable in understanding how to address deterioration of coral reef conditions around the world. The NOAA Mote Laboratory is specially designed as a small self-contained laboratory to keep maintenance costs and staffing affordable. It has become world renowned for its research and contribution to marine science.

Throughout the Florida section of the tour, the group was accompanied by James F. Murley, Director of the Joint Center for Environmental and Urban Problems at Florida Atlantic University. Dr. Murley provided an overview of local coastal issues and how they have been resolved via legal and cooperative voluntary processes.

Another important aspect of the Florida experience was contact with hotel managers in South Florida who emphasized the importance of appropriate design and construction in coastal areas. Everything from architecture to landscaping is considered in these delicate areas to preserve the huge future revenue generating potential while minimizing impacts and maintenance costs of operations.

· Rhode Island – September 18-20, 2000

In Rhode Island, IST participants were treated to the most thorough analysis of the development of a state coastal program. This was particularly important as some of the key stakeholders in the Rhode Island Coastal Management Program ultimately had a significant influence on the initial implementation of NOAA's Coastal

Management Program in Washington, D.C. This brought tremendous influence from the Rhode Island experience to the national level. While the main concentration was on the state's coastal management programs, those with national experience were also able to provide broader perspectives on decentralized coastal management in the United States. Special attention was given to permitting processes and requirements used to manage coastal development. Legal perspectives on land ownership and use rights were also addressed in the context of achieving coastal management goals. The most important discussions concerned the history of the development of Rhode Island's coastal management program.

Rhode Island's (RI) coastal program went through several start-up attempts before being passed into law by the State Legislature. A major problem in starting the RI/CZM program was the lack of capacity in government, universities and the private sector. The final plan placed program management responsibility in the hands of the Coastal Resources Management Council (CRMC). In order to overcome the lack of capacity in most state government organizations and other sectors, the drafters of the original plan were helped by the Coastal Resources Center (CRC) at the University of Rhode Island (URI). The URI/CRC is one of the premiere coastal management research and help centers in the United States that was able to provide the necessary technical expertise critical for creating the plan. Ultimately, the plan called for responsibilities to be shared across a range of government departments and non-governmental entities. This was a major factor in the final success of the program.

There were a number of reasons the law was finally passed. This included the fisheries industry collapse due to over fishing in the early part of the century, the aquaculture industry collapse due to coastal water quality deterioration, and huge loss of life and property from a hurricane as a result of unrestricted development in the coastal zone. In the 1960s and 1970s people could remember these events. Finally, with the attempt by a local government to permit an oil refinery on the Narragansett Bay, enough support was achieved for passage of the state law. Ultimately, the passage of this law was extremely significant for Rhode Island. Not only did this provide the authority to prevent an oil refinery sited on one of the most beautiful bays in America. It also allowed the state to successfully prevent later developments that would have radically changed the nature of the coastal zone in Rhode Island, thus reducing its revenue generating potential for tourism and other activities.

Once the program was approved, there were still many obstacles to achieving wide spread compliance. There were a number of critical actions, all of which were required for success of the RI/CZM program. Partners both within and outside government and public and private sector were necessary for program approval and implementation. Program success would have been impossible without shared responsibility. RI/CZM staff had to constantly deliver the same message over a long period of time before potential partners began to recognize the benefits of the program. This constant repetition and marketing of coastal management themes over time, such as the direct connection between land and water in the coastal zone, educated people to the issues and the need for action to preserve the coastal zone. This was supplemented an environmental rating scheme for companies in operating in the coastal zone (i.e., public disclosure of bad and good actors) and other mechanisms that constantly reinforced the need for a coastal management program.

Transparency through development of the program kept the process fair. NGOs played a significant role in representing public values. Partners in other agencies were able to contribute knowledge of existing regulations and resources that helped in later implementation.

Still, according to state officials, the primary reason for creating the Rhode Island Coastal Management Program (RI/CZM) was financial gain. Currently there are 5-10 million tourists per year who enter Rhode

Island, most of whom are heading for the beautiful scenic recreational areas offered by Rhode Island's coastal areas. Preserving these resources, as well as preserving public access to them, has resulted in a revenue stream that makes a significant contribution to the state's economy through direct and indirect spending, as well as through certain tourist taxes such as hotel lodging taxes. In addition, 69 percent of the resident population lives in coastal cities. These residents want to protect their environment and the coastal plan provided protection to the coastal environment.

The governing body for the RI/CZM, the CRMC, is made up of 17 members of state and local governments. Roles and responsibilities of the CRMC include assessing the condition of the coast, conducting long range planning, coordinating government activities and actions, and permitting authority for permits of state and local concern. The CRMC provides clear guidance to stakeholders about what uses are permitted in the coastal zone so landowners understand requirements and permitting decisions are transparent. In addition, the CRMC is the Rhode Island agent for coordination with other government agencies concerning activities in the coastal zone. This includes state agencies and federal agencies such as the United States Army Corps of Engineers concerning water quality permitting and other major construction and dredging activities with the Rhode Island coastal zone. This is very important as different agencies have different mandates and points-of-view. For example, the Rhode Island Department of Environmental Management derives criteria from USEPA standards. In contrast, the CRMC derives its standards from the Department of Commerce and NOAA.

For smaller actions in the coastal zone, the CRMC has the authority to issue permits. This permitting is guided through land use zoning ordinances that clearly state what uses are permitting in specific areas of the coast. Public notification periods are required on all actions in the coastal zone to ensure stakeholder participation. Most permits issued by the CRMC are based on "findings of no significant impact" or FONSI. FONSI-based permits usually take from three to five days to process. Permit applications for larger permits take longer depending on the size of the project, the level of public interest in the project and the range and complexity of potential impacts. Developers are usually brought into the CRMC planning process before permit applications for compliance help. During this process, CRMC members and developers work together to reduce project impacts and understanding coastal development issues.

Although there was a conscious attempt to inform the public and make the permitting process accessible, the process initially adopted by the CMC was very cumbersome and slow. Minor permitting decisions were taking too long and bigger permits with potentially more impact were not getting enough information collected to make good decisions. The environmental impact assessment process used for unworkable, decisions were often inconsistent, slow and did not consider cumulative impacts.

The Rhode Island Law was revised to streamline the review and permitting process. This included different permits for different activities, zoning of the entire coastal zone to increase transparency; the procedures were simplified so that everyone could easily understand them. This second attempt was mechanical, simple, transparent and ultimately workable in effectively managing development and use of the Rhode Island coastal zone. It included provisions to react quickly and transparently to complaints, violations were noted on the deeds to land preventing owners from mortgaging, and cumulative impacts were included in the permitting review. New provisions of the law were written in with broader open-ended language to provide flexibility for coverage of issues not yet encountered in the permitting process. In addition the Rhode Island CRMC staff pointed out the importance of land use planning and zoning, developed through transparent and publicly debated processes, to manage coastal development impacts and retain the economic value of coastal areas.

Currently, over 50 percent of the funding for the CRMC is from federal funding sources (US$1.3 million verses US$1 million from the State of Rhode Island). Universities usually provide many services free of charge and an average of US$300,000-US$400,000 is used for consulting support to the CRMC.

Performance monitoring is very important to measuring the success of the RI/CRM program. Public participation indicators are one way of measuring success. Some measure of success can be determined by examining whether CZM plans are being followed, the efficiency of the permitting process, continued funding levels, attendance at public hearings and number of violations reported by the public.

More difficult is direct ecosystem monitoring in terms of improvement or decline. Currently, indicators such as water quality and storm damage data give some indication of the success of the program. Also, the number of water bodies meeting designated uses is another indicator of success (e.g., swimming, boating, drinking water, fishing, etc.) There is also a cooperative monitoring program under the CZMA that allows for regularly scheduled reviews of all state CZM program implementation in the United States. These review teams include one person from the federal government and one person from another state program. In this way, states feel that reviews are balanced while at the same time cross-state learning is enhanced.

However, in terms of overall monitoring, Rhode Island representatives were quick to point our the need for ongoing research to better understand the natural regimes of the Rhode Island Coastal Zone and the connections between ecosystem events and human behavior. New technologies are making monitoring easier and coastal management decision making must be constantly updated based on the resulting science. As a result, it was recommended that new CZM programs establish reviews of every five years to ensure that decision making and management was based on the most recent science available.

Beyond monitoring the issues related directly to coastal management, the IST team explored Rhode Island's experience with fisheries management. Overall they found that fisheries management programs in Rhode Island and the United States have failed. Fisheries programs were originally too democratic: management became an allocation process rather than a conservation process based on science related to sustainable yield. Stakeholder participation (i.e., bottom up planning) was thought to be the mechanism that ensured appropriate fisheries resources management - it did not. Stakeholders were more interested in maximizing yield from year-to-year. Rhode Island planners noted that Canada had a top down approach (i.e., strong central control) which also had issues in terms of fisheries mismanagement and collapse. The similarity between all of these programs was the lack of science in planning for fisheries management.

IST participants also were afforded the opportunity to interact with Newport, Rhode Island tourism and business development representatives. Their market development activities are funded by a lodging tax that is specifically dedicated for leisure and business destination promotion to Rhode Island. Other fees such as port and docking fees generate revenue. Separate marketing plans are developed by individual groups rather than developed by a single larger marketing plan to be used for numerous groups.
For example, family tourists, golf and other recreational tourists, business conventions, cruise ships and personal yachts, and other potential market segments are individually researched and specifically targeted in marketing campaigns. In addition, economic development through integrated tourist marketing involves cooperating with other parts of government such as transportation planners to ensure adequate access to areas scheduled for tourism development. The results have been dramatic. Within 10 years, off-peak tourism has increased 20 percent though this integrated planning and marketing approach. Sixty percent of Rhode Island tourists arrive from within 350 kilometers (200 miles) of Newport.

Through conversations with tourism developers, IST participants discovered the key ingredient to tourism development is discover what is special (i.e., what products you can deliver) about individual locations and exploit this advantage in specific marketing campaigns. The types of tourism products available determine what market segments can be effectively attracted. To support ongoing efforts, measuring tourist (customer) satisfaction and responding to the results is also an important part of effectively exploiting tourism products.

In addition to direct tourism development efforts through marketing activities, Rhode Island, and especially such the city of Newport, has undertaken extensive waterfront development efforts. Through waterfront revitalization programs, such areas as Newport's harbor and bay waterfront area are now major attractions for tourist in both warm and cold weather. The success of the waterfront revitalization efforts are evident in the large number of tourists who come to Rhode Island just to enjoy the Newport urban waterfront cafes and other amenities.

The study tour participants also visited Applied Science Associates (ASA), a marine science consulting firm specializing in computer modeling of pollution dispersion and resulting impacts in marine environments. ASA is a private firm launched 20 years ago by former faculty and staff of the University of Rhode Island's Ocean Engineering Department to bering the theoretical research being developed at the University into the marketplace as applied technology.

ASA consults for both private industry and the United States Federal Government. The presentation to the study tour participants focused on ASA's work with the United States Coast Guard and the National Oceanic and Atmospheric Administration's Damage Assessment Center (DAC). The foundation of ASA's work with both government groups is computer models that simulate the movement of spilled oil in marine environments under different conditions. These systems link together hydrodynamic models with algorithms describing the movement of oil in three dimensions based on the influence of winds, currents, type of oil, and other important parameters. The models are linked with Geographic Information Systems (GIS - either ArcView, MapInfo, or a more simplified system) and a Microsoft Windows-based user interface to expedite customizing modeling scenarios to specific geographic locations and environmental conditions.

The ASA models have a variety of applications as demonstrated to the IST participants. ASA staff demonstrated the application of the models to response situations for oil spills and search and rescue operations. During the demonstrations the model, called OILMAP, was used to predict how oil would be transported under the given environmental conditions during the spill. Then a customized, shared database linked with the GIS system allowed the Coast Guard response teams to plan the deployment of equipment used for spill clean-up. Another model, SARMAP, was demonstrated for search and rescue applications. This model, based on similar principles as OILMAP, uses algorithms tailored to simulate specific objects (ships, planes, etc.) to predict the movement of these objects under specific environmental conditions. SARMAP identified search patterns that are most likely to match the movement of the lost object. A customized version allows response teams to plan rescue responses through shared databases and the GIS system.

The ASA visit demonstrated that there are technologies available to statistically predict the potential impacts of oil spills from various development activities and accidents. These are important for emergency response but also are used extensively in environmental impact statement (EIS) development for proposed development. Through these EIS, environmental risk for specific proposed developments can be estimated and appropriate preparations made in case emergency response is required. In some cases estimated risk is so high that proposed developments are cancelled.

While in Rhode Island, as a follow up to his visit in Washington, D.C. with the US Coast Guard Office of Response, Admiral Busran Kadri visited the USCG station at New London, CT. In the initial briefing, the Station Commanding Officer, Lt. Paterson, outlined the scope of operations of the station and it key role in marine surveillance and safety in waters between Rhode Island and New York. The Admiral was then taken on patrol to Fichers Island (NY) where he was informed about coordination between the USCG and other authorities (notably police) and about the logistics of providing reliable coverage for the patrol area, particularly during peak recreational boating periods. This visit was clearly a highlight of the Study Tour for Admiral Kadri who noted the importance of developing an equivalent capacity in Indonesia as part of the overall Marine MCS (monitoring control and surveillance system).

· Washington State – September 20-22, 2000

In the State of Washington, the IST group learned about the experiences of the Pudget Sound Water Quality Action Team (PSWQAT) and the Nisqually Watershed Management Program (NWMP). These programs demonstrated successful approaches to watershed and bay management and provided IST participants a chance to engage in conversations with ranking staff regarding development and implementation of both programs. Through these meetings, Washington staff articulated the roles of government, indigenous communities and the private sector in these participatory initiatives. Field trips illustrated coastal management strategies and interventions relevant to bay management including restoration, sustainable land management practices, environmental management of ports, public education and participation and a unique view to land ownership and submerged lands.

Puget Sound is a critical part of Washington State's economic health. Transportation access through the Port of Seattle links the area economically with world shipping. Helping to drive the incredible economic success of the Washington's economic expansion partly is attributable to Puget Sound and the public amenities it offers. As a result, establishing an urban bay program for Puget Sound was a natural step for the State.

Puget Sound's Urban Bay Program (UBP), coordinated by the PSWQAT, addresses the many important issues facing managers of bays located next to urbanized areas. Issues such as toxic contamination, restoration and protection of habitat, stakeholder involvement and cooperation by industry and wastewater discharge facilities, local governments and others are key to urban bay protection. As in the Puget Sound, coordination alone is difficult in urban bay situations. For Puget Sound there is more than 15 major federal and state laws, many additional federal, state and local regulations as well as Indian Tribal jurisdictions and interests.

The ultimate goals of the PSWQAT urban bay program is to protect human health, protect marine and estuarine ecosystems, restore degraded areas, and protect bay uses effected by toxic contamination and poor land use (e.g., shell fishing). This is
accomplished through three objectives: 1) Identifying areas of concern; 2) Identifying historical and ongoing problems and stresses; and 3) Ranking problems and actions to reduce contamination sources and protect and restore habitat.

Accomplishing these three objectives was a cooperative process. The first step was establishing an interagency work group (IWG). This work group included Indian Tribal government representative, and federal, state and local agencies. This work group secured commitments from key players, provided technical and scientific information, ensured coordination across agencies and programs, developed action plans and reviewed progress against action plan schedules.

The second step for the PSWQAT was to establish a citizen advisory committee (CAC). The members of the CAC included environmentalists, businesses and industrial associations, commercial and recreational fishing and boat groups and others. The CAC provided feedback on activities and action plans of the IAG, helped in identifying and confirming issues of public concern, and disseminated information to citizens and special constituent groups.

The third step was to form the Urban Bay Action Team (UBAT). The UBAT consisted of a field task force of technical staff from appropriate regulatory, resource management and planning agencies. The UBAT focused on problem identification, implementation of the action plan, encouraging voluntary clean-up and habitat restoration.

Key factors for success of the Puget Sound Urban Bay program was to get ownership established among stakeholders through education and direct involvement with Puget Sound issues. PSWQAT had to ensure cooperation between the many agency personnel responsible for the many programs overseeing Puget Sound. Another important factor for success was to get resources committed to establish and support urban bay action teams to carry out and monitor progress of action plans. No less important was supporting voluntary clean up by polluters while ensuring enough regulatory authority to stop, and if necessary, punish violators in the Puget Sound area.

