



southeast asia center for marine protected areas



protecting
strings of pearls

SEACMPA

southeast asia center
for
marine protected areas

**strengthening resilient
networks of marine
protected areas
designed to survive,
managed to last and
connected like strings
of pearls across the
seas and oceans of
southeast asia**

Jalan Pengembak No. 2
Sanur, Bali 80228
INDONESIA
Tel: +62.361.287.272
Fax: +62.361.270.737

nature.org

www.komodonationalpark.org

[www.iucn.org/themes/wcpa/biome/
marine/seasia/seasia.html](http://www.iucn.org/themes/wcpa/biome/marine/seasia/seasia.html)

photo credits

Djuna Ivereigh:
cover, 5, 6-7, 8, 11, 12(2), 13, 14(2), 15(2), 17(2)
Douglas David Seifert: inside cover
Benjamin Kahn/APEX Environmental: 2
Burt Jones & Maureen Shimlock: 3(2)
Rili Djohani: 4(1), Jez O'Hare: 4(3)
Wolcott Henry: 8
Stefan Ottomanski: 16

copywriting & design: Djuna Ivereigh





to connect & protect the seas of southeast asia

HOME TO a third of the world's coral reefs and a quarter of its fishes. Feeding and breeding grounds for whales, orcas, dolphins, turtles, dugongs, sharks and rays. Fisheries that are the livelihoods for a hundred million people...or more.

But these seas are under siege. Overfishing, bottle bombs, cyanide and crowbars, silting and pollution threaten most Southeast Asian reefs. Turtles are hauled from their nesting beaches. Sharks seem more common in shark's fin soup than they do in their ocean homes. And despite increasing efforts, fishermen's catches are on the decline.

From its home base in Bali, Indonesia, The Nature Conservancy's Southeast Asia Center for Marine Protected Areas is uniquely positioned to address threats facing the world's most biodiverse seas and help people reap their benefits sustainably.

Its building blocks are marine protected areas, powerful tools for conserving marine ecosystems and their economic values. Leveraging years of experience, guided by sound conservation science and the concerns of local communities, mobile, responsive and on the cutting edge, SEACMPA fosters networks of marine protected areas designed to survive, managed to last and connected like strings of pearls across the seascapes of Southeast Asia.

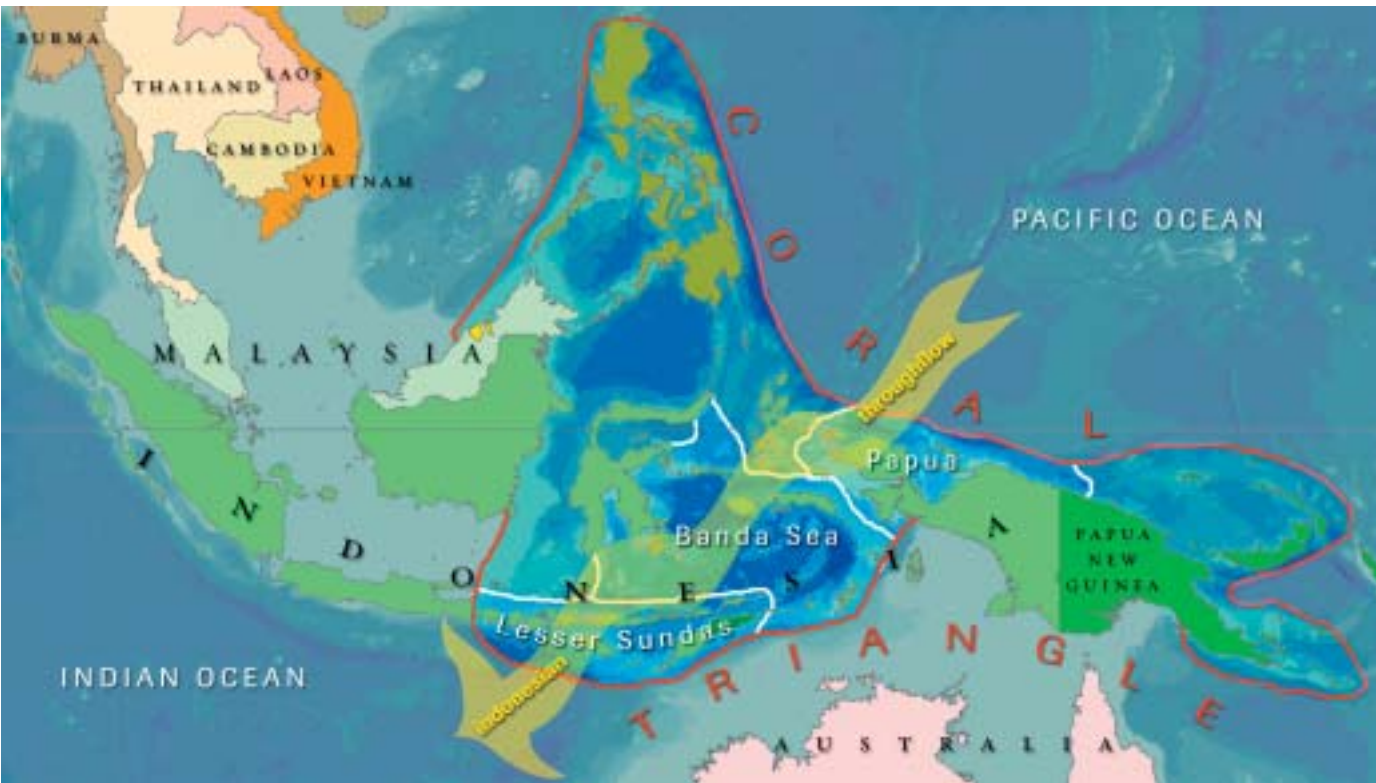
SEACMPA leadership, innovation and results will also have impact beyond the region. Lessons being learned here are being shared and applied globally as we all work together to conserve our planet's vital marine resources.



Lynne Hale
Marine Initiative Director
The Nature Conservancy

between indian & pacific

oceanic crossroads



MARINE ENVIRONMENTS in Southeast Asia are a complex mosaic of shallow continental shelves and deep oceanic basins. Diverse habitats include river estuaries, mangroves, seagrass beds, sandy beaches and rocky shores, reef ecosystems, vast shelves and little-known oceanic realms at trenches, seamounts and dark abyssal plains.

As stepping stones between Australia and the Southeast Asian mainland, Indonesia's 18,108 islands span 5,000 kilometers, forming the world's largest archipelago. Indonesia boasts nearly 95,000 kilometers

of coastline, more than 42,000 square kilometers of mangroves and some 51,000 square kilometers of coral reefs.

In the seas of eastern Indonesia, an egg-carton bottom topography provides the principal tropical gateway—the "Indonesian Throughflow"—between the Indian and Pacific Oceans. Across the Lesser Sundas, Banda Sea and Papua marine ecoregions, vigorous currents pump larvae far and wide and drive upwellings of deep, nutrient-rich waters. Both factors contribute to the region's remarkable biodiversity and richness.

Marine Corridors

The eastern Indonesian seas form a migratory crossroads for large marine life including whales and dolphins, sharks and rays, turtles, dugongs and pelagic fish. These deep, narrow island straits are as yet unprotected, presenting a global conservation gap for marine mammals made vulnerable at this migratory bottleneck. Many large marine species also depend on Indonesian seas and corridors as feeding, breeding, calving or nesting grounds.

Large Marine Life in Indonesia

- ✿ Whales (at least 12 species, including blue and sperm whales)
- ✿ Dolphins (at least 18 species, including orcas)
- ✿ Mantas
- ✿ Sharks
- ✿ Dugongs
- ✿ Sea turtles (6 species)
- ✿ Sunfish
- ✿ Billfish
- ✿ Tuna

This rare pygmy Bryde's whale (*Balaenoptera edeni*) was identified by SEACMPA and APEX Environmental in the waters of Komodo National Park. Behavioral studies coupled with DNA sampling helped to confirm this as a distinct new whale species. Despite recent advances in our understanding of Southeast Asian seas, the ecology and conservation status of whales and dolphins remains very poorly known.



the coral triangle

bull's eye of biodiversity



EASTERN INDONESIAN SEAS host perhaps ten times as many reef-building coral species as the entire Caribbean. Home to nearly a quarter of the world's fish species, and providing highways, byways and breeding grounds for sea turtles and marine mammals, this area is recognized by all major international marine science organizations as a global "bull's eye" for biodiversity.

