

The Coral Reef Rehabilitation and Management Program



Phase I Evaluation Report

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Ringkasan Eksekutif

Program Manajemen dan Rehabilitasi Terumbu Karang (COREMAP) adalah program 15-tahun yang bertujuan memantapkan “suatu kerangka kerja praktis bagi sistem manajemen terumbu karang nasional di Indonesia” yang didasarkan pada manajemen masyarakat. Program ini dibiayai oleh Pemerintah Indonesia, Bank Dunia, Bank Pembangunan Asia (ADB), dan AusAID.

Tahap I bertujuan untuk membangun selama tiga tahun (1998-2001) suatu sistem manajemen terumbu karang nasional yang akan diikuti oleh dua Tahap berikutnya, masing-masing selama enam tahun, yang dimaksudkan untuk pertama, memperluas program ke daerah-daerah lain dan selanjutnya untuk mengkonsolidasi program tersebut secara nasional dan berkelanjutan. Tahap I diperpanjang selama satu tahun hingga 2002 untuk memberikan lebih banyak waktu menyelesaikan program-programnya.

Ada tiga perubahan penting di Indonesia setelah rancangan proyek ini dibuat yang telah berpengaruh terhadap pelaksanaan COREMAP Tahap I atau yang akan menjadi faktor penting dalam rancangan Tahap II. Pertama adalah situasi politik selama beberapa tahun terakhir yang mengharuskan beberapa perubahan terhadap daerah-daerah percontohan dan penundaan program-program lapangan. Kedua adalah pembentukan DKP pada tahun 1999, suatu departemen pemerintah yang bertanggungjawab untuk manajemen daerah pantai dan laut. Ketiga, adalah Undang-Undang tentang Otonomi Daerah tahun 1999, yang mengalihkan wewenang lebih banyak kepada pemerintah kabupaten/kota untuk mengelola program daerah. Dua perubahan terakhir membawa implikasi terhadap badan pelaksana dan tanggungjawab pemerintah pusat dan daerah terhadap pembuatan program COREMAP di masa-masa mendatang.

Terumbu karang di Indonesia merupakan sumber yang tak ternilai tetapi sekaligus mengalami pengrusakan. COREMAP membuka kesempatan pertama dan utama bagi Indonesia untuk mengatasi masalah-masalah tersebut. COREMAP mendasarkan pada perlunya pendekatan yang menggabungkan pengelolaan berbasis masyarakat yang bersifat **bottom-up** dengan dukungan yang bersifat **top-down**.

Sementara kemajuan bervariasi di antara komunitas-komunitas yang terlibat, sebagian besar keberhasilan telah dicapai dalam menumbuhkan kesadaran dan komitmen kuat masyarakat atas pencarian ikan yang berkesinambungan dan perlindungan terhadap sumber-sumber alam laut yang menjadi gantungan kehidupan mereka. Begitu juga, berkurangnya pencarian ikan ilegal seperti pencarian ikan dengan bom dan racun telah terlihat di sebagian besar komunitas tersebut. Meski beberapa kemajuan (capaian) dalam kegiatan-kegiatan lain sangat penting, masalah-masalah tetap ada dan tindakan korektif diperlukan untuk Tahap II. Secara umum, keseluruhan pelaksanaan program Tahap I telah cukup kuat sebagai alasan dilaksanakannya Tahap II.

Ringkasan Temuan dan Rekomendasi

- 1) Kegiatan-kegiatan proyek yang direncanakan sebagian besar telah terlaksana pada saat evaluasi. LIPI, badan pelaksana, yang membentuk Kantor Pengelolaan Proyek (PMO) dalam suatu gedung perkantoran tersendiri, dan pemerintah Propinsi dan Kabupaten di daerah-daerah percontohan mengembangkan kelompok-kelompok pengelola untuk pelaksanaan program di empat daerah. Kegiatan-kegiatan telah dimulai untuk masing-masing komponen utama berkaitan dengan Kebijakan, Penelitian, Pengawasan dan Penegakan Hukum, Pelatihan, Komunikasi dan Manajemen Berbasis Masyarakat.
- 2) Proyek diperpanjang selama satu tahun untuk memberikan waktu bagi penyelesaian rencana awal proyek. LIPI merupakan suatu Lembaga Ilmu Pengetahuan dan Ia tidak mempunyai pengalaman dalam pengelolaan suatu program besar seperti COREMAP. Penundaan sebagian disebabkan oleh ekspektasi rancangan yang kurang realistis yaitu kapasitas yang ada pada saat penerimaan untuk mengelola proyek ini, dan kelemahan-kelemahan dan keterlambatan dalam membentuk tim manajemen.