As in the overall description of the CZMA program, non-point sources of pollution were ultimately identified as contributing as much or more pollution to coastal areas as pollution from point sources. Non-point source pollution usually starts upstream in small amounts such as used oil poured down a drain, contaminated storm water, sediments washed from cleared forest land, animal waste, household, yard and agricultural chemicals, or untreated sewage from boats or houses. Thus, the United States Clean Water Act brought NOAA and the USEPA together through the CZMA in 1990 to address non-point source pollution effecting the coastal zone. For the PSWQAT and the Puget Sound Urban Bay Program, non-point source pollution was addressed through the Watershed Action Program (WAP).

A watershed is a geographic region that drains water (and everything carried with the water) into a river system or body of water such as bays and coastal areas. Watershed planning is critical to addressing non-point source pollution. Water from all land sources within its watershed eventually drains into Puget Sound so every activity on land has the potential to affect the Sound. In addition, non-point source pollution and contamination is easily carried into groundwater, rivers and streams with many uses, including drinking water, fishing and other food producing activities. Local involvement and control of watershed program design and implementation is critical because this is where non-point source pollution originates.

The development and implementation of local watershed action plans is the heart of the Puget Sound Water Quality Management Plan's non-point source program. The Puget Sound WAP uses local committees to cooperatively identify problems and solutions to water quality and habitat problems within their watersheds. Funding incentives are made available to local governments to develop watershed plans. These local governments appoint community-based watershed management committees, made up of local government staff, water conservation district staff, Indian Tribe representatives, businesses, individuals and special interest groups. These local committees spend up to two years developing local watershed management plans.

Local watershed action plans include an inventory and characterization of the watershed and its resources, identification of problems, goals and objectives, strategies for controlling non-point source pollution, strategies for carrying out the plan including financing, timeliness, accountability and opportunities for public

participation.

The key to success is having a suitable workable plan. Local governments, citizens, businesses and others must work together to overcome obstacles that threaten the economic and ecological value of Puget Sound. These include inadequate funding, local opposition by special interest groups and lack of commitment by key players. By working together on the committee, all parties can make commitments and be held accountable for implementing the plan once approved. The Washington State Department of Ecology administers the watershed program with oversight by the Puget Sound Water Quality Action Team. Other state and federal agencies provide technical, as well as financial help. A particularly salient note is the role of commercial forest and paper companies in actively participating in and planning for sustainable management of the watershed. Clear cutting is limited to 120 acres plots as a best management practice. Areas with special features (waterfalls, archeology sites, stream and riverbanks) are all intentionally and voluntarily left covered with forest.

To better appreciate watershed management approaches, the IST group was taken to the Nisqually River Interpretive Center in the Nisqually Wildlife Refuge to receive presentations from personnel working with the Nisqually River Management Program (NRMP). The NRMP is a multi-agency effort to protect the Nisqually River as one of the main watershed contributors to Puget Sound. Over 50 percent of fresh water running into southern Puget Sound is from the Nisqually River. The NRMB was created in 1987 after the Washington State Legislature approved the Nisqually River Management Plan, which recognized the unique cultural, historical, environmental and economic resources of the Nisqually River Basin. The plan called for creation of the Nisqually River Council, a Citizen's Advisory Council and closely associated non-profit organizations.

The Nisqually River Council is the lead coordinating body for the program. The twenty members represent a variety of interests including the Niqually Indian Tribe, commercial forest and paper companies, local, state and federal government agencies, utility companies and the military. Twenty-one citizen's sit on the Council's Citizen's Advisory Committee representing all stakeholders along the river. The Council meets regularly and the public is encouraged to attend these meetings.

The Nisqually River Management Program Projects include:

- National River Basin Land Trust: This trust works to protect lands along the Nisqually River corridor through private, non-governmental means. The Trust preserves land through direct acquisition of property by buy or donation, and the establishment of conservation buffer zones along the edges of the river.
- Nisqually River Education Project: This field oriented environmental education program enables students throughout the river basin to better understand water quality concerns and related issues and recognizes their role as citizens of the basin. The project provides curricular materials and teacher training, water quality monitoring instruction and a variety of other projects.
- Nisqually Interpretive Center Foundation: An education and interpretive center was established with trails and exhibits to educate visitors on the importance and role of the Nisqually River to Puget Sound and the area. The center has over 11 kilometers of trails for the public to see the river and wildlife, hosts 80,000 to 100,000 visitors each year and has a small professional staff with over 70 volunteers.
- Nisqually River Notes: A quarterly newsletter containing information about the Nisqually River Basin and Nisqually Council Activities.
- Nisqually Basin Watch: This program was established to educate citizens along the river about their responsibilities in protecting the river. The program provides telephone numbers enabling citizens to report violations such as illegal burning, illegal dumping and other illegal activities having negative

impacts on the river and river basin ecosystem.

- Sign Project: The Council has erected signs wherever federal, state or country roads cross the Nisqually River Basin to build awareness of the extent of the watershed.
- Water Quality Monitoring: Provides over half the fresh water flow to southern Puget Sound. The water quality of the Nisqually is regularly monitored.

The Niqually River Management Program is just one example of many locally based watershed management programs supported by the PSWQAT in cooperation with other agencies.

The final visit on the Washington State study tour was a visit by the IST participants to the Port Authority of Seattle. The Port Authority has powers similar to a local government through the creation of a special Port District with its own authorities and elected commissioners. However, for many regulations the Port still falls under Seattle laws. The Port owns its own infrastructure and is ultimately responsible and liable for any pollution to Puget Sound originating from it operations. Water quality in and around the Port is monitored both by the Port Authority and outside contractors to ensure water quality is maintained.

Under the Port Authority, contaminated sediments within Port Authority boundaries have been cleaned up where necessary. However, clean-up is very expensive in the United States and so the Port focuses on prevention, by hiring two full-time personnel who visit with all Port tenants and ships at least once per week to discuss prevention of pollution and contamination. The IST group was surprised to hear that prevention efforts are so effective that water inside the Port and adjacent to the ships was suitable for public swimming!

This level of water quality is important when looking at the overall waterfront development of Seattle. Port and shipping uses are along side cafe and restaurants and open walkways overlooking Puget Sound. Public access has been preserved resulting in a very high use value for the Puget Sound waterfront and harbor area. Public access to Puget Sound within the city is one of the main revenue generators in Seattle and Washington State through local and tourist use.

3.0 Transferability to Indonesia

The development of the United States during this period, while having a number of differences, also has a number of parallels to the current situation in Indonesia. During the 1960s, population grew very rapidly in the United States making impacts much more visible as they occurred over much shorter time frames. In Indonesia, the coastal population also currently is growingvery rapidly. And, with the fiscal crisis of the past few years not withstanding Indonesia's economy is also growing and looks to post a higher than 5 percent growth rate for 2000 mostly driven by activities in near coastal areas of the country.

Television, books and other media played a critical role in the United States in supporting the movement for more wise use of coastal resources and are becoming much more prevalent in Indonesia as controls on information flow are relaxed resulting in a much more engaged and knowledgeable public. Environmental non-governmental organizations flourished in the United States during the 1960s when coastal management efforts were first beginning and are flourishing and expected to exercise an increasing amount of real political influence in Indonesia in the coming years in Indonesia.

While at different stages of governance capacity, the United States has shown it is possible to build a program and achieve measurable results within a twenty to thirty years time frame. Through the programmatic (i.e., project by project) approach incorporated in the law, the CZMA creates the integrative framework *and* legal mandate necessary to give CZM a position of priority among state and local governments. In addition, the CZMA ensured the resources and programmatic longevity outside political, special interest and short-term influences of decision-makers to achieve long-term results.

At the time the CZMA was developing in the United States, there was a lot of other related legislation being developed dealing with various aspects of increased environmental management. However, the CZMA created a galvanizing and transparent framework for constituencies - from universities to local governments to non-governmental organizations - to know where they stand and how they can be engaged in the decision processes concerning coastal management and development. The CZMA made clear the specific context of coastal zone management against the background of related legislation and "legislative noise" that otherwise was not focused on coastal management. At the time the CZMA was created, this other legislation and background noise was very similar to the background and noise created under many of the new pieces of legislation in Indonesia (e.g., Law 22/1999).

Although the CZMA of 1972 created a context for coastal management in the United States, and provided considerable guidance to states and local governments to get started in coastal planning, it left considerable freedom up to decentralized government entities in terms of important and critical key decisions. This is especially important in the United States where despite being a continent, the coastal zone is extremely vast and diverse. In this way, the United States coastal zone is strikingly similar to Indonesia's coastal zone. The level of flexibility provided through the United States continues to enable ecological and cultural diversity to be accommodated and enhanced. This lesson certainly applies to Indonesia for the same reason: to provide a program that enables and enhances cultural and ecological diversity.

There is one other element that ties the United States and Indonesia together in terms of coastal issues. A growing proportion of their populations are living within or very near the coastal zone, at once creating higher impacts on coastal resources and tying the national economy of both countries to the health and continued productivity of coastal ecosystems.

With these similarities, there is a significant difference that the IST was designed to exploit: the United States has nearly 30 years of experience in coastal management initiated through federal legislation. The evolution of the U.S. Coastal Management Act continues today. This evolution has a number of key elements that can inform Indonesia's new efforts in establishing a integrated coastal management program that meets minimum criteria to "preserve, protect, develop, and where possible, to restore or enhance, the resources of the Nation's coastal zone for this and succeeding generations", while encouraging local governments and the public to assume full authority for these resources under regional autonomy.

Similarity Indonesia needs a way to manage locally while addressing regional and national concerns, and providing local practitioners with adequate resources, both technical and financial.

4.0 Lessons for Decentralized Coastal Zone Management

4.1 Background: Design of the IST Program

Strengthening the Ministry of Marine Affairs and Fisheries (DKP) is the primary goal of fourth and fifth year workplans for *Proyek Pesisir*. This will accomplished by building on the successes of *Proyek Pesisir* field projects in Lampung, North Sulawesi and East Kalimantan and direct support to DKP through the assignment of a Senior Policy Advisor (SPA) to the ministry. The SPA will help in developing policies that promote integrated coastal management at the Ministerial and Directorate General level with the primary task of helping develop a new national coastal management law.

At the same time it is providing focused assistance to DKP, it is important that *Proyek Pesisir* continues ongoing support to programs with other government and non-governmental partners. This includes those organizations and entities already playing key roles under the project's implementation plan, and others that may be identified in the future. CZM programs the world over distribute coastal management functions across various departments or ministries. The selection of IST participants was based on this realization and efforts were made to identify key individuals across departments in Indonesia that are important to the goals of the USAID CRMP. This broad approach continues *Proyek Pesisir's* contribution to the attainment of the USAID goal for CRMP. This is expressed through *Proyek Pesisir's* overall Life-of-Project Strategy (LoPS): "…to positively contribute to the emergence of coherent and effective decentralized coastal and marine development in Indonesia."

Within the overall goal of decentralized coastal and marine development and management, an operative word within the project's LoPS is "coherent", in this case meaning integrated and sustained. Reflecting this, *Proyek Pesisir* was designed with a two track structure: 1) Developing best practices in a variety of situations and contexts at the local level; and 2) Working at the national level to institutionalize coastal management within Indonesia's overall environmental management strategy. This means connecting lessons learned through developing best practices in field sites with national policies that support the replication and sustainability of these best practices over the long-term. It also means connecting national policies with best practices from elsewhere in the world. Sites visited on during the IST were chosen to support Proyek Pesisir's LoPS strategy

Proyek Pesisir connects the local and national tracks inside the project by organizing around themes. These themes are individually described in project workplans. Here, the overall project themes have been collapsed into the following five themes for ease of discussion.

- Research and Development (to develop best practices in CZM)
- Policy and Enabling Conditions (to support policy reform and integration)
- Institutional Strengthening (and capacity building)
- Education and Training (to support CZM implementation)
- Information Dissemination, Education and Outreach (to support CZM constituency building)

These themes guide project activities and resources focused outside the project, as well. Although not singularly or individually sufficient, these themes represent most of the areas that require development for a national coastal management program. Working primarily with the Directorate General for Coastal, Beaches and Small Island Affairs and the Directorate General for Tourism, USAID support (through *Proyek Pesisir*) is an important catalyst to initiate coherent policy development through this thematic organization.

A prominent feature of the IST was the intention to highlight different aspects of these thematic areas in

terms of various United States CZM program structures and organizational integration. In addition, the program highlighted the structure of a coherent coastal management approach, especially in terms of integration and sharing authorities and responsibilities between levels of government in a fully decentralized system. The following sections reflect this aspect of the IST and make the lessons learned from the tour more accessible to the user of this document.

4.2 Lessons Learned

4.2.1 Research and Development

As stated in the Coastal Zone Management Act of 1972, the United States has long recognized the importance of coastal and marine resources to the continued economic health of the United States economy. For many years, such programs as the NOAA Sea Grant University Program (1966) have conducted research supported by the United States government and the private sector to make the connection between economic growth and conservation and wise use of coastal and marine resources. The Sea Grant University Program works in three main areas: 1) Advanced technology for commercial products and processes (for example, food safety for export fisheries); 2) Seafood production; and 3) Coastal economic development.

As an example of the importance the United States puts on coastal and marine research, the United States Congress appropriated US$56 million in 1998 and US$57 million in 1999 for Sea Grant research programs. Including funds from other sources, the Sea Grant University program totaled US$99.2 million in 1998 and US$99.6 million in 1999. While other government organizations are experiencing reduced scope and influence, the Sea Grant University program is growing based on the need to continue expanding coastal and marine-dependent economies based on increase scientific knowledge. The importance of this for economic development in Indonesia should not be understated or undervalued.

The National Estuarine Sanctuaries Program, created through the CZMA has evolved into the current National Estuarine Research Reserve System. The NERR currently includes 22 designated reserve sites in 18 states and territories encompassing almost 440,000 acres of estuarine water, wetlands and uplands. The purpose of the reserve system is to provide areas representative of indicator examples of key habitat and ecosystems for natural field laboratories for research. The goal NERR research is to enhance understanding of ecosystem and species level functioning, and create opportunities for general education on estuarine issues. Federal-state partnerships are available to acquire lands for inclusion in the NERR. State governors nominate areas for consideration and NOAA makes determinations as to whether the nominated areas are included in the NERR, based on their representation of critical coastal or estuarine habitat and their suitability for long-term research and education uses. Once admitted to the system, states must ensure that laws are enough to protect the NERR areas for research and education. These areas are then available for research by Sea Grant Universities, as well as research funded by states and private or non-governmental institutions.

Indonesian universities provide an existing resource for bridging the gap between economic growth, and conservation and sustainable development of Indonesia's marine and coastal resources. The Indonesian Coastal Universities Network (INCUNE), started by *Proyek Pesisir* and currently further supported with funds from the David and Lucille Packard Foundation from the United States, provides the starting point for developing a network of Indonesian universities to contribute to the continued economic growth of Indonesia through sustainable coastal development. The existing members of INCUNE are located in every major region with central coordination among members through Bogor Agricultural University (IPB). With appropriate support and government funding, existing INCUNE universities can expand their network and contribute to a viable and modern marine infrastructure, and a stream of coastal and marine products based on the application of science in coastal management and advanced technology in economic development. Fur-

ther, development of the INCUNE network will develop the capacity of Indonesian professionals reducing the reliance on foreign expertise and building regional capacity to support good governance in the regions under Regional Autonomy as initiated under Law 22/1999. The development of this network will:

- Play a leading role in developing and promoting sustainable coastal and marine management and resource use;
- Extend knowledge boundaries with the results of applied research and survey work;
- Educate new scientists and coastal and marine resource managers;
- Train and support coastal and marine resource professionals and policy makers;
- Offer extension services to coastal and marine communities and resource users;
- Provide technical expertise and inform to a wide range of private and public sector clients;
- Organize, expand and disseminate information critical to understanding coastal and marine ecosystem functions and appropriate uses.