The Nature Conservancy's SEACMPA focuses particular attention on eastern Indonesian seas bathing the Lesser Sundas, central and southern Maluku (the Banda Sea) and northwest Papua (formerly Irian Jaya province). These marine ecoregions are exceptional

not only for their species and habitat wealth, but for their relative ecosystem health. Many reefs in this region have been spared impacts that threaten the very survival of reefs around the world, such as coral bleaching, epidemics of disease and reef predation, and sedimentation and pollution from major land-use changes. What's more, these reefs are well-connected by currents to other reefs, suggesting their vital role in buffering and mitigating damages both within and beyond their ecoregions.

Even so, human impacts are increasing in these far-flung, poorly protected seas, and urgent action is needed to sustain this epicenter of biodiversity.

Fact File

World's reef-building coral species in SE Asia	~75%
World's mangrove species found in SE Asia	75%
World's reef-building coral families in Indonesia	100%
Reef-building coral species in Indonesia	~581
Fish species known from eastern Indonesia	1,650
Reef-associated species not yet described	~90%

Scientists find more coral species around single islands in Southeast Asia than are known from the entire Caribbean.

seas at siege



SWELLING POPULATIONS, boom-and-bust economies and poorly planned development place dangerous demands on Southeast Asian seas. The strain threatens vital ecosystem functions and the people dependent upon them. In Indonesia alone, more than 60 million people and 7,000 coastal villages look to the sea for subsistence and livelihoods.

Prime threats to Southeast Asia's marine resources include overfishing and destructive fishing. Scientists find that industrial fishing has "cut the head off" of marine ecosystems, depleting worldwide predatory fish populations by 90%. Modern commercial fleets now venture farther and farther from home, exhausting even the remote bounties of eastern Indonesian seas. Trawlers scrape up deep reefs. Vast seines and longlines scour marine corridors and spawning sites. Overall yields are actually lower than they would be if sustainable harvests were maintained. Meanwhile, reefs are blown apart by blast fishing, and broken up by cyanide fishers in search of gourmet groupers and ornamental aquarium fish.

From the land, clearing and erosion drown reefs in sediment. Coastal development and land reclamation destroy nearshore habitats wholesale. Lack of sewage treatment and poorly monitored shipping traffic pollute the seas with nitrates, phosphates and petrochemicals.

On many Southeast Asian reefs, a range of impacts leads to cumulative stress that pushes coral animals to the brink of survival. This jeopardized condition makes corals vulnerable to disease and mass bleaching. This was well-demonstrated by the 1997-98 El Niño event, when coral bleaching impacted 90% of the "Thousand Islands" reefs north of Jakarta.

At what price does reef degradation continue? In a cost-benefit analysis of overfishing, blast fishing and onshore activities leading to increased sedimentation in Indonesia, the World Resources Institute estimated that net revenue losses from fisheries, coastal resources and tourism may reach US\$2.5 billion over 20 years.

End of the Fish Frontier

o-ver·fish·ing (o'vər fish 'ing), *v.t.* **1.** fishing with an effort (e.g., number of boats, nets, fishing days) that results in a catch volume which is lower than could be sustained at a lower fishing effort.

"There is no blue frontier left," says Ransom Myers, in a recent letter to *Nature* which reports that, since 1950, industrialized fishing has reduced worldwide stocks of large predatory fish by 90%.

Over ten years, Dr. Myers and Dr. Boris Worm compiled data from longline fishers and research trawlers spanning a period of nearly five decades. Alarming, their analysis showed that most industrialized fisheries typically reduced stock biomass by 80% within 15 years of exploitation.

The bright side? Myers and Worm's findings help fisheries managers set a course for a more rational exploitation of fish stocks. The great challenge will be to first restore those communities, a commitment that now demands a significant reduction in the catch for sensitive species. The payoff would be a steady supply of fish with a lot less work.

networks of marine protected areas

sustainable solutions



NOT JUST A NO-TAKE ZONE, today's state-of-the-art marine protected area (MPA) promotes both conservation and sustainable use. Scientific research and community consultation inform zoning of regions best-suited for traditional activities, well-managed fishing and environmentally sound tourism, while safeguarding core areas to replenish regional waters.

Throughout Southeast Asia, MPAs can be powerful tools for preserving species and ecosystems, restocking fisheries and alleviating poverty. Yet the vast majority of marine protected areas lack proper management capacity. In a recent review of over half of the region's MPAs, the World Resources Institute found that only 14% were effectively managed. As of today, many precious storehouses of marine wealth see little more than paper protection.

Indeed, resources to protect these far-flung reserves are limited. SEACMPA thus brings a big-picture view that directs best use of time, funds and expertise. Applying principles from *Transforming Coral Reef Conservation in*

the 21st Century, the Conservancy's cutting-edge strategy to save reef ecosystems from critical epidemic threats, SEACMPA and partners now design regional networks of sustainably managed MPAs.

Work will focus on areas of highest conservation priority, as defined not only by biological diversity, but by "survivability"—by resistance and resilience to human and environmental impacts, by location of critical spawning sites and migratory corridors and by ecological connectivity. This network approach provides maximum reinforcements among a constellation of conservation sites, while allowing SEACMPA to best leverage and share lessons learned across the region.

Dr. Ian Dutton, Director of the Conservancy's Indonesia Country Program, works to bridge gaps between land- and marine-based conservation. At a 2002 National Conference on Integrated Coastal Zone Management, chaired by Dutton, representatives from government, NGOs and private industry put finishing touches on a National Coastal Management Law. This lays critical "groundwork" for effective MPAs.

Marine Protected Area Benefits

Conservation of biodiversity

MPAs protect and restore marine biodiversity in areas of high conservation priority. At Komodo National Park, monitoring across 185 reef sites showed that live hard coral coverage increased 30% during the first six years of Conservancy support for integrated MPA management, including community outreach and patrols that safeguard against destructive fishing.

Sustainable fisheries

MPAs sustain regional fish populations by enhancing larval recruitment and by spillover of adult and juvenile fish into fished areas. Within ten years of the establishment of a small marine reserve at the Philippines' Apo Island, fish densities in adjacent waters increased nearly ten-fold. Such benefits are crucial in Southeast Asia, where vast and remote fisheries are hard to protect from unsustainable and destructive harvest techniques.

Sustainable tourism

MPAs promote partnerships in which tourism stakeholders participate in MPA management while reaping long-term economic benefits. At Galapagos National Park, tour boat operators and park officials share logistical support and legislation assures that tourism revenue supports protection of unique assets that draw visitors from around the world.

Reefs for the 21st Century

SEACMPA leads a regional arm of the The Nature Conservancy's collaborative program ***Transforming Coral Reef Conservation in the 21st Century***. The program catalyzes a global effort to establish and protect robust and resilient networks of MPAs within high biodiversity tropical marine ecoregions. Core principals of the program are:

1. Establishing MPAs and integrating them into wider management frameworks is the most effective way to secure protection for coral reef biodiversity and associated tropical marine ecosystems.
2. Building resilience in the face of change into MPA networks is essential to long-term survival of coral reef and related biodiversity.
3. Developing sustainable means for MPAs to meet their costs is essential to creating protected areas at sufficient scale to conserve tropical marine ecosystems.
4. Strengthening local capacity to manage MPAs is essential to ensure their effectiveness.
5. Supporting policies that provide incentives for conservation and sustainable use of tropical marine resources, and that address key drivers of biodiversity loss, are needed to integrate conservation into development priorities.

The Conservancy now offers a toolkit that helps planners and managers design, protect and finance MPA networks built to survive the 21st century.