- 3) Kapabilitas manajemen merupakan suatu masalah pada Tahap I dengan langkanya staff penuh waktu bahkan pada tingkat senior yang berpengaruh terhadap kinerja. Kemajuan penting terjadi dengan diangkatnya seorang Direktur penuh waktu dan empat Asisten Direktur paruh waktu pada 2001. Kelemahan utama manajemen terletak pada kurang terintegrasinya program-program komponen yang berbeda-beda, digunakannya staff paruh waktu dan kesulitan mengkoordinasi suatu program dengan pemerintah pada tingkatan berbeda dan daerah-daerah proyek yang jauh.
- 4) Sebagian alasan terhambatnya integrasi berragam komponen pada Tahap I adalah pembiayaan oleh lembaga-lembaga donor untuk komponen-komponen yang terpisah dan pengangkatan tim-tim asisten teknik yang bekerja terutama untuk satu komponen. Pembentukan DPK mendorong dibuatnya kebijakan untuk mengalihkan tanggungjawab atas dua komponen, MCS and CBM, kepada DPK. Program Pelatihan yang didukung oleh AusAID, yang mendukung pelatihan di daerah, memberi contoh keuntungan-keuntungan yang dapat diperoleh dari program yang terintegrasi. Rancangan Tahap II seyogyanya memperkuat otoritas PMO atas semua komponen dan tim-tim asisten teknik. Ini mempersyaratkan perubahan-perubahan dalam hubungan pelaporan dan pertanggungjawaban di antara program-program komponen yang berbeda-beda.
- 5) Praktek penunjukan staff pemerintah sebagai staff paruh waktu di COREMAP merupakan hambatan yang serius terhadap pemupukan kader-kader staff yang berpengetahuan. Tingkat remunerasi yang tidak menarik, dan staff kehilangan kesempatan untuk promosi jika ditempatkan pada program di luar departemen-nya. Sebagai tambahan, sering dilakukan pemindahan staff. Mungkin lebih banyak personil COREMAP direkrut atas dasar kontrak-kerja dimana mereka dapat memperoleh tingkat remunerasi yang dapat menahan mereka untuk waktu yang lama dan lebih mudah untuk diganti jika kinerja mereka tidak memuaskan.
- 6) Masalah utama pada Tahap II adalah pilihan mengenai badan pelaksana. Jika DPK diberi tanggungjawab untuk melaksanakan COREMAP Tahap II, harus dapat dipastikan bahwa staff COREMAP yang sekarang ini ada diperkerjakan pada program tersebut melalui pembentukan tim-tim gabungan dengan DKP, mungkin untuk sarana-sarana COREMAP yang telah ada. Idealnya, tanggungjawab untuk komponen-komponen program seharusnya tidak dibagi-bagi antar badan-badan (institusi-institusi).
- 7) Di Propinsi dan Kabupaten di mana empat daerah percontohan diselenggarakan, telah dibentuk Kelompok Kerja – Kelompok Kerja (Pokja), Panitia-Panitia Pengelola yang terdiri dari tenaga-tenaga paruh waktu dari berbagai kantor dinas dan lembaga yang berminat untuk mengimplementasikan COREMAP di daerah-daerah pedesaan. Kapabilitas mereka berragam, tetapi terlihat bahwa masing-masing Pokja memiliki staff yang berdedikasi dan mereka mempunyai pemahaman yang bagus tentang tujuan dari program ini. Beberapa LSM dan Perguruan Tinggi daerah telah dikontrak untuk memberikan asistensi dalam pengembangan program-program desa.
- 8) Keputusan untuk mengalihkan lebih banyak wewenang pengelolaan terumbu karang ke tingkat Propinsi dan Kabupaten merupakan suatu perubahan yang positif karena kenyataan menunjukkan bahwa pengelolaan terumbu karang seyogyanya dipindahkan sedekat mungkin pada tingkat lokal. Kapabilitas pemerintahan pada tingkat kabupaten untuk mengambil lebih besar tanggungjawab pengelolaan merupakan salah satu isu paling penting yang harus diperhatikan dalam rancangan Tahap II. Pemerintah Kabupaten perlu membentuk suatu Tim Pengelola atau PMO yang lebih kuat dengan otoritas melaksanakan COREMAP. Pokja -Pokja yang mewakili berragam lintas-pelaku berkaitan dengan terumbu karang ataupun pengembangan masyarakat, dapat berkinerja sebagai suatu mekanisme koordinasi dan informasi yang sangat berarti.
- 9) Terdapat empat daerah pelaksanaan COREMAP, dimana salah satu daerah baru mengimplementasikan program selama satu tahun karena alasan keamanan yang memaksa