Research to acquire scientific data on which to base monitoring of coastal program performance and coastal and marine resource decisions should become a primary objective of the Government of Indonesia. As seen in each of the meetings with coastal management program managers and leaders, performance monitoring is important to measuring the success of CZM programs. However, because program components are broad and detailed scientific information is lacking, often monitoring also must be broad. Direct ecosystem improvement is difficult in terms of improvement or decline. Some good indicators are already available but ongoing research is necessary to better understand the natural regimes of coastal and marine ecosystems and the relationships between ecosystem events and human behavior. National Marine Fisheries Service personnel especially emphasized the need for data and science driven decision making in fisheries management. NMFS personnel illustrated this point with the United States experience with regional fisheries advisory councils (RFACs). Current review of these Councils' progress in maintaining fishing stocks revealed that they were largely a failure due to the lack of science in their management decisions. The Councils' largely maximized fish harvest returns rather than identifying and maintaining sustainable yields. Given this lack of scientific data, some important fish populations have collapsed in United States. As a result of this, NMFS is now required to engage in management based on a precautionary principle, when data is not enough to clearly identify sustainable yield levels.

Establishing research centers through government support is critical to acquiring scientific data necessary for marine and coastal management but is also important to provide a contact or entry point for research funding and other support by the private sector, foundations and international donors. The MOTE Marine Laboratory in Florida was created with initial funding from NOAA. The Mote laboratory was designed as a self-contained research facility with all the equipment needed for carrying out research. In addition, the design was based on low overhead and maintenance costs. However, it has evolved into a world-renowned research center through which other outside, non-governmental funding can be channeled for marine and coastal research, thus leveraging initial funding and providing a training and research center meeting national needs.

Monitoring and the ability to share data within and between organizations through integrated management information systems are required for evolution of coastal and marine management in Indonesia. A constant feature of all programs visited was the integration and sharing of information within and between agencies. For example, in Florida the Department of Environmental Protection (DEP) keeps and updates every five years a state coastal zone natural resource atlas that includes a natural area inventory. DEP provides this information to local and other state agencies with coastal permitting, planning and monitoring responsibilities to help them in accomplishing their jobs. Memoranda of Understanding also are a common tool for

sharing information and establishing cooperative working relationships between agencies. Data compilation and management is often standardized ensuring its availability between agencies. Standardization of information management within some agencies will ensure broader access to coastal and marine management data in Indonesia.

4.2.2 Policy and Enabling Conditions

Since 1966, there has been a continuing evolution of CZM policy and program integration that resulted in one of the most effective coastal management programs in the world. Discussions with coastal management professionals during the tour revealed a number of the key lessons learned through the evolution of this program.

Action at the national level through a National Coastal Zone Management Act was the single most important action promoting integrated coastal management in the United States and resulted in 99 percent of all coastal areas within the United States being currently managed through integrated coastal management program. Under Law 22/1999, Regional Autonomy will be implemented starting January 1, 2000. Under this law, provincial and district governments will assume a new level of autonomy for control over coastal and marine resources. The implementation of Law 22/1999 is an opportunity for the national government in Indonesia to help clarify roles, ensure efficient use of resources, encourage interagency coordination and effective information sharing and avoid conflicts and duplication of efforts. Through a national law similar to the United States Coastal Zone Management Act of 1972, the Indonesian National Government can set a national coastal management agenda that results in national, provincial and district governments focusing their attention, efforts and financial resources on coastal management in a coherent manner. This will ensure that certain national government concerns such as equitable access and sustainable development of coastal areas happens, while providing virtually unlimited flexibility in terms of administrative and organizational arrangements. As in the United States, it is important that the national law function through voluntary participation based on important incentives. One of the most important incentives is the requirement for the national government to comply with provincial and local coastal management plans once these plans are approved by the national government. In this way, the national law still encourages the full authority of provinces and districts over coastal resources and provides broad flexibility in program design and execution. A national coastal management law ensures coastal management plans simultaneously confront and address issues of national importance. This includes coastal hazards, declining water quality, estuary and fisheries breeding area loss, public awareness and participation, and waterfront development importance to the national economy. As in the United States, these may be addressed at some level by all local coastal governments. However, setting minimum standards are essential for ensuring management plan development processes are adequate to include and serve local, provincial, regional and national economic and conservation objectives.

Monitoring and periodic re-certification are important elements to include in a national coastal management program based on voluntary participation. As pointed out by United States coastal leaders at national and state levels, established monitoring programs are essential for the federal government to determine whether the national interest (and the local interest in some cases) is being served. In addition, as science improves and we learn more about the interaction between ecosystems and human activities, programs need to be modified and improved to accommodate this new information. In Indonesia, as in the United States, without a regular program review (e.g., every five years) there is little way to encourage provinces or districts to improve their programs. At any national, provincial, or district level (at the village level - coastal management plan certification) there should be a provision for annual monitoring and review and re-certification within some reasonable time frame (nominally five years).

The "polluter pays principle" is an important policy tool that ensures entities responsible major damage to the environment pays for restoration and for loss of value until restoration is completed. The Natural Resources Damage Assessments (NRDAs) program and the Oil Pollution Act are important policy tools that are based on the "polluter pays principle". Under NRDAs and the OPA, entities that cause major damage to natural resources are held liable for restoration of environmental resources and services beyond simple penalty assessments. In other words, parties responsible for major environmental and ecosystem damage may be required to pay for environmental restoration that can last for many years rather than paying a one-time penalty fee. This has resulted in a tremendously heightened awareness of corporate citizens in terms of avoiding actions causing major environmental impacts.

Implementation of these policies has also resulted in development of comprehensive programs of damage assessment, using systematic analyses and involving key stakeholders to ensure proper valuation of coastal resources. The resulting damage assessments (such as for Exxon Valdez in Alaska) have consequently altered corporate behavior, including having pollution prevention programs in place in most industries.

Funding incentives are a requirement for local governments to undertake coastal zone management planning. The federal government for execution of programs retains a significant portion of tax revenues in the United States. This provides revenues that can be used as incentives for initiating certain programs that are in the national interest. Virtually all state and local coastal management programs were initiated under the incentive of federal revenues from the United States federal government to these local governments. It is reported that the Indonesian central government will retain a proportionally lower amount of revenues under Law 25/1999 beginning in January 2000. However, funding incentives are a traditional incentive mechanism used throughout the world for federal governments to encourage attention to issues of national importance. This is also true of state or provincial government that use incentive grants or other funding as mechanisms to encourage local governments to address issues of state or regional importance. To encourage the development of a vertically and horizontally integrated coastal zone management program in Indonesia, appropriate financial incentives must be developed at the national, provincial and especially the district levels. These incentives must be transparently applied and be consistent with the specific CZM planning framework under the proposed national law.

Progressive management schemes can result in partnerships between port management authorities and local, provincial and national government and should be an important focus for policy and enabling legislation. Ports can be major contributors to degraded water quality in coastal and waterfront areas. Meetings with the Port Authority of Seattle revealed history and lessons for managing Indonesia's ports to improve or avoid this situation. The Seattle Port Authority, who is under local government but owns its own infrastructure, is ultimately responsible for any pollution to Puget Sound from operations. At the same time, it is empowered with management responsibilities like another local government with its own elected commissioners and internal enforcement authorities regarding pollution and impacts to Puget Sound. These authorities include monitoring the impacts of port activities and being responsible for violations of port users. The Seattle Port Authority has its own compliance help team that regularly visits port users and helps them in reducing pollution and understanding regulations. Prior to the Port Authority taking control, water quality was degraded and contributed to serious problems within the port area.

Failure of Indonesia to comply with international treaties protecting marine and coastal resources conventions to which Indonesia is a signatory can have serious consequences for economic activities. Exports to many countries depend on meeting international treaties on sustainable harvesting of certain products and protection of endangered or threatened species. Meetings with United States State Department personnel

underscored the importance of Indonesia's continued compliance with international marine species treaties and other conventions, such as those protecting green sea turtles. In many cases, periodic certification is a prerequisite for continued export of fisheries products to the United States and other developed countries.

As with the concept of polluter pays, "user pays" concepts are also of key importance in generating revenue streams that support protection and management of coastal resources. For example, in the Florida Keys there are about 2.5 million visitors each year with an annual financial contribution to the economy of US$1.2 billion. Part of this economic contribution is in taxes or user fees that are specifically dedicated to management of the coastal resources that attract these visitors. For example, cruise ships that dock in the Florida Keys are assessed an environmental user fee of US$3.00 per passenger. This fee is assessed through contracts directly with the cruise ship companies so transparency is assured. Other fees are included in room charges at hotels that generate further revenue for the Florida Keys Sanctuary. Through these types of arrangements, protection and management of coastal resources is paid for by those persons who most directly use and enjoy them. In Indonesia, we already are seeing these types of systems evolve. User fees have just been approved for tourist visiting Bunaken National Marine Park in North Sulawesi. Most visitors to sites like these are happy to be charged marginal amounts to ensure continued use and wise management of the resources they enjoy.

Tiered approaches in coastal zoning offer significant benefits in terms of human resource use and management of natural resources. Many states in the United States use tiered approaches to spatial planning in the coastal zone. These tiered systems are similar to the pyramid-like planning framework that was generated during the Indonesian Marine Resource Evaluation and Planning Project (MREP - Dutton, Duff, et.al., 1998). Under this pyramid, each level/type of plan forms a "nested hierarchy" of planning instruments, allowing for a multi-faceted suite of coastal plans. The pyramid is likely to be the core focus of an interim national regulation (KepMen) on CZM that will be a key precursor to the national coastal law currently proposed in Indonesia.

Under these systems, land closer to the coast is managed under more specific guidelines for development and use. The result in a much more efficient permitting process, as permits for less restricted land areas further from the coast are processed quickly and allow a wider range of uses. This frees staff resources to devote their time to addressing more critical permitting issues in more sensitive areas of the coastal zone.

Integration of national, provincial, district and local government in terms of program coordination, planning, funding and implementation is a requirement for achieving a unified and integrated coastal management program for Indonesia. As in the United States, Indonesia has a great need for widespread use of province-district administrative relationships for effectively planning and organizing resources for coastal management. Both during and after the creation of local or municipal (city or township) coastal zone management programs, coordinated technical help from the provincial, and where appropriate, national levels is critical. These multi-level partnerships between local, provincial and national governments are win-win partnerships in terms of natural resources management and sustainable development, especially when financial resources can be combined to accomplish goals important to people at all levels. A prime example of this in the United States was the creation of the Florida Keys National Marine Sanctuary.

4.2.3 Institutional and Strengthening

For coastal management programs the around the world, there is usually a lead agency or organization in charge of day-to-day operations and monitoring coastal program implementation. However, all coastal management responsibility is never placed solely in one ministry or department. Government responsibilities

are shared vertically and horizontally through cooperation between various organizations. Institutional and programmatic placement and development is a critical part of evolving a successful coastal management program. A number of lessons regarding institutional and programmatic strengthening were discovered during the IST experience.

The importance of a consolidated office at each level of government focused exclusively on coastal and marine management was emphasized at all levels of government and in each agency visited. This provides a coordination point through which local coastal planning, regional coordination and national interests can all be monitored and integrated. These lead agencies or offices ensure consistency with local coastal management plans, contact appropriate agencies concerning issues of non-compliance and negotiate and ensure transparency in situations where coastal resource user conflicts arise. Offices and staff dedicated to coastal management greatly increase broader compliance with local coastal management plans, consistency with regional and national development priorities and effective conflict resolution. These dedicated offices also ensure that professional expertise is developed and available to address the most important resources management issues.

Twinning activities through Memoranda of Understanding and other mechanisms offer tremendous opportunities for Indonesia to access expertise and other support such as scientific data. Every organization visited provided valuable information and was enthusiastically engaged with IST participants regarding coastal and marine management for Indonesia. United States national, state and local government personnel, NGOs and private sector representatives recognize the importance of Indonesia's coastal and marine environment to global ecosystem health. Virtually all agencies and parties visited volunteered to provide additional support and information to help development of an Indonesia-wide integrated coastal management program. The Memoranda of Understanding (MOUs - attached) signed during the IST are evidence of this willingness to provide help. However, the value of these connections and MOUs rests on follow-up and implementation of these agreements and follow-up with the professional contacts made during the IST. By taking advantage of these 'twinning activities' through MOUs and other professional networking opportunities, expertise and help is available for rapidly advancing coastal management efforts in Indonesia.

Special Area Management Plans (SAMPs) are widespread in all coastal management plans in the United States and are particularly appropriate for coastal management programs in Indonesia under Law 22/1999. SAMPs can be used to protect a wide range of habitat important for local use as well as tourism, and are sometimes used to protect indigenous people's rights, a particularly important issue in Indonesia. SAMPs take many forms and names and have a wide range of program elements to accomplish an equally wide range of objectives. SAMPs are alternatively called marine sanctuaries, marine or wetland protected areas, wildlife refuges, areas of particular concern, etc., and all provide a higher degree of specificity in terms of acceptable uses within the designated areas. Under Law 22/1999, local governments have the authority to create SAMPs supported through local ordinances. This applies all the way to village level government. Through support from USAID through Proyek Pesisir, three villages in North Sulawesi have already initiated locally designated marine sanctuaries with restricted use. This model offers significant opportunities for broader application in Indonesia; for example in the Lampung village and provincial level programs and the East Kalimantan watershed-based programs supported by Proyek Pesisir.

Local governments in Indonesia must immediately initiate effective spatial planning and land-use management programs in order to avoid huge costs in the future in terms of coastal environmental and ecosystem degradation and revenue loss as a result of lost opportunity for coastal uses such as tourism and marine products. Coastal management personnel in Big Pine Key, Florida and in Washington State admitted this is

a difficult process due to the many stakeholders and special interests that must be included in the spatial planning process. However, they also confirmed the importance of coastal land use planning by recognizing their own mistakes twenty years ago. These mistakes have resulted in lost revenue and increased management costs for local government. Indonesia already has successful models for initiating this process. With USAID support through *Proyek Pesisir*, the Province of Lampung has created a coastal atlas that has been heralded as a model for all coastal provinces in Indonesia. This is a first step toward detailed and effective spatial planning, and highlights that these approaches are doable and applicable in Indonesia.

The establishment of a network of marine and estuarine protected areas that reach along the entire United States coastline, and which includes representatives of virtually all critical habitat found within United States waters and territories, serves as a model for habitat and biodiversity preservation. The United States system of reserves, currently including 22 designated reserve sites in eighteen states and territories and encompassing almost 440,000 acres of estuarine water, wetlands and coastal uplands, serves as a model for Indonesia. Enforcement and protection of these areas is shared among agencies and is very effective in terms of ensuring a continuity around the entire United States coast for critical habitat and breeding grounds. The process for establishing this system included an inventory of existing areas, identification of gaps in the system and areas overlooked, development of science-based management for these areas, and engaging public stakeholders in decisions to designate and manage these protected areas. An inventory of existing protected areas and the current status of management effectiveness should be completed for Indonesia, followed by identification of critical ecosystem gaps in this network. Through this approach planning for Indonesia's marine resources is holistic and takes into the account the interaction within and across the entire archipelago thus more closely approaching a comprehensive approach to sustaining coastal and marine contributions to national and local economies.

It must be noted that establishing a network of marine reserves in Indonesia, while a critically important task that must be addressed immediately, does not have to follow the United States system in terms of establishing reserves covering large areas. USAID and *Proyek Pesisir* have demonstrated the applicability of this approach in three villages in North Sulawesi that have already established community-based marine sanctuaries and supporting ordinances. Another village on Sebesi Island in Lampung Province has already started work to follow this model.

A comprehensive and clear permitting process is required for effective development control in the coastal zone. As illustrated in Rhode Island, establishing and implementing a permitting program for coastal development is a complicated and difficult process. However, development permitting is critical to protect current and future economic and public values in the coastal zone. Permitting programs must include different permits for different activities, zoning of the entire coastal zone through a transparent and publicly debated processes to ensure transparency, and simplified procedures so that each individual can easily understand them. Programs must be ultimately workable in each local context for managing and developing the coastal zone.

In order to be workable, coastal permitting systems must have the support of local constituencies and empower local people to participate in ongoing implementation of the program. One of the most important aspects of this public participation is a provision within the program to react quickly and transparently to complaints and violations and to address cumulative impacts from ongoing development. Local (as well as provincial and national) permitting programs should be written with broad language to provide flexibility for coverage of issues not yet encountered in the permitting process.