Key SEACMPA Staff

BALI

Rili Djohani
Director, SEACMPA
Chair, WCPA Southeast Asia Marine
Co-Chair Indonesian MPA Task Force

Jos Pet
Program Manager

Peter Mous
Science & Training Manager

Johannes Subijanto
Marine Portfolio Manager

Danang Widodo
Finance & Administration Manager

Tri Soekirman
Communications Manager

Susantry Sihombing
Office Coordinator

Damayanti Anggraeni
HR Program Officer

Yudi Syahputra
Accountant

Abdul Halim
WCPA SEA Marine Coordinator

Sri Wiranti Saraswati
Awareness & Outreach Specialist

Marthen Welly
NGO Liaison Program Officer

Paramitha B. Utami
Outreach Program Officer

KOMODO

Dewa Gede Raka Wiadnya
Komodo Field Office Project Leader

Abubakar Pasya
Surveillance Officer

Hirmen Syofyanto
Community Outreach Program Officer

Hesti Widodo
Community Outreach Program Officer

Trevor Meyer
Mariculture Manager

Sudaryanto
Mariculture Coordinator

RAJA AMPAT

Ricardo Tapilatu
Marine Program Field Representative

Andreas H. Muljadi
Monitoring Program Officer

WAKATOBI

Mirza Pedju
Marine Program Field Representative

Purwanto
Monitoring Officer





where insight sparks innovation

THE SOUTHEAST ASIA CENTER FOR MARINE PROTECTED AREAS. This is where people gather to share experience and scientific findings. Where partnerships and conservation strategies are forged. From here we launch into the field to put policy into practice, and to the roundtable to put practice into policy. Here we make results and communicate them.

Through solid research and community consultation, we map out practical, science-based solutions for protecting Southeast Asia's seas. Our strengths are our focus on *marine protected areas* and our ability to adapt conservation approaches to ever-changing on-the-ground realities. Our solutions emphasize *sustainability, effectiveness* and *leverage* by integrating self-financing, training and outreach into marine protected area management.

There is no fixed blueprint for conservation. Rather we choose to capitalize upon the very mobility and dynamics of our field. In so doing, we find ourselves at the cutting edge of marine conservation.

Rili Djohani
Director, SEACMPA

SEACMPA forms living links between three core pillars of conservation:

1. On-site work at a portfolio of MPAs and proposed MPAs
2. Science, training, outreach & partnerships
3. Policy and financing support.

At the hub of Southeast Asia marine conservation, we offer a communications clearinghouse, cornerstones for sustainability and the leverage of our integrated approach.



leveraging vision, mobility & science

how we work



EVOLVING FROM The Nature Conservancy's Coastal and Marine Program, SEACMPA taps a deep well of experience in the world's largest conservation organization. Our strength lies in the same results-oriented approach fine-tuned at the Conservancy over more than half a century.

Regionally, SEACMPA also serves as a hub of the World Commission on Protected Areas – Southeast Asia Marine Working Group. Hosting the Chair, Secretariat and Coordinator of this diverse task force places our center firmly within the IUCN (World Conservation Union) network, drawing worldwide recognition and driving our international outlook.

Sharing with our chief partners the goal of linking and strengthening MPAs throughout Southeast Asia, we apply our broad experience through collaboration with communities, government, other NGOs and the private sector using a set of tried and true conservation tools. These include:

Conservation by Design, The Nature Conservancy's scientific method for mapping priorities, developing and applying conservation strategies and measuring their effectiveness. SEACMPA projects in Komodo National Park served as a Conservancy test-case for a "conservation audit," maximizing efficiency and transparency at our prime platform site in Southeast Asia.

Ecoregional Conservation Assessment, a means of focusing limited conservation resources, while integrating our work with sustainable development goals. We apply science to map out conservation priorities, and partner with government agencies and local stakeholders to include these priorities in regional zoning and policy-making.

Participatory Site Conservation Planning, a tool to engage on-site stakeholders in identifying environmental problems and causes and in consolidating a better picture of their long-term impacts. The outcome: conservation strategies that work for all local players.

Goal & Strategies

To strengthen a resilient network of marine protected areas (MPAs) in Indonesia and Southeast Asia through:

- ✿ Mobile, responsive, cutting-edge support for a *portfolio* of MPA sites
- ✿ Innovative MPA *policy & finance* initiatives
- ✿ Training, *outreach* and multi-media campaigns
- ✿ Promotion of *economic development* compatible with MPA management
- ✿ Active collaboration with a broad array of *partners*

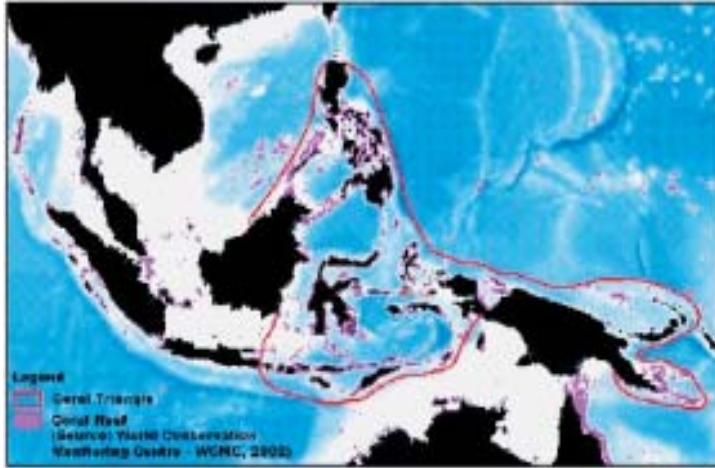
Our Track Record

Examples of our accomplishments highlight why SEACMPA is uniquely positioned to connect and protect MPAs across Southeast Asia:

- ✿ Developed a Regional Action Plan for an MPA network through the World Commission on Protected Areas - SEA Marine Working Group
- ✿ Conducted Rapid Ecological Assessments in Komodo, Sangihe Talaud, Raja Ampat, Wakatobi, Alor and Banda
- ✿ Developed and launched a curriculum for MPA management training.
- ✿ Hosted field exchanges for staff and stakeholders at Komodo and Galapagos National Parks and Vilanculos, Mozambique.
- ✿ Forged partnerships with government, intergovernmental institutes, the private sector and international and local conservation NGOs.
- ✿ Provides Komodo and Wakatobi National Parks with effective management support.
- ✿ Supports Komodo National Park with development and implementation of a self-financing and collaborative management initiative.
- ✿ Supports development of sustainable livelihoods including financially and environmentally sound tourism at Komodo National Park.



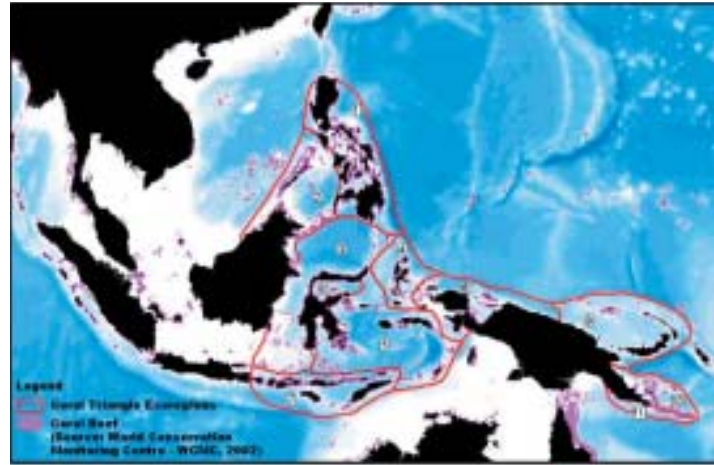
saving seascapes



Heart of the Coral Triangle

THE CORAL TRIANGLE. A popular name for that high diversity region between the Pacific and Indian Oceans. In 2003, SEACMPA invited a roundtable of experts on Australasian seas to closely examine the Coral Triangle. Looking to get a solid aim on the “bull’s eye of biodiversity,” a team including Dr. John Veron (author of *Coral reefs of the World*) and Dr. Gerald Allen (author of *The Fishes of Southeast Asia*) was asked to map out SEACMPA’s prime conservation target.

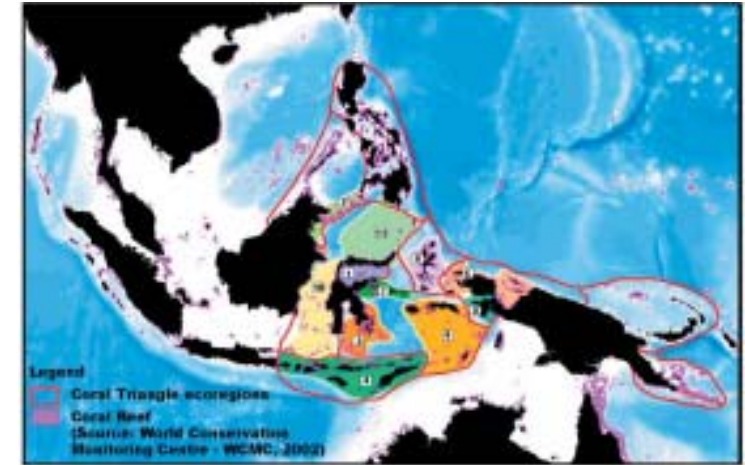
Considering physical factors favoring reef development as well as exceptional coral diversity (over 500 recorded species), the team identified a core region including the Philippines, central & eastern Indonesia, northern and eastern New Guinea (including the Bismarck Archipelago). While SEACMPA Program Manager Dr. Jos Pet maintains that certain boundaries remain “fuzzy” until further research, he was pleased that “experts agreed this region sets a scientifically sound footprint for the epicenter of marine biodiversity.”



Defining Ecoregions

The team of experts next endeavored to map marine ecoregions across the heart of Coral Triangle. Ecoregions define large areas with distinct assemblages of species, communities and environmental conditions. While preserving representative habitats within ecoregions is a prime conservation goal, the boundaries between ecoregions, where ecological processes strongly interact, can also be of interest.

The team agreed that coral reef fishes provide today’s best basis for the definition of ecoregions within Indonesia, due to a relative wealth of data on their restricted distributions. In all, workers defined 11 Coral Triangle ecoregions: Palawan/North Borneo, Celebes Sea, Makassar Strait, West Nusa Tenggara, East Nusa Tenggara/Banda Sea, Northwest Sulawesi, Halmahera, Bismarck Sea, Milne Bay Area, Southeast Papua New Guinea and the Eastern Philippines.



Functional Seascapes

The final task for the roundtable allowed the experts to hone in on areas of highest conservation priority for SEACMPA. To do this, the team adopted the latest planning concept developed by The Nature Conservancy and adapted it to the marine environment. The result: a set of “functional seascapes”—areas of practical working scale comprising many interconnected ecosystems, communities and species that retain (or can have restored) a high degree of ecological intactness.

Based on factors such as biodiversity and current connectivity within and among reefs, researchers identified 11 functional seascapes within SEACMPA’s first focus region (central and eastern Indonesia, south of the Sulu Sea). These include Tomini Bay, Northeast Borneo, Southeast Sulawesi, Lesser Sundas, Bird’s Head Peninsula, Halmahera, Sulu Spur, Banda Sea, Fak Fak, Makassar Strait/Flores Sea and the Sulawesi Sea. Pet feels confident that these seascapes “stand out clearly as footprints for resilient MPA networks to be.”

our site portfolio

where we work

Bali

CENTERED ON BALI, SEACMPA is an easy-access hub for science, training, partnership and policy development, outreach and communications in support of marine protected areas. From our leafy campus in Sanur, we offer technical support, interpretive exhibits, formal curricula and a growing multimedia reference library.

From Bali, SEACMPA also leads field work in our initial focus seascapes: the Lesser Sundas, the Banda Sea and northwest Papua. We work at three *platform sites*—Komodo, Raja Ampat and Wakatobi—where we devote full-time staff and resources at established and proposed marine protected areas. In addition, we've led field-based activities at a number of *leverage sites*, including the Derawan Islands, Banda and Alor.

Komodo

Lesser Sundas

The Komodo Dragon, the world's largest living reptile, shares its home at Komodo National Park with more than 1,000 species of fish, 260 species of reef-building corals, ten species of dolphins, six species of whales and four traditional fishing villages.

A diamond in the rough, Komodo National Park has suffered from poor funding and management capacity. Blast fishing has devastated some of the park's stunning reefs and tourism facilities are in disrepair.

Seeing great needs and opportunities, SEACMPA selected Komodo National Park as a core platform site within the Lesser Sundas seascape. The Nature Conservancy worked closely with park authorities to develop a comprehensive 25-year management plan, to be implemented through a state-of-the-art collaborative management initiative. Since 1995, we've helped to set a crucial precedent for MPAs in the region: transforming a paper park to a well-managed, financially self-sustaining park that protects biodiversity and the long-term interests of local communities. Lessons learned here inform our work throughout the region.



Wakatobi

Banda Sea

Wakatobi is a common name for the Tukang Besi archipelago, dominated by the four main islands **Wangi-Wangi**, **Kaledupa**, **Tomia**, and **Binongko** at the southeastern tip of Sulawesi. Renowned by divers for spectacular coral gardens decorated by otherworldly fish and invertebrates, 1.39 million hectares of Wakatobi islands and waters were declared a national park in 1996. Wakatobi ranks as one of the highest priorities for marine conservation in Indonesia and serves as a logical centerpiece for a network of mutually replenishing MPAs in the area.

Since late 2002, The Nature Conservancy and the World Wildlife Fund have assisted the Wakatobi National Park authority to improve its management plan, zoning, and implementation of park management. Following a Rapid Ecological Assessment and socio-economic survey in 2003, aims have broadened to include development of collaborative management and financing plans, support for alternative livelihoods, and training in local management skills such as outreach and conservation awareness, monitoring and surveillance. Many activities will be coordinated from a *floating ranger station*, a platform proving both flexible and practical for work in remote Indonesian waters.

Raja Ampat

Papua

The Raja Ampat, or “Four Kings,” archipelago includes Waigeo, Batanta, Salawati, Misool and Kofiau islands, plus hundreds more scattered west of West Papua's Bird's Head Peninsula. At the northern gateway to the “Indonesian Throughflow,” admitting deep, rich Pacific waters into Indonesian seas, Raja Ampat is the meeting and mating place for commercially important fishes and provides nesting beaches for untold thousands of sea turtles. Throughout geologic time, Raja Ampat likely served as an evolutionary crossroads as well as a safe haven for species during severe climate shifts. Early surveys show that coral and reef fish diversities here are the highest yet found on Earth. Bathed by cool, upwelling currents, there is a good chance these reefs will weather today's global warming, too.

SEACMPA sees Raja Ampat reefs and islands as precious crown jewels in a regional MPA network. In 2003 we launch work at this new platform site from a nearby Sorong field office. Though human impacts here are less severe than they have been elsewhere in Indonesia, our efforts to socialize recent discoveries and integrate them within planning and policy frameworks at this new political district are urgent.

Leverage Sites

SEACMPA applies its broad base of experience throughout the Indonesian archipelago and beyond.

In May 2002, SEACMPA led a rapid ecological assessment to the **Banda archipelago**. Preliminary research showed that reefs flanking these remote volcanic isles are remarkably diverse, hosting 310 reef-building corals and an estimated 871 fish species. What's more, Banda's reefs maintain high populations of sharks and groupers that have been overexploited throughout much of Asia. Exquisite coral gardens, flushed by deep, clean, cool waters, also show promising resistance to coral bleaching. SEACMPA looks forward to working with local NGOs and UNESCO to preserve this proposed World Heritage Site.

In 2001 and 2002, we led a Rapid Ecological Assessment focusing on marine corridors between **Flores** and **Alor**. These straits form deep, narrow passageways between the Indian Ocean and the Banda seascape, admitting swift, nutrient-rich currents as well as migrating whales, dolphins, mantas, turtles and sunfish. While working with Indonesian national government on marine mammal conservation policy, we coordinate with local government and communities on the establishment of a marine corridor protected area in the Alor straits.

The **Derawan Islands** of East Kalimantan are renowned by divers for rich coral reefs and for a manta "cleaning station" that attracts hundreds of the huge rays. Here SEACMPA will coordinate with a local Conservancy field office in a fully integrated "ridges to reef" conservation approach.

SEACMPA supports management at various marine national parks. For instance, we have developed and hosted a training curriculum for monitoring of fish spawning aggregation sites (a.k.a. "SPAGs") at **Karimunjawa** (Central Java), **Bunaken** (North Sulawesi), **Cendrawasih Bay** (West Papua) and **Pohnpei** (Micronesia). As predictable, easily accessible gathering sites for certain elusive reef fish, SPAGs make whole fisheries highly vulnerable to overharvesting. By focusing efforts on SPAGs, MPA managers can get a window on the status of fish populations and safeguard vital sites for fisheries replenishment.

At **Nusa Penida** and **Nusa Lembongan** (Bali), we work with communities and the private sector towards the development of a framework of multi-use MPAs.

Bringing Experience to Bear in the World's Richest Seas

"All indications are that this is the heart of the heart of marine biodiversity." So announced Rod Salm, Director of the Conservancy's Asia Pacific Marine Initiative, from Raja Ampat. Salm had just led a team of top scientists on a survey of the Indonesian isles west of West Papua, and was overjoyed at the group's discoveries.