Tourism based on mixed-use coastal and waterfront development is a major source of revenue that is currently under-developed in Indonesia, that has tremendous economic potential and that will suffer serious impacts unless integrated coastal planning is rapidly implemented in Indonesia. Indonesia must begin to develop its coastal tourism and mixed use programs in order to avoid huge potential economic losses and costs in the future. As the IST participants witnessed, in Washington, D.C., Baltimore, Florida, Rhode Island and Washington State, tourism and mixed-use waterfront development constituted a major revenue stream for local and state governments. In the Florida Keys alone this resulted in US$1.2 billion annually in tourism revenues. In Washington State, the Seattle Port sits in the middle of cafes and restaurants frequented by locals as well as tourists. The water in the Seattle Port is suitable for swimming just alongside the large ships docked along the wharf. Similarly, the Baltimore Aquarium facility has proven to be a key economic engine for the redevelopment of the city center and provides a site that attracts both locals and tourists.

In Rhode Island, the tourism development board promoted Rhode Island's pristine coastal area through marketing programs specifically tailored to individual segments of the market. This has resulted in tourism becoming a stable and important industry in Rhode Island and enabled the State to survive economic recessions due to declines in other key industries such as defense and manufacturing. In all coastal states, revenues from both outside tourism and local use of waterfront and coastal resources are a key reason coastal management plans are developed and implemented. Indonesia's coastal and waterfront resources are far more extensive than those found in the United States and offer tremendous potential for sustainable mixed-use development.

Watershed-based coastal management programs are required to ensure the health and economic productivity of urban bays. This was exemplified by the integrated watershed-based approach of the Puget Sound Water Quality Action Team in managing impacts to water quality in Puget Sound. Watershed approached to managing urban bays is complicated and in Puget Sound involved more than 15 major federal and state laws, many additional federal, state and local regulations as well as Indian Tribal jurisdiction and interests. This is analogous to administrative responsibilities in many Indonesian urban bays and provides a model for how these administrative and managerial authorities can be integrated to accomplish urban bay protection and sustainable development. This model requires establishing an office or team with specific responsibility for coordinating urban bay management through watershed planning. Through interagency working groups, this team then leads the process of identifying areas of concern, identifying historical and ongoing problems of stress on these areas, and ranking problems and actions to reduce contamination sources, protect and restore habitat and plan for sustainable economic development.

Non-point sources of pollution play a significant role in contamination of urban bays. These sources generally start upstream in the watershed from pouring oil down drains, contaminated storm water, sediments from clearing land without enough stream side buffers, agricultural and household chemicals and untreated sewage. In order to address these issues, local governments in Indonesia must be first made aware of the problems and brought in as partners to any proposed programs. Then, these local governments must develop their own, locally driven watershed management programs that are understood and supported by local residents. As in the Washington State Nisqually River watershed program, it may be in the interest of provincial or district government to acquire lands that are critical to maintaining water quality in the watershed or urban bay that receives the watershed discharges. USAID support through *Proyek Pesisir*, in cooperation with local government, has initiated a watershed management program in Balikpapan focused on protecting and reducing stresses to Balikpapan Bay. Meetings are already being held and plans are underway for establishing a new NGO to focus attention on watershed management. This sets a model for other urban bays to follow but also has broader implications for water quality management in other areas of Indonesia.

The PSWQAT is already engaged in supporting the Proyek Pesisir Balikpapan Bay initiative and is committed (through a Memorandum of Understanding signed in Seattle during the IST trip) to supporting this initiative over the long term.

4.2.4 Information Dissemination, Education and Outreach

It is very important that Indonesian-based programs disseminate information beyond Indonesia on the development of CZM and good governance. United States officials and coastal managers were surprised as Indonesian IST participants briefed them on progress and new developments regarding coastal and marine management in Indonesia. This highlighted the importance of programs to disseminate positive information on developments in natural resources protection and management outside Indonesia. The interaction between United States coastal and marine professionals and the Indonesian IST participants was a particularly successful aspect of the IST.

Non-governmental organizations and the media have an important role to play in initiating and sustaining coastal management at all levels of government. NGOs in the United States play a tremendously important role by organizing the public around coastal and marine issues at the local level, providing human resources through volunteers to support state and national programs, and overall education of both residents and visitors in coastal areas. Over the past 30 years, NGOs, in combination with the media, have become an important political constituency that has influenced national, state and local policy in profound ways. This same process is underway in Indonesia as non-governmental organizations and the media are finding new freedoms of expression. There is a tremendous opportunity for harnessing the energy of NGOs and the media to rapidly disseminate information and achieve the level of public education necessary to establish an integrated coastal program for Indonesia. Government at all levels should engage these two sectors as early as possible as partners to assess public values and achieve public aspirations concerning coastal and marine resources.

Participation of communities, universities, non-governmental organizations and the private sector in coastal and marine management is important in developing and implementing coastal management programs. Public participation and the roles of NGOs were constant features of CZM programs in the United States. The role of the national and state governments in ensuring the process for broad participation in coastal management was highlighted in every site visit. By ensuring that the process for public participation and NGO leadership was in place, government agencies augmented there own management capacity and ensured broad support for coastal management initiatives. The IST participants regularly witnessed effective co-management of coastal resources achieved through effective public participation. Meetings were held between IST participants and United States citizen councils and non-governmental organizations (NGOs) that have leading roles in implementing all aspects of coastal management programs. This includes organizing and voicing stakeholder values related to management of coastal resources that otherwise would not be heard. Very important among state programs are the approaches that have contributed to conflict resolution, coordination and harmonization processes (including consistency with the local CZM programs by state agencies). Lessons for Indonesia include focusing on developing new programs for public engagement, especially under implementation of Law 22/1999 and working with local government to set minimum standards for transparency and public participation.

Public Education programs are a key means to develop support and public constituencies for coastal and marine management. These can often be combined with revenue generating activities. During visits to the Baltimore Aquarium and to the NOAA/National Geographic Expedition Exhibition in Florida with Dr. Sylvia Earle, IST participants saw first hand the value of public education programs. All IST participants

were provided with a range of materials and ideas that show: a) how to work to engage and build a constituency for CZM, and b) how to keep public interest over the long term. New generations of constituents are progressively built by updating CZM issues, by building these updated issues into progressively newer public education programs and by keeping CZM issues prominent in the local media. Indonesia needs a similarly organized and systematic public education and outreach effort and should seek to include this as a core element of all CZM initiatives.

5.0 Conclusions and Programmatic Recommendations

5.1 Summary of Findings

With the political and administrative changes of the last four years, Indonesia is well on the way to embarking on a new road to coastal and marine management. Because of the timing of the International Study Tour, the lessons learned are particularly ripe for harvesting and follow up by the Indonesian participants. With thirty years of integrated coastal and marine management experience, not all successful, the United States presents an excellent living laboratory for Indonesia to observe and from which to learn.

Despite differences of scale and level of development, this observation tour has illustrated the many key elements that, although not individually sufficient, are all together required for effective and integrated coastal and marine management programs. The selection of sites for the IST matched Proyek Pesisir's two-track approach to developing coastal management in Indonesia: a) meetings focused on best practices in various geographic and thematic areas, and b) meetings focused on the development of a national policy.

Perhaps surprisingly, the United States experience shares much in common with Indonesia in terms of the development of coastal management programs, although these similarities are separated by time. The 1950s and 1960s in the United States saw a radical change in information access by common people and the political empowerment of people. Non-governmental organizations with environmental political agendas proliferated and environmental issues were directly connected to human rights and local determination of coastal resource uses. The role of the national government also evolved to a heightened sense of responsibility for protection of the commons, that is those public resources owned by all United States citizens, to meet not only the needs of the current generation but also future generations. New agencies were created to address the new needs resulting from this social and political evolution.

The parallels to Indonesia are obvious. With the end of the New Order Government, information access in Indonesia perhaps is, in a relative sense, expanding even faster than it did in the United States through the use of Internet and other mass media. New agencies such as the Ministry for Marine Affairs and Fisheries are being created at the same time that Regional and Fiscal Autonomy is changing the decision making process for natural resource utilization and management. Indonesian non-government organizations, not to mention political parties, are proliferating.

However, these events are not unlike the foment that occurred in the United States around environmental and social issues in the United States thirty to forty years ago. As a result, the institutional, organizational, legal and public empowerment events in the United States experience represent a target, if not a model, for Indonesian development of integrated coastal and marine management. This is evident in Attachment F that includes participant evaluations, observations and plans resulting from the tour.

There are three immediate and significant outcomes or products of the IST. The first includes the actual materials and documents acquired. Five boxes of books, brochures, guidance documents, laws, and other information were shipped back to Indonesia and provides a written legacy of the United States (and IST) experience. The second includes the professional connections that were made between IST participants and marine and coastal management professionals in the United States. These channels are open conduits through which two-way communication and information can flow and cooperation between the two countries can be enhanced. The third, and perhaps most important outcome on an individual basis, is the knowledge and vision that is now embedded in minds of the IST participants in terms of integrated coastal and marine management. "Integrated" here refers to vertical and horizontal government organizational integration, in-

tegrated information technology and sharing, and integration and empowerment of the public and non-governmental organizations that result from the United States' thirty years of implementing the National Coastal Zone Management Act of 1972.

5.2 Programmatic Recommendations Resulting from the United States International Study Tour

1. Memoranda of Understand signed during the IST promise valuable exchanges of information and personnel. These should be actively implemented between the co-signatories. Proyek Pesisir should help Indonesian partners to implement these MOUs and access the resources they represent. This includes continuing to play an important role in coordinating assistance between the PSWQAT and the East Kalimantan watershed-based coastal and bay management programs. It also includes Proyek Pesisir continuing to work through the network of the Coastal Resources Center at the University of Rhode Island to enhance the connections made and support initial interests in cooperation through to realization. A opportunity of particular importance and opportunity is the promise of cooperation and support from NOAA's Office of Ocean and Coastal Resource Management.

   Where feasible and consistent with the Proyek Pesisir Life-of-Project Strategy, specific assistance should be provided to follow up on all MOUs resulting from the IST. This support will, however, be inadequate if not fully reaffirmed by the independent and self-funded initiatives of the GoI agencies that are co-signatories to these MOUs. It is recommended that all agencies represented in the MOUs make priorities in their annual budgets for MOU-related follow up activities.

2. Many professional contacts and offers of information exchange and help were made during the study tour outside of official MOUs. These also represent very important avenues for acquiring different types of help for coastal management program development in Indonesia. Proyek Pesisir and Proyek Pesisir Partners (i.e., IST participants) should actively follow-up on these contacts where appropriate for Indonesia CZM objectives.

3. The materials obtained during the study tour should be widely distributed (see Attachment H) amongst Proyek Pesisir coastal management and marine partners in Indonesia and promoted in seminars and other appropriate venues. Proyek Pesisir should evaluate the materials acquired and identify those that may be appropriate for reproduction and broader redistribution. In addition, copies of all materials should be housed in the library at the Center for Coastal and Marine Studies at Bogor Agricultural Institute (IPB-the national learning partner of Proyek Pesisir) and that copies of this report be distributed throughout the Indonesia Coastal Universities Network (INCUNE).

4. The role of the United States Coastal Zone Management Act in evolving and integrating coastal management in the United States was profound. Through the CZMA, the national government took the lead in encouraging state and local government to more fully assume their authorities over coastal resources while meeting minimum standards through voluntary certification for transparency, public participation and protection of public interests. Through its national track, Proyek Pesisir should ensure efforts are made to develop a similar law at the national level in Indonesia. These efforts should be implemented in partnership with IST participants who are now the key "institutional memory" from which ideas derived from the IST can be brought to life in Indonesia CZM laws at the national, provincial, kabupaten and local levels.

5. State and local coastal management laws are the actual implementation and decision making devices

for coastal management in the United States. Proyek Pesisir should support the development of model provincial and kabupaten coastal management laws that meet minimum standards and accomplish coastal management goals.

6. The Lessons Learned outlined in this report come directly from IST experiences and participant observations during the tour. These lessons should be carefully reviewed within the context of the Year 5 Workplan development for Proyek Pesisir. Where possible, resources and tasks of the project should align with these lessons. These lessons should be reinforced by Proyek Pesisir initiatives and programs at all appropriate occasions, specifically in follow up publications and in a series of national and provincial follow up seminars.

7. This report should be circulated widely within USAID and other donor organizations in an effort to introduce opportunities identified during the IST to other donor agencies and so as to encourage support of these types of activities and to further demonstrate the benefits of multi-lateral exchanges.

8. This report represents a valuable resource in itself in that it introduces and outlines many approaches to coastal management applicable in Indonesia. As such it should be circulated widely among Proyek Pesisir partners and GOI agencies to encourage dialogue and coordination around key issues. The report should especially be circulated widely within the Ministry of Marine Affairs and Fisheries and the Ministry of Settlements and Infrastructure, from which IST participants were drawn and that have significant roles in coastal zone planning and management. A summary version of this report should be translated into Bahasa Indonesia to make it more widely accessible.

9. In order to accomplish a national program containing all the elements required for and integrated Indonesia-wide coastal management program, national, provincial and kabupaten level budgets must be aligned with the appropriate priorities. This report should be used to inform the work planning and budgeting process at each level of government, particularly with respect to creating overarching national, provincial and kabupaten coastal management laws, and to develop specific, individual programs such as community-based marine sanctuaries which offer tremendous potential within the Indonesian context.

ATTACHMENT A

EXPRESSION OF INTEREST
BETWEEN
NOAA
AND
MINISTRY OF MARINE AFFAIRS AND FISHERIES

Statement of Interest to Explore Cooperation on Marine and Coastal Matters Between the Indonesian Ministry for Marine Exploration and Fisheries (MMEF) and the National Ocean Service of the National Oceanic and Atmospheric Administration (NOAA).

Recognizing that our two governments are currently discussing a first draft of a Joint Statement on the United States-Indonesia Common Agenda for the Environment which will include coastal and marine issues;

Recognizing NOAA has thirty years of experience working with coastal states to manage U.S.
and marine services;

Recognizing the importance of Non-Governmental Organizations (NGO) such as the U.S. University of Rhode Island Coastal Resources Center, whose Coastal Resources Management Program - Proyek Pesisir - plays a central and vital role in advising MMEF on ocean governance;

Whereas, the coastal and marine environment is important to the economic development and societal welfare of each nation;

Whereas, the increasing concentration of human activities in coastal areas poses a challenge to the coastal ecosystems and the communities which depend on them;

Whereas, NOAA and MMEF serve as national stewards for the coastal and marine environment;

Whereas, both governments have taken important steps to revitalize ocean governance;

The two agencies will try to review opportunities for mutual collaboration to promote sound capacity and institution building in coastal and marine management. The parties propose to explore topics of interest which may include but are not limited to the following:

- Consider collaborative relationships on: coastal and marine protected area management including; coral reefs; monitoring and evaluation; coastal and marine hazard risk analysis and mitigation planning; hazardous spill response and restoration; science and technical services; education and outreach; safe navigation; Sea Grant programs, fisheries issues (research, enforcement,); and exclusive zone mapping and surveillance;

- Assess opportunities for: exchange of personnel; training and collaboration; procedural advice and policy analyses for regional implementation of integrated coastal management;

- Propose this cooperation as a compliment to already existing relationships with Universities and NGOs working in the region, such as the University of Rhode Island, Coastal Resources Center’s Proyek Pesisir;

- Conduct follow-up meetings to explore areas of mutual interest;

· Explore entering into a non-binding memorandum of understanding for future cooperative activities;

· This statement of interest is not a legally binding document and commits no resources.