In just three weeks at Raja Ampat, coral expert Emre Turak identified no less than 487 species of reef-building hard corals. His finds brought the local tally to 535 species and led Turak to predict that this remote archipelago harbors an astonishing 75% of the world's Scleractinian corals.

Fish, too, were off the charts. Veteran taxonomist Gerry Allen broke his all-time single-dive fish count in Raja Ampat—twice. He now lists 1,071 reef fish species for the area, and estimates a total diversity close to 1,149 species. "No doubt about it," said Allen, "this is the richest place for fishes I've ever seen."

The Raja Ampat Rapid Ecological Assessment (REA), like others conducted in Komodo, Sangihe Talaud, Wakatobi, Alor and Banda, will inform ecoregional planning for Raja Ampat, a collaborative effort to integrate conservation priorities with sustainable development goals.

In Raja Ampat, SEACMPA is keen to preserve constellations of representative habitats—reefs, lagoons, mangroves, pelagic fish spawning sites and migratory corridors—in a network of well-managed marine protected areas. SEACMPA sees Raja Ampat as a crucial hub for a broader network of MPAs spanning Southeast Asia.

Why is Raja Ampat such a vital centerpiece? Beyond the islands' great species and habitat diversity, Salm sees Raja Ampat reefs as resistant and resilient to threats like coral bleaching and disease—threats that now jeopardize the very survival of coral reefs around the world. What's more, strong larval recruitment and vigorous currents at this gateway between the Pacific Ocean and the Indonesian seas imply that Raja Ampat may replenish other threatened reefs. Says Salm, "For the *Transforming Coral Reef Conservation* program that I lead within the Conservancy's Marine Initiative, Raja Ampat is a global priority that meets all of our criteria for resilience in the face of change and connectivity with other reef areas."

REA researchers were delighted to find on-the-ground support for Raja Ampat conservation. Local faces lit up when findings from the marine survey were related to a Misool Island community. But local people were quick to add that they feel powerless to protect their resources from intruders. Reef bombers, cyanide fishers, shark finners and turtle poachers pour into Raja Ampat waters and logging operations now penetrate even Strict Nature Reserves. As Salm laments, "the very isolation and dispersion that make conservation a challenge, make access and exploitation easy for outside resource raiders."

But SEACMPA Director Rili Djohani won't be daunted. These are familiar challenges for which the Conservancy can leverage eight years of experience in the region. Djohani looks forward to sharing the results of the REA with local government and community members, and to brokering strategies that will preserve Raja Ampat's riches for all.



innovative policy & financing making it happen



Provision of floating ranger stations is one of the ways SEACMPA supports management at Komodo and Wakatobi National Parks.

WORKING CLOSELY with international agencies, government, NGOs, the private sector and local communities, SEACMPA supports design and implementation of forward-thinking policies that make sustaining our seas sustainable. Works-in-progress include:

Policy Support for Marine Protected Areas. Seating and supporting both the Chair and Secretariat of the World Commission on Protected Areas Southeast Asia Marine Working Group, SEACMPA coordinates the *Regional Action Plan to Strengthen a Resilient Network of Effective Marine Protected Areas in Southeast Asia: 2002-2012* (RAP). The RAP consolidates the needs and strengths of ASEAN nations, providing a framework to guide implementation of new and existing plans for strengthening and networking five core

MPAs. Addressing themes: 1) planning & design, 2) adaptive management, 3) coordination & enforcement, 4) community awareness & development and 5) sustainable financing.



the RAP offers concrete strategies and models for achieving commitments for a worldwide MPA network forged at the World Summit on Sustainable Development. Meanwhile, within Indonesia, SEACMPA leads decision-makers in developing a national MPA task force. (See “A Growing Network”.)

Collaborative Management. From NGO-managed parks in Latin America to volunteer-assisted parks in Australia, there is a growing trend toward collaboration in management of the world’s protected areas. As governments slash budgets, many protected area managers look to institutional arrangements that provide greater flexibility in securing public and private funds. Indonesia is no exception, as shown by a number of co-management initiatives and by the innovative collaborative management policy adopted by park authorities and The Nature Conservancy at Komodo National Park. SEACMPA partnerships with multilateral donors, the Directorate General of Forest Protection and Nature Conservation, local government and all manner of stakeholders, have resulted in a cooperative arrangement that sets bold new precedents for Indonesia and the world. SEACMPA now leads the way in consulting on and supporting a nation-wide initiative for protected area collaborative management.

Sustainable Financing. SEACMPA builds a new conservation paradigm based on sound business principles. Wherever we work, we seek ways in which revenues from appropriate protected area use can be invested in protected area management

Experience shows that locally sustainable financing for protected areas includes certain core ingredients: a local sense of ownership over natural resources, livelihood alternatives that support conservation, and good governance to ensure proper planning and use of funds. To help protected areas meet these needs, SEACMPA develops conservation business plans for our own project sites and shares experience on sustainable financing through MPA training programs.

Clearing Murky Waters

Fishery scientists report that Indonesia now realizes just 60% of its *Maximum Sustainable Yield*. Sadly, most decision-makers miss the message that depressed yields are due to *overfishing*. Across Indonesia, government officials push for more intensive fishery exploitation—a tactic which will only further depress long-term yields. SEACMPA outreach emphasizes that *reduced* fishing efforts, properly managed, are key to tapping Indonesia’s full fishery potential—one of many ways we clear the murky waters separating science and policy.

Better-Business Ecotourism

At Komodo National Park, The Nature Conservancy partners with tourism experts in *Putri Naga Komodo*, an ecotourism joint venture to help the park realize and sustain its true worth.

Venture partner Feisol Hashim has over 20 years experience in the travel industry, holding leadership roles with the Indonesian Tourism Council, ASEAN Tourism Associations and the Pacific Asia Tourism Association. He’s seen what happens when tourism goes wrong and he’s not shy to shout about it. “Without conservation, there is no tourism!” he booms.

SEACMPA director Rili Djohani, likewise, knows that without sustainable revenue, conservation won’t last.

Developing local tourism capacity, *Putri Naga Komodo* (PNK) sponsors high school students from Labuan Bajo with hotel internships in Bali. And in keeping with tourism concession guidelines laid out in Komodo’s 25-year management plan, *PNK* readies itself to help park authorities with needs including ecotourism business and marketing plans, infrastructure improvements and low-impact visitor management. By directing revenue towards park maintenance, a conservation trust fund and community lending, as well as stimulating local economic development, *Putri Naga Komodo* aims to make conservation at Komodo financially sustainable.

In the eyes of Bapak Widodo Ramono, the Indonesian Director of Species Conservation who struggles with 80% budget cuts to national parks, such support is vital. “In Komodo,” says Ramono, “the most important thing is that we keep up patrolling, control illegal hunting and fishing and find sustainable livelihoods for fishermen.” The Nature Conservancy, through SEACMPA, now supports these activities in Komodo at a cost of some US\$2 million per year. Based on past visitation figures, an AC Nielson survey and models at partner reserves, Djohani and Hashim believe that Komodo tourism revenue can one day support management expenses.



investing in people



BASED IN INDONESIA, the world's fourth most populous country, we know that conservation isn't about empty places. Conservation is the attitude and action of *people*. People with the skills and resources to see ecological systems and their roles within them. SEACMPA provides these skills and resources through a variety of training and outreach activities. Highlights include:

MPA Management Training. SEACMPA has developed and launched an MPA planning and management course for government, NGO and co-managing conservation practitioners. A recent course focused on population dynamics of exploited species and boosted management skills including monitoring, mapping, community development, outreach and surveillance.

Field Monitoring Courses. SEACMPA trains on-site personnel to conduct check-ups on the places we work. Trainees have learned to monitor coral health, cetaceans, mangrove and seagrass communities and grouper spawning aggregation sites.

Sustainable Livelihood Training. Villagers living in and around Komodo National Park are offered free

training on seaweed farming, grouper and snapper mariculture, deep-water fishing, souvenir weaving and wood carving and SCUBA diving for local tour guides.

Field Exchanges. SEACMPA has hosted field exchanges for personnel from Indonesian national parks (Komodo, Bunaken, Wakatobi and Karimunjawa), as well as from Ecuador (Galapagos), Mozambique (Vilanculos) and Cambodia. We also facilitated a two-week conservation training event for Japanese and Indonesian high school students in Komodo.

Outreach. With technical reports and media campaigns, community workshops and comic books, SEACMPA cultivates understanding and support for MPAs from all sectors of society. In partnership with the RARE Center for Tropical Conservation, we catalyze local communities to take pride in nature close to home and work to protect it. And joining forces with media partner Jungle Run Productions, we launch a new interactive video campaign providing a forum for public concern and positive models for environmental stewardship.

Reviving Bali's Beaches

"Look," says Wayan Sada. "A baby barracuda!" A flash of silver darts into a tangle of mangrove roots and won't be seen again. Wayan poles his canoe forward and explains, "Mangrove forest has two important functions. It prevents erosion and serves as a breeding ground for fish and shrimp."

This is impressive talk from a native of Nusa Lembongan, a tiny island south of Bali that hosts two sleepy villages and growing swarms of surfers, divers and beach-goers. But Wayan and eight friends are recent graduates of a facilitator training program hosted by SEACMPA in Bali. Over the course of two weeks, his team and others from Sanur, Benoa and Nusa Penida studied everything from waste management to coral identification. But most of all, Wayan relished his time at the Mangrove Information Center.

"That's when I realized how lucky we are," he said. "Our mangroves are really clean and healthy." Wayan's experience is a powerful tool for convincing other villagers not to cut mangroves for firewood or to fish this amphibious forest using cyanide. "Sure," he tells them, "you can do that once. But you can't do it again."

After their training seminar, the Nusa Lembongan graduates wrote their own conservation proposal and received funding from SEACMPA and USAID. Wayan now leads school groups through a maze of mangrove tunnels. The kids tally *Rhizophora* and *Sonneratia* mangrove species and learn that certain young mangrove shoots can be used to treat malaria. On other days, the Nusa Lembongan conservation group will host coral surveys and beach clean-ups and install mooring buoys so that dive boats no longer drag anchors across the reef.

"The people of Nusa Lembongan are dependent on all life here," says Wayan. "But if we don't teach them, how will they know to protect it?"

SEACMPA director Rili Djohani sees programs like this as the heart of community-based conservation. "We're investing in people," she says. "So many people would like to protect their environment. We're just offering them the means to do it."

Go Fish

Into a swimming pool, stir 100 plastic fish. Add 15 students of sustainable fisheries. Divide students into 5 teams who fish for 3 minute "days". Offer a reward of 500 rupiah per fish. Each "day", 10% of the remaining fish stock is replenished... Let the games begin!

Students of sustainable fisheries should know that if five teams limit their catch to two fish per day, yield will equal replenishment and everyone will get a perpetual supply of fish. But do they put theory into practice? No. Teams race after every last fish and after 6 "days" the pool is empty. Game over.

This hands-on exercise, developed by SEACMPA's Dr. Peter Mous, underscores a "tragedy of the commons" so common in the seas and highlights *restraint* as a great challenge of fisheries management—even when we "know" what's best.

conserving communities



MORE THAN 3,000 PEOPLE call Komodo National Park home, while another 17,000 live in villages just outside the reserve. Some 97% of these growing populations rely on fishing as their main source of income and now worry over declining catches of valuable species such as squid, live groupers and lobster.

Main objectives of the 25-year management plan for Komodo National Park are to halt destructive fishing and to protect fish stocks at critical spawning sites and delicate bottom communities. While park zoning secures traditional fishing rights for villagers near their homes, reef gleaning and other destructive techniques are strictly prohibited and emphasis on pelagic (open-water) harvesting is encouraged. In addition, SEACMPA and park authorities promote development of a more diversified economy. Direct support for alternative livelihoods includes the following:

Komodo Fish Culture Project. SEACMPA develops a sustainable mariculture industry outside Komodo National Park with the launch of a fish hatchery near Labuan Bajo, Flores. Following six years of research, planning, construction and outreach, the hatchery provides fingerlings to local communities, who will rear the groupers, seabass and mangrove jack to market size in floating grow-out cages.

During its pilot phase, the hatchery maintains 2.4 tonnes of broodstock, yielding as many as 100,000 juvenile fish per year. Fish will reach market size (0.5 kg) within 11-22 months (depending on species), with harvests staggered at 3-4 per year to provide regular income. With initial annual targets of 12.5 tonnes, the mariculture enterprise should generate local profits of US\$200,000 per year. Following the pilot study, economic and environmental assessments will determine project expansion.

Aside from offering sustainable income to local communities, the fish hatchery trains students from a local fisheries high school, serves as a regional tourism attraction, and will provide an alternative source for live reef fish in demand at Asian restaurants. The existing live food fish trade largely targets wild-caught groupers harvested at spawning sites or plucked from reefs using cyanide and pry bars. Even most “cultured” fish are grown-out from wild stock, thus depleting natural fisheries.

The Komodo Fish Culture Project joins a handful of full life cycle mariculture centers that have successfully spawned valuable mouse groupers. Low larval mortality and an enthusiastic response from the first community grow-out organization are encouraging.

Pelagic Fisheries. A hallmark of Komodo waters is the *bagan* “pelagic lift net” fishing prahu. On a dark moon, hundreds of the long, low outriggers depart villages by afternoon. By sunset, they gather at favorite fishing sites, drop broad nets, and fire up the kerosene lamps that serve as simple “fish magnets.” With their quarry entranced, the fishermen lift the nets—once, on a good night, or several times, until break of dawn, to fill the boats.

Komodo *bagan* fishermen report declining yields for squid, their most lucrative harvest. Anchovies are a poor substitute in the face of rising fuel costs. The Komodo National Park management plan now safeguards exclusive fishing rights for park residents with the aim of restoring squid and fish stocks while spurring a sense of responsibility for fishery health.

In addition, SEACMPA has supported infrastructure development to generate higher returns on low-impact pelagic fishing. Fish-aggregating devices over deep water outside the park (see “A Growing Fad: FADs”) attract Spanish mackerel, yellowfin tuna and skipjack.

Seaweed Cultivation. Seaweed farming is common in parts of Java, Bali and Lombok, but until recently, was virtually unknown in the Komodo region. Following community interviews, surveys by industry experts and feasibility tests, SEACMPA determined that cultivation of *Kappahycus alvarezii*—a raw material for carrageenan, alginate and agar agar, as well as local desserts—would benefit local economies. One hundred families in 7 villages took up seaweed farming with training and material support from SEACMPA and now supplement their incomes with sustainable harvests from the sea.

Handicrafts. Together with park authorities, SEACMPA supports development of carving and weaving industries at villages on Komodo and Rinca islands. We provide plantation teak and training for handicraft carving at Komodo Village and at Rinca Village we support women’s groups that carry on *ikat* weaving traditions famous from the region.

A Growing Fad: FADs

Seraya Besar, a one-village island just outside Komodo National Park, was once known for bomb and cyanide fishing. But Pak Rusdin Catelin, founder of the fishing cooperative *Harapan Baru* (“New Hope”) has found a livelihood that better suits himself “and my children and grandchildren.”

Pak Rusdin took an idea from The Nature Conservancy and made it all his own. In an effort to reduce pressure on reefs, the Conservancy installed *rumpon* (“fish-aggregating devices” or “FADs”) in deep waters outside Komodo National Park. Simple bamboo rafts anchored in place serve as gathering points for mackerel and tuna and make pelagic fishing more productive.

Pak Rusdin took a chance and invested in *rumpon* near Seraya Besar. To his own surprise, he found he could haul up more than a ton of fish in a day. Word of his success spread fast and now *Harapan Baru* has 28 members overseeing 80 *rumpon*. Members take turns working and rotate harvests to sustain highest yields. “We call this our ‘fish bank,’” says Pak Rusdin. “We just keep coming back to withdraw more fish.”



Fish Bomber Turns Fish Breeder

Wengking Latul squints at squiggles in a glass beaker, then tosses the Mouse Grouper larvae back into a tank holding 200,000 baby fish. These fish are his future, and the future of many villagers near the Loh Mbongi Fish Hatchery just outside Komodo National Park.