Sarwono Kusumaatmadja
Minister
Ministry of Marine Exploration

D. James Baker
Under Secretary for Oceans and Atmosphere

ATTACHMENT B

MEMORANDUM OF UNDERSTANDING
BETWEEN
UNIVERSITY OF RHODE ISLAND
AND
MINISTRY OF MARINE AFFAIRS AND FISHERIES

MEMORANDUM OF UNDERSTANDING

BY AND BETWEEN:

THE COASTAL RESOURCES CENTER (CRC), UNIVERSITY OF RHODE ISLAND, GRADUATE SCHOOL OF OCEANOGRAPHY, NARRAGANSETT, RHODE ISLAND, USA
AND

THE DIRECTORATE FOR COASTAL, BEACHES AND SMALL ISLANDS AFFAIRS, MINISTRY OF MARINE AFFAIRS AND FISHERIES, JAKARTA, INDONESIA

Whereas: CRC was organized in 1971. It is dedicated to developing strategies for the effective management of coastal environments around the world. CRC objectives are realized through a breadth of activities in the areas of field programs, research and learning, communications, and training and education; and

Whereas: In early 2000, the Government of Indonesia created a new Ministry of Marine Affairs and Fisheries to integrate authority and decision making for marine issues within a single national agency. Within the Ministry, a Directorate for Coastal, Beaches and Small Islands Affairs was established to formulate and implement effective approaches to integrated coastal and marine management; and

Whereas: The Government of Indonesia is cooperating with the Government of the United States of America as partners in the Indonesia Coastal Resources Management Project (CRMP), a seven-year coastal management project funded jointly by the U.S. Agency for International Development and the Government of Indonesia; and,

Whereas: The CRMP is implemented through the University of Rhode Island's Coastal Resources Center and CRC is committed to long-term sustainable partnerships with Indonesian institutions to achieve mutually supported goals and objectives.

Now, therefore, be it resolved that:

CRC and the Directorate for Coastal, Beaches and Small Islands Affairs agree to explore ways to share experience and information related to management, restoration and protection of coasts, estuaries, bays and watersheds.
This cooperation may include any area of coastal management that is of mutual interest including but not limited to national policy development; public education and involvement; best management practices for development; program and environmental monitoring; and technical issues.
Cooperation may be of a programmatic or scientific nature and include:

- exchange visits by coastal managers, scientists and students;
- applied research and policy analyses;
- review of studies and plans; and
- other activities deemed of mutual benefit.

Furthermore, the parties to this agreement recognize that:

Any proposal for cooperative activities undertaken as part of this Memorandum of Understanding (MOU) shall be submitted for approval and integration into the work plans of both parties.

The implementation of each cooperative activity shall be contingent on the approval by both parties to undertake the activity. Approval shall be granted on the basis of:

- consistency of the objectives of the proposed activity with those of each party and the MOU; and
- willingness and agreement by both parties to allocate the internal resources required for the specific activity and/or obtain funding from other sources that would allow the allocation of resources for the proposed activity.

Specific activities approved by both parties will be confirmed by a letter of agreement that outlines and clearly defines the roles, responsibilities and contributions of each party in relation to the specific activity. Once signed by both parties, this document shall serve as the operating instrument for the cooperative activity.

Either party may, at any time, terminate the agreement.

This MOU will remain valid for a period of five (5) years from the date of signing and can be extended/ renewed by mutual consent as evidenced by an exchange of letters to that effect.

IN WITNESS OF THIS AGREEMENT OF 18 SEPTEMBER 2000
the parties append their signatures below:

University of Rhode Island	Ministry of Marine Affairs and Fisheries
Dr. Robert Carothers President	**Sarwono Kusumaatmadja** Minister
University of Rhode Island Coastal Resources Center	Directorate for Coastal, Beaches and Small Islands Affairs, Ministry of Marine Affairs and Fisheries
Mr. Stephen B. Olsen Director	**Dr. Ir. Rokhmin Dahuri, MS** Director General

ATTACHMENT C

MEMORANDUM OF UNDERSTANDING
BETWEEN
RHODE ISLAND COASTAL RESOURCES MANAGEMENT COUNCIL
AND
PROVINCE OF LAMPUNG

MEMORANDUM OF UNDERSTANDING
BETWEEN
COASTAL RESOURCES MANAGEMENT COUNCIL
WAKEFIELD, RHODE ISLAND
AND
LAMPUNG PROVINCE PLANNING BOARD (BAPPEDA), INDONESIA

Whereas, the Coastal Resources Management Council (CRMC) has a 30-year history of planning and implementing an integrated program for preserving, protecting, developing and where possible restoring the coastal resources of Rhode Island for this and succeeding generations; and

Whereas, Rhode Island is a part of the US National Oceanic and Atmospheric Administrations' National Coastal Management Program and the State program is implemented through the CRMC; and

Whereas, the federal government through the National Oceanic and Atmospheric Administration and the US Agency for International Development are interested in sharing internationally the experience of the National Coastal Management Program; and

Whereas, the Coastal Resources Management Council is interested in sharing its experience and in learning from the experience of other programs around the world; and

Whereas, the Government of Indonesia is cooperating with the Government of the United States of America as partners in the Indonesia Coastal Resources Management Project (CRMP), a seven-year coastal management project funded jointly by the U.S. Agency for International Development and the Government of Indonesia and implemented through the University of Rhode Island's Coastal Resources Center; and

Whereas, the Province of Lampung is the focus for the CRMP program to manage coastal lands and waters and Lampung BAPPEDA is interested in sharing its experience and in learning from the experience of other programs around the world.

Now Therefore Be It Resolved That

a) The Coastal Resources Management Council and the Province of Lampung BAPPEDA agree to explore ways to share experience and information related to management, restoration and protection of coasts, estuaries, bays and watersheds.
b) Cooperation may include any programmatic or scientific initiative that is of mutual interest, such as:
   - Exchange visits
   - Review of studies and plans; and
   - Other activities deemed of mutual benefit.

Implementation: Implementation of each cooperative activity shall be contingent on the approval by both parties to undertake the activity. Once specific activities are approved by both parties, a letter of agreement will be developed which outlines and clearly defines the roles, responsibilities and contributions of each party in relation to the specific activity. Once signed by both parties, this document shall serve as the operating instrument for the cooperative activity.

Termination: Either party may, at any time, terminate this agreement.

Term: This Memorandum of Understanding shall remain valid for a period of five (5) years from the date of signing and can be extended/renewed by mutual consent as evidenced by an exchange of letters to that effect.

IN WITNESS OF THIS AGREEMENT OF 20 SEPTEMBER 2000
the parties append their signatures below:

Michael M. Tikoian
Chair Director General RI Coastal Resources Management Council

Dr. Ir. Rokhmin Dahuri, MS
Directorate for Coastal, Beaches and Small Islands Affairs Ministry of Marine Affairs and Fisheries

Grover J. Fugate
Executive Director
RI Coastal Resources Management Council

Harris Hasyim
Chairman
Lampung Provincial Planning Board

ATTACHMENT D

MEMORANDUM OF UNDERSTANDING
BETWEEN
PUGET SOUND WATER QUALITY
ACTION TEAM
AND
PROVINCE OF EAST KALIMANTAN

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE STATE OF WASHINGTON
PUGET SOUND WATER QUALITY ACTION TEAM
OLYMPIA, WASHINGTON
AND
PROVINCE OF EAST KALIMANTAN, INDONESIA

Whereas, the Puget Sound Water Quality Action Team has a 15-year history of planning and implementing a coordinated program for protecting and restoring the water quality and biological resources of Puget Sound; and

Whereas, the Action Team's Puget Sound program is a part of the US Environmental Protection Agency's National Estuary Program; and

Whereas, the federal government through the Environmental Protection Agency and the US Agency for International Development are interested in sharing internationally the experience of the National Estuary Program; and

Whereas, the Puget Sound Action Team is interested in sharing its experience and in learning from the experience of other programs around the world; and

Whereas, the Government of Indonesia is cooperating with the Government of the United States of America as partners in the Indonesia Coastal Resources Management Project (CRMP), a seven-year coastal management project funded jointly by the U.S. Agency for International Development and the Government of Indonesia and implemented through the University of Rhode Island's Coastal Resources Center; and

Whereas, the Province of East Kalimantan is the focus for the CRMP program to manage its coasts and estuaries and is interested in sharing its experience and in learning from the experience of other programs around the world.

Now Therefore Be It Resolved That

c) The Puget Sound Water Quality Action Team and the Province of East Kalimantan agree to explore ways to share experience and information related to management, restoration and protection of coasts, estuaries, bays and watersheds.

d) Cooperation may include any programmatic or scientific initiative that is of mutual interest, such as:
   - Exchange visits
   - Review of studies and plans; and
   - Other activities deemed of mutual benefit.

Implementation: Implementation of each cooperative activity shall be contingent on the approval by both parties to undertake the activity. Once specific activities are approved by both parties, a letter of agreement will be developed by both parties which outlines and clearly defines the roles, responsibilities and contributions of each party in relation to the specific activity. Once signed by both parties, this document shall serve as the operating instrument for the cooperative activity.

Termination: Either party may, at any time, terminate this agreement.

Term: This Memorandum of Understanding shall remain valid for a period of five (5) years from the date of signing and can be extended/renewed by mutual consent as evidenced by an exchange of letters to that effect.

IN WITNESS OF THIS AGREEMENT OF 21 SEPTEMBER 2000
the parties append their signatures below:

Admiral (ret.)Busran Kadri
Director General
Directorate for Monitoring, Surveillance and Enforcement
Ministry of Marine Affairs and Fisheries

M. Asli Amin
Chairman
East Kalimantan Provincial Planning Board

Nancy McKay
Chair
Puget Sound Water Quality Action Team

ATTACHMENT E

PARTICIPANT BIOGRAPHIES

Participant Biographies

Sarwono Kusumaatmadja
Minister of Sea Exploration and Fisheries
Government of Indonesia
Minister Sarwono is the first head of the Ministry of Sea Exploration and Fisheries, which was established in 1999 by the Presidential Decree of President Abdurrahman Wahid, and approved by the government of Indonesia. Previously, he served as the Minister of the Environment and is an avid SCUBA diver. He is fluent in English.

Rokhmin Dahuri
Director General for Coasts, Beaches, and Small Island Affairs
Ministry of Marine Affairs and Fisheries
Rokhmin Dahuri received his bachelor's degree in Fisheries Biology and Management, and an M.Sc. in Environmental and Natural Resource Management from Bogor Agricultural Institute. He received his Ph.D. in Coastal Zone Management from Dalhousie University in Nova Scotia in 1991, and was a participant in CRC's 1996 Summer Institute in Coastal Management at the University of Rhode Island.

Prior to joining the Ministry of Sea Exploration and Fisheries, he served as Vice Rector for Institutional Agribusiness Cooperation; Vice Dean for Academic and Research Affairs, Faculty of Fisheries; and Director of the Center for Coastal and Marine Resource Studies at Bogor Agricultural Institute. In 1995, he received the Indonesia National Teaching Excellence Award from the Ministry of Education and Culture of the Republic of Indonesia. He also serves on the editorial boards of various international and national scientific journals, and has published an extensive number of publications, including journal papers, reports and books on various subjects related to coastal and marine issues. He is fluent in English.

Rear Admiral Busran Kadri
Director General for Sea Enforcement and Protection
Ministry of Marine Affairs and Fisheries
Rear Admiral Kadri received his education and training at the Indonesian National Defense College, the Joint Service Staff College of the Armed Forces and the Indonesian Naval Academy. He has served his country as Deputy for Operations of the Navy Chief of Staff; Commander of the Security Task Force - Western Group; Chief of Staff for the Eastern Fleet Sea Combat Group; Unit Commander of the Fast Patrol Ship Squadron's Eastern Fleet; and been a commanding officer of warships.

His military career track made him an excellent choice for Director General for Sea Enforcement and Protection in the new Ministry, as law enforcement is becoming a major issue throughout the Indonesian archipelago.

Dr. Alex Retraubun
Director of Small Islands Affairs
Directorate General for Coast, Beach, and Small Islands Affairs
Alex Retraubun received a bachelor's degree in Fish Stock Assessment at Bogor Agricultural Institute; and a master's degree in Tropical Coastal Management, and Ph.D. in Marine Ecology from the University of Newcastle in the United Kingdom.

In addition to his duties as Director of Small Island Affairs, he is head of the Fisheries Resources Laboratory and Coordinator for Education for Sustainable Development at University of Pattimura. He had previously served head of the Marine Biology Laboratory and as a lecturer at the university.

Dr. Retraubun has built a significant track record as a scientist, academic and manager in the field of marine and coastal resources. He has written numerous international and national publications, including journal papers, reports and books, related to marine science and technology.

Ir Ruchyat Djakapermana
Director of Spatial Planning, Ministry of Settlements and Regional Development
We regret that Mr. Djakapermana's details are not available.

Harris Hasyim
Chairman, Lampung Provincial Planning Board (Sumatera)
Harris Hasyim received a bachelor's degree in Agriculture from Bogor Agricultural Institute, and a master's degree in Regional and Development Planning Studies, from the ISS in The Hague, the Netherlands. In 1982, while at the University of Lampung, he was given the Teaching Excellence Award from the Ministry of Education and Culture of the Republic of Indonesia.

At the University of Lampung, Mr. Hasyim served as Vice Rector, Dean of the College of Agriculture and Vice Director of the Community Development Research Agency. Before becoming the chairman of the Lampung Regional Planning Board, he had also served as its Vice President and head of the Economic Affairs Section.

Mr. Hasyim is officially representing the Governor of Lampung Province on the study tour.

M. Asli Amin
Chairman, East Kalimantan Provincial Planning Board (Indonesian Borneo)
Asli Amin received his bachelor's degree in Anthropology from the University of Airlangga in Surabaya, West Java. In addition to chairing the East Kalimantan Planning Board, he also serves as a researcher on development issues for the board. He has also worked at the agency as Helpant Chairman for Social Welfare, Helpant Chairman for Community Welfare, bureau chief of social development and has been a member of the East Kalimantan Provincial House of Representatives.

During his tenure as government official, he has developed expertise in rural and regional development through a wide range of training topics such as environment, role of women in rural areas, social security systems, and tourism transport infrastructure. Mr. Amin earned medal of honors from the National Scouts Organization in 1984 and 1988, and been awarded the Republic of Indonesia's Service Medal of Honor, and the Republic of Indonesia's Revolution Medal of Honor.
Mr. Amin is officially representing the Governor of East Kalimantan Province on the study tour.

J.A. Saruan
Chairman of North Sulawesi Provincial Planning Board
We regret that Mr. Saruan's details are not available.

ATTACHMENT F

PARTICIPANT IST EVALUATIONS

Participant IST Evaluations

Final Tour Evaluation

1. Approach

In the design of any training activity it is important to be able to assess the ultimate effectiveness in terms of outcome. Outcome measurement is even more difficult for training related to policy objectives as times frames are sometimes very long. However, there are some ways of ensuring retention of information and that connections are made between information presented and needs that need to be met. One element that is particularly important for adult learning is repetition of information learned within a reasonably short time frame - for example twenty-four to forty-eight hours. It is also important to get training participants to make plans for using new information while this information is fresh in their minds. To achieve both of these, Proyek Pesisir used a two-step approach.

(a) Concurrent, informal evaluation and summary - rather than leaving discussions or planning until after participants returned to Indonesia when many of the information may already be lost to memory, the Proyek Pesisir study tour to the United States used a progressive learning approach. Prior to each stage of the tour, briefings were given to describe the purpose of the coming visits and to provide background on the context of the issues presented. These briefings were supplemented with group discussions are various stages that served to bring different thematic components together.

(b) Semi-formal structured evaluations and discovery oriented working sessions - in the middle and at the conclusion of the final day of the tour, semi-formal discussions were held to summarize lessons learned. Using a discovery oriented or guided approach, participants were encouraged to consider their study experiences and what applications could be drawn for Indonesia. At the final tour wrap-up evaluation just before participants left to return to Indonesia, a simple (three question) survey was used to illicit input from tour participants. This survey was done individually for each participant and responses were discussed among the group to achieve cross-fertilization of ideas and perspectives between IST participants. Participants were encouraged to prepare summary documents after returning to Indonesia for distribution to their respective constituencies.

The three questions that were asked of participants were:

(a) What three things did you like most about this tour?
(b) What three things did you like least about this tour?
(c) What three specific actions will you immediately undertake upon returning to Indonesia?

2. Findings

The responses to these questions are presented below.

(a) What Three Things Did You Like Most

· Exposure to a planning point of view and seeing how this is implemented in the United States.
· Coordination between organizations and how this was necessary to accomplish the objectives.
· Importance of mixed use and preservation of mixed-use planning for waterfront and port development
· Opportunity for establishing MOUs with United States partners.