Wengking’s future once looked a lot less certain. At 19, he left his home in Maluku, east of Komodo, to seek his fortune in Bali. But opportunities are slim for newcomers, and his experience in eastern waters was soon capitalized by Bali’s turtle industry, still thriving in the 1990s. He joined a fleet of 16 vessels that raided beaches for nesting turtles and hauled in, Wengking estimates, thousands of turtles each month. Most of the time the money was good, but if his boat was apprehended by authorities he could lose a month’s hard-earned cash to bribes.

Then, on a trip to Komodo in 1995, Wengking had even worse luck. He and his crew couldn’t find a single turtle. Out of cash and afraid to return to his boss empty-handed, Wengking lingered in Labuan Bajo, just east of Komodo National Park. There he took the first job that came his way: packing fish bombs.

Wengking learned how to dissolve fertilizer in kerosene, then sun dry and tamp the mix into soda pop bottles, inserting wicks made of ground-up match heads. He followed on fishing trips into the national park and along the north shore of Flores, and watched as his new friends lit charges and lobbed them overboard. Timing was everything. If the bomb blew early, hands or lives could be lost. (Wengking knew five fish bombers killed on the job.) If the bomb blew too late, however, half its energy would be consumed shattering the reef. The ideal bomb blasted the center of the water column, bursting swim bladders in as many fish as possible. Casualties sank or bobbed up to be skimmed off the surface.

As fish bombers, Wengking and crew were always on the move, partly because bombed-out reefs yield their bounty only once, but also to dodge authorities. Aside from its physical hazards, fish bombing, even more than turtle poaching, brings the risk



of losing everything to extortion.

Then, in 2000, Wengking’s boat was apprehended in Komodo National Park. This time the rangers, forest police, marine police, army and navy officials, now working with Conservancy support, didn’t want money. They wanted arrests and prosecution. Wengking pleaded lack of evidence and was released. That’s when the Conservancy’s Komodo Field Office invited him in.

Former Alternative Livelihoods Coordinator Abdul Halim explained to Wengking that they were building a new mariculture hatchery, where groupers would be bred and reared to fingerling stage. Fingerlings would be sold to local villagers, who would “grow-out” and sell the prized fish at market size. Sold live, certain groupers fetch tens or even hundreds of dollars per kilo in Asian restaurants. Halim asked if Wengking might like to work at this new hatchery, and Wengking took a chance.

Three years on, is Wengking happy with his career change? “Better I die than bomb again,” he says. Anyhow, there’s no sense even trying in Komodo these days. Since 2000, says Wengking, when The Nature Conservancy launched outreach campaigns and provided “floating ranger stations” to help the park patrol its waters, no one can get away with bomb fishing.

Tonight, Wengking goes home to a wife and two young children. Only since working with the Conservancy has his life been secure enough to settle down and start a family. “If I bombed, my children would bomb,” says Wengking, and those risks would be too great.

finding strength in partnerships

a growing network



Dr. Peter Mous, SEACMPA's Science and Training Manager, and Dr. Mattheus Halim, Head of Komodo National Park, survey a turtle nesting beach near Loh Liang, Komodo. Collaborative monitoring programs and solution-oriented research are integral parts of TNC's SEACMPA program.

SEACMPA SEES COLLABORATION as core to our conservation approach. While maximizing the inputs and extended reach of our own partnerships, we expand our crucial role as a *bridging institution*, facilitating exchange and integration among far-flung people and organizations.

As a full listing of SEACMPA partners would fill several pages, the following highlights just a handful of projects that benefit from our shared vision and efforts with various sectors.

TNC Advisory Boards. SEACMPA gains broad insights through the Conservancy's Indonesia Program Advisory Board and Asia-Pacific Council. Each lends the viewpoints of a diverse cross-section of society, including the corporate sector, media and leading scientists.

Government. SEACMPA helps to link disparate arms of Indonesian government in a national task force on marine protected areas. Members include representatives from the Ministry of Forestry (in charge of protected area management at both land and sea), the Ministry of Environment, the nascent Ministry of Marine Affairs and Fisheries, the Indonesian Maritime Council, SEACMPA director Rili Djohani (task force co-chair) and SEACMPA Marine Portfolio Manager Johannes Subijanto (former Head of Komodo National Park). Our inside understanding of government challenges applied to

a new "open-arms", transparent approach in Indonesia's age of *Reformasi* offer great prospects for true protected area reform.

Regional Networks. Besides leading ASEAN marine affairs for the WCPA (see "Making it Happen"), SEACMPA works with other arms of the World Conservation Union (IUCN), with the International Coral Reef Action Network (ICRAN), the UN Environment Programme (UNEP), the US National Oceanic and Atmospheric Administration (NOAA) and the Network of Aquaculture Centres in Asia-Pacific (NACA).

Multilaterals and Bilaterals. SEACMPA serves as a primary reporting body to UNESCO in deliberation on proposed World Heritage sites including Raja Ampat, Wakatobi and the Derawan Islands. Our work in developing collaborative management and sustainable financing at Komodo National Park is supported by both the Global Environment Fund (GEF) and the International Financing Corporation (IFC), both of which look to our work as innovative models worthy of broad application. The US Agency for International Development (USAID) supports work in Komodo and Bali while Dutch Aid supports further outreach at Komodo.

Non-governmental Organizations. Through a formal Memorandum of Understanding, SEACMPA works with WWF on conservation activities at Wakatobi and prepares for a similar partnership at Raja Ampat. With the Conservation and Community Investment Forum (CCIF) we develop sustainable financing initiatives based around alternative livelihoods. With the Zoological Society of San Diego, we support research on terrestrial fauna at Komodo National Park (including the Komodo dragon) and management implications. And in collaboration with Indonesian government and APEX Environmental, SEACMPA supports development of an *Indonesia Marine Mammal Management Area*. The IMMMA aims to close a critical conservation gap for cetaceans and dugongs in Indonesia with the institution of a no-take zone from beaches to 200 nautical miles offshore.

Communities. Through outreach, participatory site conservation planning, formal training and livelihood support, we enjoy many fora for exchange with people at the "front lines" of conservation. Many "conservation cadres," through SEACMPA encouragement or example, serve as catalysts for



SEACMPA partners in all sectors of society expand our sphere of influence and benefit from our capacity as a bridging institution.

sustainable development. Several have gone on to forge their own community organizations, such as *Forum Peduli Komodo*, which address local concerns in local terms. In this highly diverse and densely populated archipelago, such a network is invaluable.

Private Sector. Aside from our direct alliance with tourism professionals in the joint venture *Putri Naga Komodo* (see "Better Business Ecotourism"), we work with Gahawisri, the Indonesian Association of Maritime Tour Entrepreneurs, on Bali beach events promoting a cleaner coastal environment.

Media and Communications. Our strong focus on communications with skilled and specialized partners carries the impact of our work far and wide. With the RARE Center for Tropical Conservation and Jungle Run Productions, we offer communities the skills, resources and platforms to perform their own conservation outreach. And with Johns Hopkins University, we plan to launch a scientific means of measuring the impacts of our conservation outreach campaigns. The private PR firm Maverick meanwhile supports SEACMPA staff with tailored media training and strategic communications.

Donors. Last but certainly not least, we owe a great debt of gratitude to the private and organizational donors who make SEACMPA possible through their support. Deepest thanks to the Packard Foundation, Keidanren, Sekisui, Japan Fund for Global Environment, USAID, NOAA, Dutch Aid and the Tahija Foundation, to name but just a few.

World Heritage Sites Go Global

“Komodo and Galapagos face a lot of the same challenges.” After five days in the field at Komodo National Park, this was the finding of Edgar Muñoz, Galapagos National Park Director of Public Use. And following slide presentations by Muñoz and Aldo Salvador-Hidalgo, Executive Director of the Galapagos Tourism Association, most officials at Komodo National Park agreed. “But we’re so far behind,” one ranger muttered.

Muñoz doesn’t find this outlook discouraging, however. Rather, he sees opportunity. “We’re on the same course,” he says. “Galapagos can be a model. I felt very good to learn that we work with the same circumstances, the same methodologies and the same results. The results for conservation, and for ensuring conservation for the long term, are very good.”

Muñoz and Salvador-Hidalgo shared experiences with Komodo park authorities and local communities as part of an ongoing World Heritage Site exchange program sponsored by The Nature Conservancy and SEACMPA, with

support from USAID, the Alex C. Walker Educational and Charitable Trust and the Japan Fund for Global Environment. Two Indonesian delegations, including the Indonesian National Parks Director, the Vice Governor and the Regent of Komodo and westernmost Flores have likewise visited Galapagos. Aside from teaching invaluable field lessons, the journey united Komodo resource managers who spend most of their time isolated in distant offices. “That experience really bonded us,” reported SEACMPA Director Rili Djohani. “We’ve worked more effectively as a team ever since.”

Former National Parks Director Widodo Ramono was particularly interested to learn first hand about the *1999 Special Law for Conservation and Sustainable Development of the Galapagos Islands*. The law raised usage fees for the park and the ratio of funds that stay on-site. Now 50% of Galapagos tourism revenue supports park management and patrols. The remaining 50% is earmarked for regional and central government projects focusing on education, health, athletics, the environment and visitor services.

“Galapagos is idyllic,” says Ramono. “Because the park is a revenue source, the director has strong support from local government, NGOs and the Ministry of Tourism. They stand together to find solutions on exploitative fishing and other issues.” Ramono hopes that collaborative management and a dedicated ecotourism concession at Komodo will help this park achieve similar results. The concession *Putri Naga Komodo*, a Conservancy joint venture, now looks to Galapagos for experience in visitor management, tour operator licensing and guide certification.

But though Galapagos seems far ahead in tourism development, Muñoz brought home valuable lessons from Komodo. “I admire very much the work of The Nature Conservancy in these few years,” he said. He was pleased to learn more about biological monitoring, about Komodo’s “floating ranger stations”—uniting park, police and military officials in marine patrols—and about alternative livelihoods supporting local fishermen, such as mariculture. “I think this technology is very important, and one I can apply in Galapagos or mainland Ecuador,” he said. There he hopes that culturing of lobster and sea cucumbers can reduce fishing pressure on the national park.



Conservation is Everyone’s Business

From his home in Labuan Bajo, Felix Beda Tukan watched the sun set over Komodo National Park for 14 years before he realized it was something special. Even then he had to travel over a thousand kilometers to make the discovery.

In 1996, while participating in a teacher’s writing contest near Jakarta, Pak Felix came to know that “Komodo is extraordinarily rich, but its people don’t even know it. We have beautiful islands, rich seas, amazing wildlife. What we lack are human resources.” Pak Felix headed home with a newfound sense of obligation. “I felt a great responsibility,” he says. “I had to tell people that the entire community must conserve Komodo National Park.” Even so, Pak Felix felt alone and ill-equipped to carry out his duty.

A second awakening came for Pak Felix in 2000, when he attended a Conservation Campaign Workshop led by the Conservancy and RARE Center for Tropical Conservation founder Paul Butler. A corps of local residents learned skills to spark pride for their environment. They painted a billboard announcing that “the sea belongs to our grandchildren” and put on puppet shows that brought wildlife to life. During that workshop, says Pak Felix, “I felt within myself a great potential for good.”

Within the year, Pak Felix and friends had launched a 15-member “*Konservasi Klub*” which now partners with SEACMPA’s outreach team. Pak Felix is the head of the Education and Awareness Commission.

On the front lines of conservation, Pak Felix sees his obstacles not only as widespread ignorance, but as a slippery slope into conflict that plagues any environmental campaign. It doesn’t have to be that way, he says, and when asked about his hopes, his wisdom is clear and universal.

“For conservation to work,” he says, “we all need to work together. We all must be models. We must do conservation rather than complain about it. And if you wish to complain about me, complain to me, not someone else. Let’s sit down, drink coffee and chat. We’re not all that different, you know.”

Indeed, Pak Felix feels that the aims of the Conservancy and the *Konservasi Klub* are designed to benefit everyone. “We must strike a balance between conservation and development,” he says. “So long as the community prospers, Komodo National Park will see everlasting protection.”

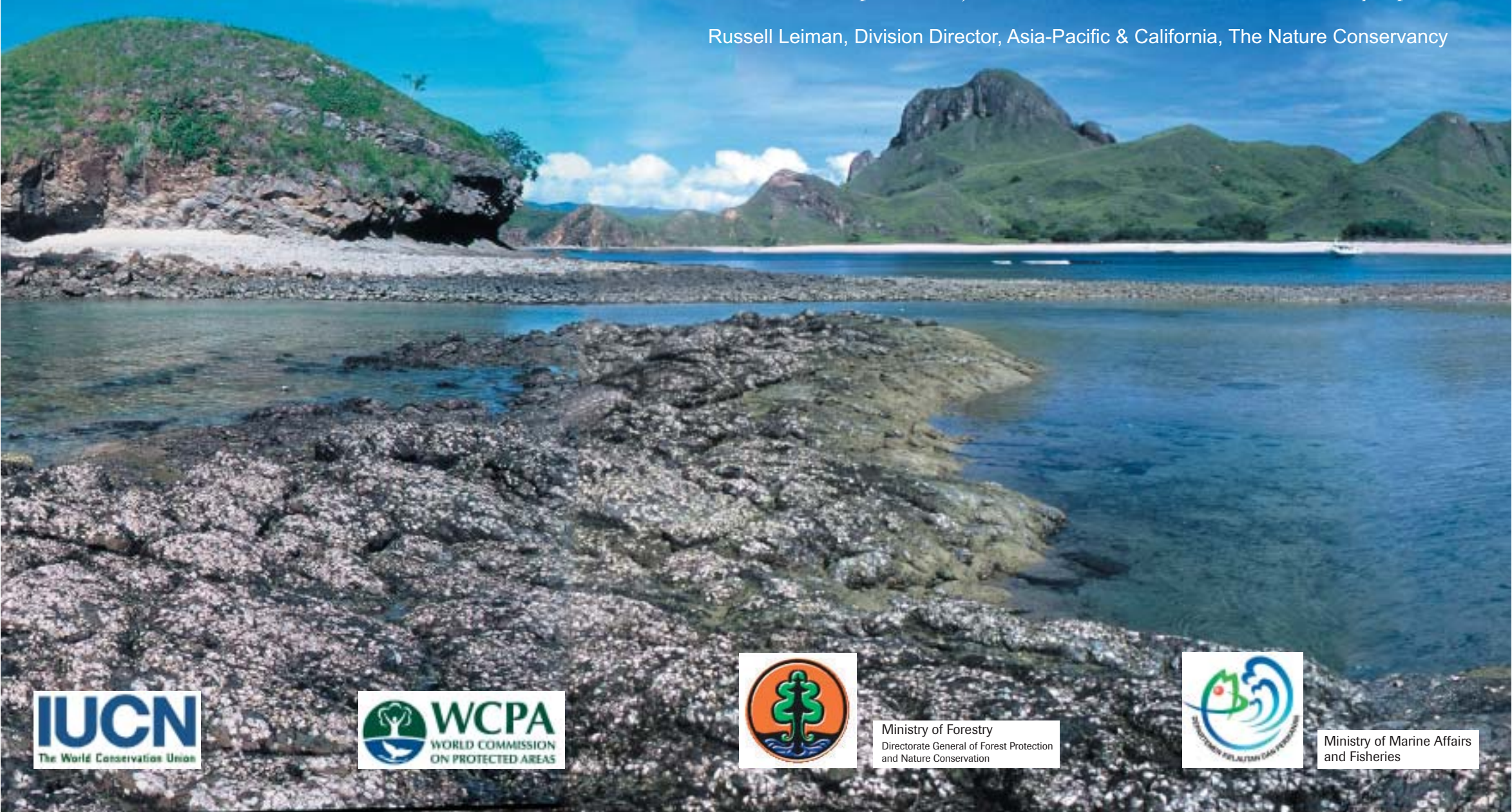


The mission of The Nature Conservancy is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive.

“The Nature Conservancy’s SEACMPA is at the forefront of efforts to conserve the unequalled abundance and diversity of fish and coral species in the waters of Indonesia. Tens of millions of coastal dwelling people across Southeast Asia depend on those waters for sustenance and for their livelihoods.

They are, in addition, vital to the ecological health of global marine systems. Consequently, the success of SEACMPA as an entity managed by Indonesians to the highest international standards, and implementing the most scientifically advanced, scientifically rigorous strategies with impact throughout the region, is one of the most important objectives to which The Nature Conservancy aspires.”

Russell Leiman, Division Director, Asia-Pacific & California, The Nature Conservancy



Ministry of Forestry
Directorate General of Forest Protection
and Nature Conservation



Ministry of Marine Affairs
and Fisheries