- Good and appropriate locations and sites for the study tour helped develop a vision for what is needed in Indonesia.
- Tour presented many new ideas, especially how to increase the focus on coastal and marine needs and not just land-based activities.
- Makes clear the goals on which we need to focus and the messages we need to convey to constituencies in Indonesia.
- Systematic approach to coastal management in United States to inform regional autonomy in Indonesia
- Places and persons selected for meetings were most appropriate in terms of coastal management for Indonesia.
- Systematic structure to the tour.

(b) What Three Things Did You Like Least

- Locations visited were too spread out; picked 4 corners of the country—too far to travel which created very tough schedule.
- The persons met were very appropriate but all from the coastal management environmental field. It would have been useful to meet people from other departments with other kinds of responsibilities such as economic development, infrastructure development and more planning.
- Travel arrangements for this trip did not meet enough standards. Not enough resources were committed, for example flying business class would not have been so tiring and taxing for this kind of schedule.

(c) What Three Things Will You Do Immediately When You Get Back To Initiate Action

- Immediately make plans to apply CZM management.
- Follow-up and implement MOU with partners.
- Work with Proyek Pesisir to stage one-day seminar for stakeholders.
- Call the legislators and work with Proyek Pesisir to develop a public education workshop and seminar.
- Report to the governor what was seen and learned on the tour and the importance of the coastal environment to expand support for coastal management.
- Ensure that budget line items for coastal management are included in local government budgets in my province.
- Report to the Minister about the important lessons for Indonesia from the United States
- Immediately start campaign regarding the important things learned on the tour, especially about how to establish better coordination among ministries.
- Initiate dialogues with local governments about integrated coastal zone management because it is now clear the role of the central government is to facilitate implementation at the local level.
- Make a report on the importance of zoning codes and spatial planning for the coastal zone.
- Invite key people to my office and discuss/identify national interests related to lessons from the study tour including what should we do and what should they do.
- Focus on guidance for Small Island management including lessons from the Florida Keys.
- Formally request Proyek Pesisir support in getting books and other guidance documents that will be helpful to implement some of the lessons learned.
- Help develop a national coastal zone management law for Indonesia.

ATTACHMENT G

DAILY AGENDA FOR STUDY TOUR

Daily Agenda for the Study Tour

WASHINGTON, D.C.

Day 1: Tuesday, September 12, 2000

5:48 pm, Arrive into Washington, D.C. National Regan Airport on Northwest Airlines flight #224.

Transport to The Washington Monarch Hotel
2401 M Street, N.W.
Washington, D.C. 20037
Ph: 202.429.2400
Fx: 202.457.5010

Participants enjoy dinner on their own at the Monarch Hotel or nearby restaurants
(restaurant listings provided in briefing packages)

Day 2: Wednesday September 13, 2000

8:00 am – 10:30 am, Breakfast and Welcome (Linden meeting room, Monarch hotel)

- Introductions: **Dr. Ian Dutton**, Chief of Party, Proyek Pesisir
- Breakfast
- Welcome; A Perspective on U.S. Coastal Programs, **Ms. Lynne Hale**, Associate Director, Coastal Resources Center
- Participant Introductions and Expectations, **Dr. Rokhmin Dahuri**, Director General for Coasts, Beaches and Small Islands
- The Origins of IST and its Implications for Indonesian Coastal Policy
  Mr. Maurice Knight, Senior Policy Advisor, Proyek Pesisir

10:45 am, Transport to the motor vessel "Finished Business"

11:30 am – 2:30 pm, Discussion, Field Trip, and Lunch during a cruise on the Potomac River aboard Finished Business

Participants will witness coastal issues first hand and meet invited guests from United States government, NGOs working in Indonesia, foundations and development banks.

2:30 pm – 4:00 pm, Free Time

4:00 pm, Transport to State Department

4:30 pm – 5:30 pm, U.S. State Department Meeting

Indonesian participants will brief State Department officials on developments in Indonesia with regard to coastal management and learn about State Department work relevant to Indonesian coastal and marine resource management including, the East Asia Pacific Environmental Initiative, the Oceans Program, the International Coral Reef Initiative, global climate change initiatives, and the U.S.-Indonesian Common Agenda for the Environment.

Ms. Mary Beth West, Deputy Helpant Secretary for Oceans
Ms. Lisa Brodey, Foreign Affairs Officer, Oceans Program
Mr. James Carouso, Desk Officer for Indonesia, East Asia Pacific Bureau
Mr. David Hogan, Foreign Affairs Officer., Office of Marine Conservation
Mr. Bruce Malkin, Regional Foreign Affairs Officer, East Asia Pacific Bureau

Evening Free

Day 3: Thursday, September 14, 2000

8:00 am, Transport to NOAA meetings

8:30 am – 11:30 am, Briefings by the National Oceanic Atmospheric Administration (NOAA)

The briefing will provide an overview of the United States national coastal management program and the legal, technical, and financial mechanisms through which the federal government interacts with state and special management area programs.

- Welcome and Decision Support Tools for Hazards Risk and Vulnerability Assessment, **Ms. Margaret Davidson**, Help. Administrator, National Oceans Service
- National Coastal Management and Non-Point Source Pollution Programs
  Mr. Jeff Benoit, Director, NOS Office of Ocean & Coastal Resource Management
- Response, Restoration, and Hazardous Material Spills
  Mr. David Kennedy, Director, NOS Office of Response and Restoration
- Managing Federal Fisheries: Inter-jurisdictional Fisheries Enforcement, Fisheries Data and Information Processes, **Mr. Trent Lamar**, Help. Administrator, National Marine Fisheries Service
- The Sea Grant Program, **Mr. Ron Baird**, Director, Sea Grant, Off. of Oceanic & Atmospheric Research
- Concluding Discussion, **Mr. Charles Ehler**, Director, NOS International Program Office

Background: The National Oceanic and Atmospheric Administration (NOAA) is an agency of the U.S. Department of Commerce. NOAA's primary mission is to describe and predict changes in the Earth's environment while also conserving and wisely managing United States coastal and marine resources. In addition, NOAA seeks to strengthen the links between environmental stewardship and economic growth. Through the National Ocean Service (NOS), NOAA develops and promotes effective coastal and ocean management policies while seeking to bridge existing gaps between science, management, and public policy. NOAA's National Marine Fisheries Service (NMFS) administers programs which support domestic and international conservation and management of living marine resources. Atmospheric, coastal, and marine research is conducted by NOAA's Office of Oceanic and Atmospheric Research (OAR), both in its own laboratories and through partnerships with university-based programs.

11:30 am – 12:30 pm, Participants lunch on their own in the Ronald Regan building

12:45 pm – 2:00 pm, United States Agency for International Development (USAID) Meeting

Indonesian participants will brief USAID officials and learn about AID priorities. Salient issues include: Indonesia's strategic importance, the importance of marine and coastal resources to the Indonesian economy, the creation of a new ministry that is a symbol of decentralization and democratization, the delegation of authority over coastal waters to the provinces, the importance of past USAID efforts to achieve these changes, and the importance of gender issues to the USAID development agenda.

Hattie Babbitt, Deputy Administrator

Background: The United States Agency for International Development is the United States federal government agency that implements America's foreign economic and humanitarian help programs. The Agency focuses on six areas essential to Indonesia's recovery and continued development: democratic transition, economic recovery, environmental management, health and nutrition, food aid, and increased employment. Given the global importance of Indonesia's ecology, USAID has made responsible environmental management a priority in response to growing strains on the environment during the economic crisis. The USAID-CRC Indonesian Coastal Management Project,

Proyek Pesisir, reflects USAID's support of devolved resource management authority. Using the principle, "From local action to national practice," Proyek Pesisir is working in three provinces and nationally to develop best practices in coastal management to achieve the strategic objective of decentralized and strengthened coastal resources management.

Harriet C.Babbitt is Deputy Administrator for USAID. Before joining USAID, Ambassador Babbitt was the U.S. permanent representative to the Organization of American States (OAS) from 1993 to 1997. She worked closely with her counterparts from other OAS member states and the OAS secretary general to make the organization more responsive and effective, emphasizing democracy, human rights, sustainable development and trade. Ambassador Babbitt served from 1988 to 1993 as the chair for the Latin American Committee of the National Democratic Institute, an independent organization affiliated with the Democratic Party that promotes the establishment and growth of democratic institutions in foreign countries. Prior to joining the administration, Ambassador Babbitt was an attorney with Robbins & Green, P.A., from 1974 to 1993.

2:00 pm, Transport to 2:30 engagements

(i.e., walk across street to Dr. Baker Meeting; shuttle to United States Capitol)

2:30 pm – 3:30 pm, Meeting with **Dr. James Baker**, Undersecretary and Administrator, NOAA

Minister Sarwono Kusumaatmadja, Dr. Rokhmin Dahuri, Mr. Busran Kadri, Ms. Lynne Hale, Dr. Ian Dutton, and Mr. Maurice Knight

Background: Dr. James Baker is Administrator of NOAA and Under Secretary for Oceans and Atmosphere at the U.S. Department of Commerce. He has been active on the U.S. Coral Reef Task Force and serves as the Co-Chairman of the Committee on Environment and Natural Resources of the National Science and Technology Council and as an ex-officio member of the President's Council on Sustainable Development. He was previously President of Joint Oceanographic Institutions Incorporated, Dean of the College of Ocean and Fisheries Sciences at the University of Washington, and on the faculties of Harvard University and the University of Rhode Island.

Tour of the UNITED STATES Capitol or free time

Dr. Alex Retraubun, Mr. Harris Hasyim, Mr. Asli Amin, Mr. J Saruan, Mr. Deni Ruchyat

3:30 pm, Transport to Hart Senate building for seminar

(i.e. walk from Capitol to Hart; shuttle from Commerce Building to Hart)

4:00 pm – 6:00 pm, Public Seminar in the Hart Senate Building followed by a Reception

Through his presentation, "A New Era for Marine and Coastal Resources Management in Indonesia," Minister Sarwono Kusumaatmadja, will inform the International Development Community in Washington of the changes occurring in Indonesia and the opportunities unfolding.

6:00 pm, Transport back to hotel

Evening Free

Day 4: Friday, September 15, 2000

8:30 am, Transport to Baltimore Aquarium

Rear Admiral Kadri with Mr. Maurice Knight to United States Coast Guard Headquarters

10:00 am – 1:00 pm, Tour of Aquarium Followed by Lunch-Round Table Discussion

The tour and discussions will highlight a government-non-profit partnership and consider issues such as conservation, public education and the role of the Aquarium as an economic catalyst in the context of urban renewal.

Mr. David Pittenger, Executive Director

Ms. Connie Parr, Director of External Relations

Mr. Glenn Page, Director of Conservation

Dr. Valerie Chase, Acting Director of Conservation Education
Ms. Christine DeAngelo, Curator of Marine Mammals
Ms. Nancy Hotchkiss, Exhibit Developer

Background: The National Aquarium in Baltimore opened its doors to the public on August 8, 1981. Today, the Aquarium remains one of the most sophisticated and technologically advanced aquariums in existence. Its architecture, exhibits, programs, and management structure are considered definitive role models worldwide. The Aquarium actually "began" in the mid-1970s when Baltimore Mayor William Donald Schaefer and Commissioner of Housing and Community Development Robert C. Embry conceived and championed the idea of an aquarium as a vital component of Baltimore's overall Inner Harbor redevelopment. The Aquarium is Maryland's largest paid tourist attraction, and its impact on the State of Maryland is tremendous. A 1990 study by the Maryland Department of Economic and Employment Development determined that spending by Aquarium visitors in 1990 generated $128.3 million in income to the region.

1:00 pm, Depart aquarium for Baltimore airport

2:55 pm, Depart from Baltimore on United States Airways flight # 2603

5:36 pm, Arrive into Miami International Airport

Transport to Hawk's Cay Resort
61 Hawk's Cay Blvd.
Duck Key, FL 33050
Ph: 305.743.7000
Fx: 305.289.0651 - Dinner on own in resort restaurants

SOUTH FLORIDA

The Florida Keys National Marine Sanctuary (FKNMS) exemplifies the United States experience with national marine sanctuaries highlighting the role of federal and state agencies with regard to program coordination, funding, planning, and implementation. Coastal management interventions that promote sustainable development with regard to tourism, coastal hazards, and pollution are demonstrated emphasizing those with special relevance to the context of small islands. Models for community, university, non-governmental, and private sector involvement in coastal management are explored.

Day 5: Saturday, 16 September, 2000

8:00 am – 10:30 am, Florida Keys National Marine Sanctuary Briefings en route to Key West

Briefings will explore the role of national and state government with regard to national marine sanctuary coordination, funding, planning, and implementation with special emphasis given to the Sanctuary's experience with community participation.

Ms. Joanne Delaney, Research Interpreter, FL Keys Natl Marine Sanctuary

Background: The Florida Keys National Marine Sanctuary (FKNMS Sanctuary consists of 2,800 square nautical miles (9,500 square kilometers) of coastal and oceanic waters, and the submerged lands thereunder, surrounding the Florida Keys. One of 13 sanctuaries protected under the National Marine Sanctuaries Program, this sub-tropical ecosystem sustains spectacular, unique, and nationally significant marine environments including coral reefs, seagrass meadows, hardbottom regions, and fringing mangroves. This complex ecosystem is the foundation of the commercial fishing and tourism-based economies of south Florida. The sanctuary was designated by the United States Congress 1990 in response to mounting threats to the health and ecological future of the coral reef ecosystem. As part of its establishment, a comprehensive management plan and water

quality protection program was created for the Sanctuary in concert with the public, a citizen's advisory council, and several federal, state and local government agencies. Management of the Sanctuary is achieved through a cooperative partnership between the US Department of Commerce's National Oceanic and Atmospheric Administration and the State of Florida Department of Environmental Protection and the Florida Fish and Wildlife Conservation Commission. Current issues facing the FKNMS include coral bleaching and disease, overfishing, and damage to corals from boaters, divers, and occasional ship groundings.

The National Marine Sanctuaries Program is administered by National Oceanic and Atmospheric Administration (NOAA). The program was created in Title III of the Marine Protection, Research and Sanctuaries Act to serve as the trustee for the nation's system of marine protected areas, and to conserve, protect, and enhance their biodiversity, ecological integrity and cultural legacy. The National Marine Sanctuaries Program expands the United States' long history of protecting special areas on land to embrace the seas. It brings an ecosystem approach to marine environmental protection and encourages a new ethic of marine stewardship.

10:30 am – 11:30 pm, Tour the Sustainable Seas Expedition Open House

Background: The Sustainable Seas Expeditions is a five-year project of underwater exploration and discovery of the marine world with special emphasis on the national marine sanctuaries of the U.S. The expeditions are the brainchild of Dr. Sylvia Earle, scholar and Explorer-in-Residence of the National Geographic Society. Led by Dr. Earle, the expeditions are a project of the National Geographic Society in cooperation with NOAA and other government agencies, industry, and private institutions, made possible by a grant from the Richard and Rhoda Goldman Fund. The expeditions have four goals: exploration and discovery, scientific research, use of cutting edge underwater technologies, and public awareness of the marine environment with an emphasis on protection of marine species and ecosystems.

12:15 pm – 2:00 pm, Picnic lunch with FKNMS NGO partners

NGOs including the Center for Marine Conservation, The Nature Conservancy, and Friends of the Sanctuary have played an active role is the planning and implementation of the Florida Keys National Marine Sanctuary. Participants will have an opportunity to explore this participation with key leaders from these organizations.

2:30 pm – 3:30 pm, Boat Tour of the Sanctuary and Key West Harbor

During the field trip participants will have a chance to observe firsthand the unique marine resources of the Florida Keys, review resource protection tools employed by the Sanctuary, and discuss the challenges of managing a large, multiple-use marine protected area.

3:30 pm – 5:00 pm, Free time

5:00 pm, Meet with Dr. Sylvia Earle

In addition to her prestigious scientific career, Dr. Earle is exemplary in her active advocacy for ocean conservation and public education on ocean issues. She will briefly meet with participants to discuss her experiences in ocean conservation from both a government and private perspective.

5:30 pm, Transport to Grand Key Resort

3990 S. Roosevelt Blvd.
Key West, FL 33040
Ph: 305.293.1818
Fx: 305.296.6962

5:30 pm – 6:30 pm, Refresh before dinner

7:00 pm to 9:00 pm, Dinner with Mr. Billy Causey and the FKNMS Staff

Models for national and state government facilitation of private sector, community, university, and non-governmental involvement in coastal management will be discussed with Dr. Earle and FKNMS staff. Dr. James Murley, Director of the Center for Urban and Environmental Problems, Florida

Atlantic University/Florida International University will also join the group for these discussions.

Day 6: Sunday, 17 September, 2000

8:30 am Coastal Management Tour of South Florida en route to Miami Beach

The tour will demonstrate coastal management planning, permitting and interventions that have succeeded and failed in promoting sustainable development with regard to tourism, coastal hazards, and pollution. Special emphasis will be given to the challenges of addressing these issues in the context of small islands.

James Murley, Director of the Center for Urban and Environmental Problems, Florida Atlantic University/Florida International University

2:30 pm, Arrival at The Wave Hotel

350 Ocean Drive
Miami Beach, FL 33139
Ph: 305.673.0401
Fx: 305.531.9385

Afternoon/Evening Free

RHODE ISLAND

The Rhode Island agenda concentrates on the state's coastal management programs, including state perspectives on decentralized coastal management in the U.S. Special attention is given to permitting processes and requirements used to manage coastal development and legal perspectives on land ownership and use rights in the context of achieving coastal management goals. The U.S. Coast Guard experience with surveillance and enforcement suggests structures and strategies to implement sea monitoring.

Day 7: Monday, September 18, 2000

6:15 am, Depart Wave Hotel for Miami International Airport

8:05 am, Depart Miami on American Airlines flight 1132, arriving into the NYC/LaGuardia Airport at 10:55 am

12:20 pm, Depart NYC/LaGuardia on American Airlines flight 4519, arriving into Providence at 1:30 pm

Transport to the Coastal Resources Center, University of Rhode Island

3:00 pm – 4:15 pm Presentations and Discussion on Global Coastal Management Experience and the University of Rhode Island

Welcome - Ms. Lynne Hale, Associate Director, Coastal Resources Center

An Overview of CRC and International Challenges for Coastal Management.

Stephen Olsen, Director, Coastal Resources Center

Background: The University of Rhode Island has one of the largest and most widely known graduate schools of oceanography in the United States, with about 100 students currently enrolled and more than 600 alumni. It is the cornerstone of an array of marine programs at the University. Interest in the marine sciences and oceanography at the University of Rhode Island dates back to the mid-1930s when the Narragansett Marine Laboratory was established. With significant reorganization and considerable expansion, the initial marine program became the University's Graduate School of Oceanography (GSO) in 1961. In 1989, GSO was named a NOAA Center of Excellence in coastal marine studies. Recently, the National Research Council ranked the Graduate School of Oceanography's Ph.D. program one of the best in the country and fifth among oceanographic institutions.

For 20 years, the University of Rhode Island's Coastal Resources Center (CRC) has worked to foster sustainable use of coastal resources. From work in the field sites, CRC learns how to develop and apply the concepts and tools of coastal governance. Partnerships, service, and commitment underlie CRC's approach to field programs. All field programs are formulated and implemented through a participatory, incremental learning approach.

CRC's work in Indonesia, Proyek Pesisir (Indonesian Coastal Resources Management Project), is part of the natural resources management program of the U.S. Agency for International Development and the Government of Indonesia. Following consultation with Indonesian stakeholders during 1995-96, the project began in 1997 and will continue until 2003. Implemented by CRC, Proyek Pesisir works closely with resource users, the community, industry, non-governmental organizations, academic groups and all levels of government. Proyek Pesisir operates in field sites and nationally to address Indonesia's vast need for improved coastal resources management. The challenge is to develop coastal resources management techniques that allow development, but conserve Indonesia's rich ecological resource base. (A summary of Proyek Pesisir activities is included at the end of the briefing materials.)

4:15 pm, Transport to Bay Voyage Hotel

150 Conanicus Avenue
Jamestown, RI 02835
Ph: 401.423.2100
Fx: 401.423.3209

6:00 pm, Transport to President Carothers' House

6:30 pm – 9:00 pm, Reception and Dinner at University of Rhode Island President's House

During the reception, the University of Rhode Island and the Indonesian Ministry of Marine Exploration and Fisheries will sign a Memorandum of Understanding. Guests to this event hosted by URI president Dr Robert Carothers include state government officials and coastal management professionals from government, the private sector, and academia allowing Indonesian participants the chance to informally discuss approaches and challenges to coastal management.

Day 8: Tuesday, September 19, 2000

8:00 am, Depart Bay Voyage for CRC

8:30 am – 10:30 am, Presentations on Decentralized Coastal Management in the U.S.

Presentations by Ms. Lee and Mr. Fugate will provide the state perspective on decentralized coastal management in the United States describing interactions with the federal government and planning, permitting, and management interventions used to implement coastal management goals. Mr. Nixon will present on overview of the historic development of coastal governance in the United States.

Ms. Virginia Lee, Associate Director, Coastal Resources Center

Mr. Grover Fugate, Executive Dir., Coastal Resources Management Council

Mr. Dennis Nixon, Professor, Marine Affairs

Background: Rhode Island was one of the first states to undertake management of its coastal resources with the passing of its Coastal Resources Management Act of 1971. The state's management plan received federal approval in 1978. The Coastal Management Resources Council administers the plan and local governments participate in the program on a voluntary basis, developing local harbor management plans. Beach erosion, polluted runoff, the impact of human use on coastal resources, and public access are key issues for Rhode Island's coast. To address these issues, the coastal program created special area management plans; instituted a comprehensive harbor management-planning program; and encourages mitigation for wetlands that are permanently lost or altered.

10:45 am – 11:45 am, Coastal Management Round Table Discussion

The roundtable is intended to allow participants to interrogate experts on legal and institutional aspects of coastal management, such as permitting processes and requirements, land ownership rights and conservation, harmonization of land and water uses, and public processes used in planning and setting regulations.

Moderator: **Ms. Lynne Hale**, Associate Director, Coastal Resources Center

Panel: **Mr. Steve Olsen**, Director, Coastal Resources Center

Mr. Dennis Nixon, Professor, Marine Affairs

Mr. Grover Fugate, Executive Dir., Coastal Resources Management Council

Ms. Virginia Lee, Associate Director, Coastal Resources Center

11:45 am, Box lunch at CRC

12:30 – 5:30 pm, Coastal Management Tour of Rhode Island

The tour's first stop at Applied Science Associates, a marine science consulting firm, will explore oil spill mitigation and response. The tour will continue onto Newport Rhode Island where participants will experience the unique history of Newport's urban waterfront renewal and tourism management.

Mr. Brian Crawford, Lead Technical Advisor, Coastal Resources Center

Ms. Virginia Lee, Associate Director, Coastal Resources Center

Ms. Jennifer McCann, Marine Resource Associate, CRC

Dr. Deborah French, Senior Scientist, Applied Science Associates

TBA, Newport Tour Guides

6:00 pm – 8:00 pm, Dinner in Newport

Day 9: Wednesday, September 20, 2000

8:00 am – 9:00 am, Breakfast with Ms. Trudy Coxe

Through a facilitated discussion with Ms. Trudy Coxe, participants will further explore the creative tension between state and federal coastal management programs in the U.S.

Background: Ms. Trudy Coxe has been a leader in United States coastal management working at the highest levels of the national government and Massachusetts state programs. Her unique vantage from having driven United States coastal management from both the federal and state perspective will help participants as they synthesize previous tour presentations in D.C. and Rhode Island.

9:00 am – 9:15 am, Signature of Memorandum of Understanding between the Rhode Island Coastal Resources Management Council and the Province of Lampung

9:15 am – 10:15 am, Reflections on the Indonesian Coastal Management Study Tour

Mr. Knight will lead a reflection on the Study Tour to date focusing on lessons learned and implications for Indonesia and Proyek Pesisir activities. Mr. Maurice Knight, Senior Policy Advisor, Proyek Pesisir

10:30 am, Transport to Providence Airport

12:00 pm, Depart Providence on Northwest flight 697, arriving in Detroit at 2:07 pm

3:25 pm, Depart Detroit on Northwest flight 269, arriving in Seattle at 5:16 pm

Transport to Ramada Inn Governor House

621 South Capitol Way

Olympia, WA 98501

Ph: 360.352.7700

Fx: 360.943.9349 - Dinner on own

WASHINGTON STATE

The experiences of the Puget Sound Action Team and the Nisqually Watershed Management Program demonstrate successful approaches to watershed and bay management. Meetings articulate the roles of government, indigenous communities and the private sector in these participatory initiatives. Field trips illustrate coastal management strategies and interventions relevant to bay management including, restoration, sustainable land management practices, environmental management of ports, aquaculture, and a unique view to land ownership and submerged lands.

Day 10: Thursday, September 21, 2000

8:00 am, Transport to Puget Sound Action Team offices

8:45 am - 11:15 am, Presentations on Bay and Estuary Management by the Puget Sound Water Quality Action Team

Briefings will discuss the experiences of the Puget Sound Action team and the program's approaches to watershed and bay management.

- Introduction to the Puget Sound Action Team
  Mr. Duane Fagergren, Deputy Director
- Estuary management in Puget Sound
  Mr. Steven Tilley, Planning Manager
- Environmental monitoring of Puget Sound
  Mr. Scott Redman, Science Coordinator
- Urban Bay Planning and Management
  Mr. Kevin Anderson, Special Projects Coordinator
- Watershed, shoreline & submerged land management
  Mr. Steven Tilley, Planning Manager

Background: The Puget Sound Water Quality Action Team — a sub-agency of the Governor's Office — brings together the heads of ten state agencies, a city and a county representative, a representative of federally recognized tribes and ex-officio non-voting representatives of three federal agencies to lead and coordinate efforts to protect Puget Sound. Action Team members are responsible for:

- Developing a biennial work plan and budget.
- Coordinating the monitoring and research programs.
- Periodically amending the Puget Sound Water Quality Management Plan.
- Coordinating Puget Sound Management Plan implementation among agencies.

Management and protection of Puget Sound is complex and challenging. Jurisdictional boundaries must be bridged while federal and state agencies, local and tribal governments, businesses, individuals and organizations must pull together to carry out a protection strategy. The Action Team supports programs, from community education to scientific monitoring, that unite these groups. Actions to identify and stop pollution in the Puget Sound region are the primary focus of the Action Team. The Action Team Science Programs are designed to monitor, evaluate and document suggested implementation in the Management Plan for long-term strategies and the Work Plan for short-term goals.

11:15 am, Transport to Nisqually Wildlife Refuge

11:30 am – 2:00 pm, Watershed Management Briefings and Lunch at the Nisqually Wildlife Refuge

Briefings explore the experiences of the Nisqually Watershed Management Program with special emphasis to the role of indigenous communities as program stakeholders. Forestry management in the watershed will also be discussed.

- Greeting and Introduction to the Nisqually Wildlife Refuge,
  Ms. Jean Takekawa, Manager, Nisqually Wildlife Refuge

View Interpretive Center and Walkways

Lunch at the Refuge

· Introduction to the Nisqually Watershed Management Program
  Mr. Steve Craig, President, Nisqually River Interpretive Center Foundation
  Mr. Peter Moulton, Senior Staff, Nisqually River Council
· Forest Management in the Watershed
  Mr. Jack Ward, International Paper

Background: The Nisqually Watershed Management Program has been a model for participatory regional watershed management that strives to balance balanced stewardship of the area's economic resources, natural resources, and cultural resources. The Nisqually remains one of the least degraded of the major Puget Sound rivers draining over 700 square miles of land, nearly 500,000 acres, and contained in portions of three counties. As of 1996, fifty-six percent of the basin was privately owned while thirty percent of the basin was the responsibility of various federal agencies, with the balance owned by state, municipal and tribal governments. The Basin supports extensive salmon and steelhead runs, timber and agricultural resources and hydropower generation. The Nisqually Basin is also home to many threatened and endangered species, offers a variety of popular recreational opportunities and provides over half of the fresh water flow entering southern Puget Sound.

2:00 pm, Transport to Clear Creek Fish Hatchery

2:40 pm – 3:30 pm, Presentation on the Role of Hatcheries in Salmon Restoration

The presentation will highlight issues relevant to restoration as a bay management intervention.

Mr. George Walter, Nisqually Tribal Staff

3:30 pm – 4:10 pm, Transport to Olympia

4:10 pm – 6:00 pm, Free Time

6:00 pm, Transportation to Shelton, Washington

6:25 pm – 7:00 pm, Tour of Shellfish Hatchery and Processing Plant

Tour will highlight aquaculture issues and practices.

Mr. Bill Dewey, Division Manager, Project Management and Public Affairs, Taylor Shellfish Farms, Inc.

Background: Taylor Shellfish is the United State's largest Manila clam producer and also farms Blue mussels, and a variety of oysters, scallops and crabs. The company, which has been in operation over 100 years, operates an extensive aquaculture facility.

7:30 pm - 9:00 pm, Reception and Dinner at Xinh's Clam & Oyster House hosted by local Shellfishers

During the reception, the Puget Sound Water Quality Action Team and the Indonesian participants will sign a Memorandum of Understanding. Discussions with dinner guests will continue the focus on aquaculture practices as well as describe Washington State's unique perspective on submerged land ownership issues.

9:00 pm, Transport to Olympia

Day 11: Friday, September 22, 2000

7:00 am – 9:00 am, Transport to Seattle

9:00 am – 10:00 am, Presentation on the Port of Seattle's role in restoring & protecting Elliott Bay

The briefing will describe environmental management of ports within the larger context of bay management plans.

Mr. David Aggerholm, Manager of Health, Safety, and Environmental Services, Port of Seattle

Background: The Port of Seattle is one of the largest, most efficient container and breakbulk cargo centers on the West Coast. The Port of Seattle is a municipal corporation created September

5, 1911, by the voters of King County. The Port is a public enterprise with unique authority operating in an international, market-driven environment. It provides services to its customers in order to return benefits to the citizens of King County, giving careful consideration to the economic, social and environmental implications of its decisions.

10:00 am - 11:00 am, Tour Reflection

Participants will evaluate lessons learned during the tour and their applicability to Indonesia. They will further recommend actions they can take toward implementing these recommendations upon return home.

11:00 am - 12:00 am, Tour Seattle waterfront

Tour allows participants to see the Seattle waterfront within the context of bay management.

12:00 pm, Transport to the Seattle Airport

ATTACHMENT H

"A New Era for Marine and
Coastal Resources Management in Indonesia"

Presentation by the

Honorable Sarwono Kusumaatmadja

Minister of Marine Affairs and Fisheries
Republic of Indonesia

September 14, 2000
Hart Senate Building, Washington, D.C.

"A New Era for Marine and Coastal Resources Management in Indonesia"

Presentation by the
Honorable Sarwono Kusumaatmadja
Indonesia Minister of Marine Affairs and Fisheries
September 14, 2000
Hart Senate Building, Washington, D.C.

Senator Jack Reed,
Senator Lincoln Chafee,
Distinguished Guests,
Ladies and gentlemen,

It is a tremendous pleasure and privilege to be with you here in Washington this afternoon. As many of you know, we had planned for this seminar and the related Study tour to occur back in April, but had to make a late postponement due to a Ministerial travel ban imposed by our President to ensure we Ministers stayed focused on key national issues. Well, as the IMF pointed out again last week, many of those issues are still of pressing concern, so I must admit that there were a few nervous people in our entourage as we made final travel plans last week, especially among our good friends at the Coastal Resources Center who had the difficult task of rescheduling the earlier tour at the 11th hour!

As you can see, we have had no such dramas this time and I would like to again express my sincere appreciation to the tour sponsors, the Indonesia program of the US Agency for International Development and the tour organizers, the Coastal Resources Center of the University of Rhode Island. I would also like to pay special thanks to the sponsors and organizers of this seminar here at the Capitol, the Women's Aquatic Network, and Senators Jack Reed and Lincoln Chafee of Rhode Island.

I am always impressed by the diverse range of interests that come together at events such as this and am delighted that you have elected to be with us this afternoon. So as to ensure there is plenty of time for dialogue with you, I will keep my speech reasonably short. I will also be asking staff from my Ministry and three colleagues from Provincial administrations to assist me in answering any questions or comments you may have later.

In preparing for this talk, I was faced with the inevitable difficult decisions about what to include and what to leave out, what to generalize about and what to emphasize. Talking about Indonesia at the present time presents a vast array of opportunities for discourse on such vital topics as good governance, democracy, economic recovery, social justice, environmental management and development paradigms.

I decided that given the eclectic interests of the audience, my talk should focus most on why the establishment of Indonesia's first ever Marine Ministry is such a significant accomplishment and how our Ministry's activities are so intricately interwoven with all of the themes I have just mentioned. I will seek to outline in the talk how the Ministry came into being, our structure, charter and initial focus and then elaborate on how our activities provide opportunities for further engagement with US agencies and interests.

To help those who do not know Indonesia well, I have included this slide that shows some basic features of the geography of our country, including the locations of the three provinces represented in the study tour

group – in my experience, very few people outside Indonesia understand the scale or diversity of our country. It is hard for people to envision a maritime nation as opposed to nations that are marked by land boundaries.

During our initial meetings with various NOAA and State Department officials along with various NGO, Industry and academic representatives on the boat tour of the Potomac River earlier today, I was, however, pleasantly surprised by how many of you are both interested in Indonesia and are well informed about key issues and developments. I consider that a good measure of the positive bilateral ties that groups such as the US-INDO Foundation are fostering.

As these next slides indicate, Indonesia possesses a remarkable maritime heritage. Our mega-diverse and highly productive islands and seas, our diverse cultures and industries, our strategic location and our strong reliance on marine products and services make Indonesia a globally important maritime nation. And yet, somewhat surprisingly, our development focus to date has largely been on terrestrial industries and issues.

I liken our current situation with marine policy and programs to the situation in the US in the early 1970s when fledgling coastal and ocean management programs were being developed to respond to increasingly serious degradation of coastal and marine ecosystems. However, our situation is perhaps more complex because of three factors:

- First we have to deal with issues that have compounded over a very long time period of environmental management neglect or inactivity – take for example, our national gateway, Jakarta Bay. Jakarta Bay is the ultimate sink for the wastes of more than 22 million people. Over the last 400+ years, the Bay has received virtually no special protection, nor is there any agency or program specifically concerned with management of the Bay. As a consequence, the bay is the most polluted in Asia and will require a massive restoration effort comparable to the clean up programs in Boston Harbor.
- Secondly, and unlike much of the US, particularly at the present time, Indonesian coastal communities are still reeling from the impacts of the Asian Economic crisis. Industrial downturns have closed many budding industries and caused reverse migration to coastal villages where laborers now engage in occupations such as fishing and gleaning of marine products. At the same time, the high foreign exchange value of products such as shrimp and pelagic fish has created incentives for increased exploitation, often involving destructive or non-sustainable methods. This has, in turn, led to increased conflicts with local, subsistence and traditional fishers.
- Third, and not lastly, we face the challenges of participating in a global economy in the 21st century equipped mostly with outdated or inadequate skills, knowledge and technology. One example relates to exploitation of the resources of our large Exclusive Economic Zone by rogue fishing fleets. At present, making accurate estimates of fisheries losses due to poaching is virtually impossible due to our very limited

Monitoring, Control and Surveillance systems, but obviously essential if we are going to realize the potential of our EEZ to contribute to national economic development.

As you can read in the hand out article by my Director General for Coastal, Beaches and Small Island Affairs, Dr Dahuri, in developing our coastal and marine resources on a sustainable basis, we face six critical challenges:

(1) lack of knowledge of coastal and marine resources and processes – despite our strong science tradition, we know little about our bluewater areas and biotechnology prospects;
(2) Undervaluation of coastal and marine resources – the pioneering work of the World Bank funded COREMAP studies has shown us just how valuable the our coral reefs are and revealed again the long

term implications of inaction. However, like the US Presidential task Force and the International Coral Reef Initiative acknowledge, we also face many obstacles in changing the short term orientation of many reef-based industries;

(3) Lack of Empowerment of coastal communities and marine resource users – the article on Talise Island available as a handout to you is an excellent example of that point – to get users to buy into effective management systems requires some fundamental changes in our regulatory approaches;

(4) Unclear legal authority and inadequate planning and development control frameworks – this is a critical constraint as we prepare for full Regional Autonomy from January 1 next year – as my colleagues from the Provincial planning boards will agree, there are major challenges and many unresolved issues in developing new administration systems at Provincial, district and local levels;

(5) Low institutional and human resource capacity to undertake comprehensive and integrated coastal and marine resource management; and

(6) Lack of vertical and horizontal integration between government, industry, NGO and community initiatives – this is a common problem in most large countries, but compounded in Indonesia by our archipelagic geography and by our legacy of "Top Down" governance over the past 30 years.

These issues exist despite the remarkable progress made in three areas:

· Firstly, we have established comprehensive academic and research programs in marine science and fisheries – our six leading Universities now have the potential to produce 1800 graduates per year in these areas. In addition, we have now developed two specialized postgraduate programs in coastal management that are producing staff capable of implementing new regional autonomy programs. However, there is still a massive imbalance between supply of capable professionals and demands for their skills in many areas of marine science and technology – targeted training is thus a key area of further capacity building – during this Study tour we hope to strengthen links with leading US and global programs to support these efforts;

· Secondly, as a result of Law 22 of 1999 on Regional Autonomy and the related Law (25) on revenue sharing, we have begun to focus on how coastal and marine management programs can be best integrated between district governments (who have jurisdiction out to 4 nautical miles), Provincial administrations (who have jurisdiction out to 12 nautical miles) and the national government which has jurisdiction for the EEZ. These are not easy tasks and will obviously require close coordination between all layers of government, especially in development of locally workable spatial plans and regulatory frameworks. Here again, I emphasize the demonstrated value of USAID assistance – in North Sulawesi, Lampung and East Kalimantan provinces, as a consequence of the work of Proyek Pesisir and their local government, university and NGO partners, we now have Indonesia's most advanced models of good coastal resources governance. I have visited these sites and can attest to their inspirational impacts on coastal communities and their effectiveness in promoting the quality of coastal resources.

· Thirdly, there is now an emerging constituency for better coastal and marine resources management. Despite, or perhaps because of, the slow action of governments, individuals, industries, researchers, communities, NGOs and others are taking a lead in developing locally appropriate resource use and management systems. So as to further encourage these, my Ministry has established a biannual National Coastal awards scheme – at the first ceremony, the major winners were Haji Thayeb a village leader of a community-based mangrove replanting program in South Sulawesi and Bali's leading marine tourism operator – Bali Hai cruises.

I encourage those of you coming to the International Coal Reef Symposium in Bali next month the meet these leaders and visit other places where local communities and NGOs are also demonstrating leadership.

Why is the establishment of a Marine Ministry so significant for Indonesia's future? To comprehend this, it is important to reiterate that despite their historical lack of political focus and management action, Indonesia's seas are fundamental to national culture, economy and the quality of life of all Indonesians. That significance has long been recognized. For example, the German/Dutch writer Rumphius was so amazed by our marine diversity that he penned a compelling work about sea life in eastern Indonesia that was first published in 1704. The Ambonese Curiosity Cabinet, as the work is called, has just been republished in English for the first time by Yale University Press.

Some of you may be more familiar with the magnificent Ecology of Indonesian Seas - two volumes that trace marine science and management issues in Indonesia from the ancient times to the present day.

I mention these works largely because they provide an excellent analogy for one of the major problems of marine science in Indonesia - - we have been reasonably good at describing our resources, their problems and potential, but largely ineffective in implementing coordinated programs of meaningful national policy and effective local action to use those resources in a sustainable manner for the benefit of Indonesian society. How are we addressing this situation? One of my first tasks when appointed as Minister was to assemble a team of capable and committed experts in specific fields of marine science and management. My five Directors-General, Inspector General and Secretary General and other senior expert staff are drawn from many branches of government, from academic and research organizations and bring enormous enthusiasm to our work.

Starting with a brand new Department has many advantages but also poses many challenges. Much of our first year has been taken up with those all-important, but time-consuming good housekeeping tasks. Only last month, for example were we able to move to our new permanent offices.

Despite the difficulties of recruiting staff and procuring budget, our first year has been a very busy period for us. We have spent months consulting with key stakeholder groups throughout Indonesia, listening to communities and their leaders and conversing with industry and research groups and with NGOs and with the myriad of donors and investors who wish to support our endeavors. We have also been working closely with members of parliament to ensure they understand and support our efforts. Those dialogues have enabled us to develop a coherent and client-focused workplan for the Ministry, details of which are summarized in a handout available to you which will also soon be available on our Ministry's website www.indoocean.com.

The action programs shown in this slide are indicative of our core focus on developing a comprehensive plan for marine and fisheries resource utilization. However, they are just a beginning. As we found with a new initiative on small islands, such proposals can not be implemented without a proper process of open review and consultation. There is a long way to go yet before we have a comprehensive Oceans Policy or the capacity comparable to the US in resolving the complex questions of intergovernmental relations that the new Law on Regional Autonomy poses.

Indeed, one of my strong hopes is that participants in this study tour will return with some recommendations on how to determine an appropriate balance of responsibility between the various levels of government. I have encouraged my staff to pay particular attention to:

- learning about how to reduce the costs of coastal and marine resources governance,
- how to develop more participatory approaches to coastal and marine development, and
- how to develop resource management systems that utilize locally appropriate technology.

One further achievement I would like to flag before summing up is the establishment of a National Maritime Council that provides direct advice to the President on national policy issues. Membership of the council is drawn from the 27 private sector, NGO and government agencies and is the pre-eminent forum for gathering information and opening or programs for review. The President chairs the Council and I have oversight of its routine operations.

I welcome the opportunity to learn more about US experience with such high level forums, particularly how they may enable improved policy development and better coordination of sectorial programs.

Ladies and Gentlemen, Indonesia has suffered tremendous upheavals in the recent past including severe environmental, financial, economic and political crises. The country has experienced a radical transformation from a highly centralized and authoritarian regime, to what is now the third largest democracy in the world, and with that transition comes new hopes for the future, especially in the areas of marine and coastal resources management.

I have been overwhelmed by the positive reaction to the Ministry both in Indonesia and abroad. We are now developing a clear coordinating role within the broader framework of government, however, like all such programs, these initiatives take time and require us to learn as we go. I have consistently advocated that we must have realistic expectations and need to be careful not to promise more than we can deliver.

This requires us to be very disciplined in accepting offers of external assistance – the recent installation of Maurice Knight, the USAID-funded Policy Advisor in our Ministry is a good example of such discipline – until now we had little capacity to utilize such assistance efficiently, but now can see a clear path forward for a National Coastal Policy initiative – this Study tour will be of much value to that initiative.

I have long advocated that we need to look for new ways to manage our marine affairs as we are only now recognizing the heavy costs of past development practices – social conflict, environmental destruction and economically inefficient resource use are just some of the legacies that we inherited and are now obstacles to recovery that we must overcome.

We are very fortunate in having such good partners and supporters as USAID and the Coastal Resources Center who are helping us to develop more sustainable and equitable approaches to coastal and marine resource use. We hope that this Study Tour will enable us to build broader links with US-based agencies, NGOs and industries, as there is clearly much to learn from your global leadership in these fields. Above all, we are hoping to consolidate the personal links and contacts that will enable bilateral cooperation in marine affairs and fisheries to continue to be mutually beneficial and successful!

Thank you again to the sponsors and hosts of this seminar.

I look forward to your questions and comments and to chatting with you less formally during the reception.

ATTACHMENT I

BIBLIOGRAPHY AND LIST OF PUBLICATIONS ACQUIRED
DURING THE INTERNATIONAL STUDY TOUR

List of Publications

No.	Title	Author / Source
1	2000 Puget Sound Update Puget Sound Water Quality Action Team 7th Report of the Puget Sound Ambient Monitoring Program	Puget Sound
2	2001 Marine Wildlife Calendar	Center for Marine Conservation
3	American's National Wildlife Refuges	U.S. Fish & Wildlife Services
4	Aquidneck Island Our Shared Vision	CRC/URI, Sea Grant
5	Aquidneck Island Partnership Brochures	
6	CMC 2001 Marine Calendar	
7	Coastal Nonpoint Source Pollution Brochures	EPA (Environmental Protection Agency)
8	Coastal Resources Center Information folder	URI
9	Coastal Services Newsletter Vol. 3, Issue 5. September/October 2000	NOAA
10	Coastal Stewardship : Towards The New Mullenium 1996-1997 The Biennial Report to Congress on Administration of Coastal Zone Management Act	NOAA
11	Coastal Zone Management 25th Anniversary 1972-1997 Accomplishment Report	OCRM, NOAA
12	Coordinating Success : Strategy for Restoration of the South Florida Ecosystem	South Florida Ecosystem Restoration Task Force
13	Decision Support Tools for Hazards Risk and Vulnarebility Assesment	NOAA
14	Ecosystem-Based Fishery Management	U.S. Department Commerce
15	Evolution of Public and Private Rights to RI's Shore	URI
16	Fisheries of the United States, 1998	U.S. Department Commerce
17	Florida Keys National Marine Sanctuary Brochures	NOAA
18	Florida Keys National Marine Sanctuary Folders	NOAA
19	Health for Oceans	Center for Marine Conservation
20	Health of Puget Sound CDs	Puget Sound
21	Healthy Coast Brochures	NOAA
22	Living in Water, Curriculum for Grades 5 - 7	National Aquarium in Baltimore
23	Managing NonPoint Pollution	Puget Sound
24	Marine Mammals Ashore A Field Guide for Strandings	NOAA
25	Misc. Puget Sound Fact Sheets	
26	Monroe Country Sanitary Wastewater Master Plan Vol 2 Appendices	
27	Monroe Country Year 2010 Comprehensive Plan (Policy Document)	Monroe Country
28	Mote News Vol. 45 No. 1 Spring 2000	
29	National Aquarium in Baltimore	Aquarium in Baltimore
30	National Estuary Program : Protecting Our Naton's Estuaries	EPA (Environmental Protection Agency)
31	National Ocean Service 1999 Brochures	NOAA

32	National Oceanic and Atmospheric Administration U.S. Department of Commerce Visit of Mr. Sarwono Kusumaatmadja Information Folder	NOAA
33	National Sea Grant College Program Biennial Report 1998-1999	Sea Grant
34	Nisqually Destiny Video	
35	Nisqually River Basin Information folder	
36	Nisqualy Watershed Glacier to Delta A River Lagacy	Nisqually River Interpretive Center Foundation
37	Oceanus Coastal Science & Policy II	Wood Hole Oceanographic Institution
38	Our Living Oceans	U.S. Department of Commerce
39	Our Water, Our Way of Life	Monroe Country
40	Public Shellfish Sites of Puget Sound	Puget Sound
41	Puget Sound Water Quality Action Team Information Folder	Puget Sound
42	Puget Sound Water Quality Management Plan 2000	Puget Sound
43	Puget Sound Water Quality Work Plan 2001-2003	Puget Sound Water Quality Action Team
44	Puget Soundbook	James A. Kolb, Diane Boardman
45	Putting the Public Trust Doctrine to Work (2nd Edition)	David C. Slade, Esq., R. Kerry Kehoe, Esq., Jane K. Stahl, Esq.
46	Rhode Island's Salt Pond Region : A Special Area Management Plan folder	
47	Saving Bays and Esturies : A Handbook of Tactics	EPA (Environmental Protection Agency)
48	Saving Inky Video	Baltimore Aquarium
49	Sea Grant Presentation Slides	NOAA
50	Stormwater Education Programs	Puget Sound
51	Summer Institute Presentation CD	URI
52	Summer Institute Presentation CDs, Audio Version	URI
53	Summer Institute Publication CD	URI
54	Sustainable Seas Information Folder	
55	Sustaining America's Coastal Communities and Resources	NOAA
56	The National Coastal Management Act Presentation Slides	NOAA
57	The State of Rhode Island Coastal Resources Management Program folder	URI
58	U.S. Fisheries Management/Enforcement Presentation Slides	NOAA
59	Volunteer Monitor Newsletter	

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Dahuri R. and I.M. Dutton, *Integrated Coastal Management Enters a New Era in Indonesia, Integrated Coastal Zone Management*, 1:11-16, 2000

Hunt, L.J., I.M. Dutton, and J.P. Duff, *Integrated Coastal Zone Planning and Management Manual*, Vaughn International, Canora and BCEOM, Jakarta, CD ROM (bilingual), 1998

National Coastal Zone Management Act of 1972, United States Congress, 1972