dilakukan relokasi daerah. Daerah-daerah ini menggambarkan kondisi dan pendekatan COREMAP yang bervariasi. Satu daerah memberi fokus utama pada CBM dan sistem MCS berbasis masyarakat dengan biaya murah; satu daerah berlokasi di Taman Laut Nasional dan satu lainnya mengutamakan komponen MCS bermodal besar dengan elemen CBM yang minimal.

- 10) Komponen CBM mengikutsertakan fasilitator-fasilitator dari kalangan LSM yang tinggal di desa-desa. Masyarakat memilih motivator-motivator desa dan membentuk kepanitiaan untuk mempersiapkan Rencana Pengelolaan Terumbu Karang yang menetapkan zona-zona perlindungan dan pelarangan penangkapan ikan. Sejumlah desa telah selesai membuat perencanaan ini dan telah memperoleh persetujuan dari Pemerintah Kabupaten. COREMAP memberikan **grant** pada saat rencana ini selesai dan disetujui, sementara **seed fund** diberikan untuk mendukung aktivitas AIG and pembangunan masyarakat. Riau terlihat sangat maju dalam program CBM. Desa-desa menggunakan tekanan-tekanan masyarakat untuk mengurangi pelanggaran-pelanggaran dan membentuk kepanitiaan-kepanitiaan lokal untuk mencari dana bagi program pengawasan terumbu karang oleh masyarakat.
- 11) Pengalaman dari daerah-daerah yang berbeda memastikan bahwa model yang paling berhasil adalah yang mengutamakan pendekatan CBM di mana masyarakat mempunyai masukan dan rasa kepemilikan yang kuat. Integrasi program secara khusus sangat penting pada tingkat desa untuk memastikan pendekatan COREMAP yang menyeluruh dan konsisten dalam masyarakat. Sementara MCS mencapai beberapa keberhasilan di Biak, kesulitan-kesulitan yang dialami di Biak oleh karena kurangnya rasa kepemilikan atas program MCS karena program CBM tidak diselenggarakan menegaskan perlunya suatu pendekatan yang terintegrasi.
- 12) Sumber-sumber yang tersedia untuk CBM sangat terbatas pada Tahap I. Pengelolaan terumbu karang hanya akan dapat bersinambungan jika mereka dapat memperoleh keuntungan dari tanggungjawab pengelolaan terumbu karang. Ini seyogyanya direfleksikan dari peningkatan secara relatif bagian dari sumber-sumber yang diberikan untuk CBM di tahap berikutnya.
- 13) Kegiatan AIG masih terbatas dan seringkali ditentukan tanpa asesmen yang cukup atas fisibilitas kegiatan-kegiatan itu atau pilihan-pilihan lainnya. Lebih banyak sumber-sumber seharusnya diberikan pada tahap kedua untuk rekrutmen ahli-ahli dari luar yang ditugaskan untuk melakukan asesmen fisibilitas dan mengembangkan kemungkinan pilihan-pilihan kegiatan lainnya untuk dapat dipertimbangkan oleh masyarakat.
- 14) Bahkan dengan dukungan kuat masyarakat, perlindungan terumbu karang tidak dapat berhasil sepenuhnya jika tidak ada aturan dan penegakan hukum yang lebih keras. Tidak banyak kemajuan telah dilakukan dalam pembuatan kerangka kerja legal (hukum) yang mendukung program ini dan banyak masalah timbul karena komitmen yang lemah dari aparat (unit-unit) penegak hukum. Hak dan tanggungjawab otoritas desa untuk menegakkan peraturan tentang terumbu karang harus diperhatikan betul. Jika Rancangan Undang-Undang tentang Pengelolaan Kawasan Terkontrol dan Pulau-Pulau kecil disetujui oleh Parlemen (DPR) dalam waktu dekat ini, maka kerangka kerja nasional akan dapat dipastikan dan perhatian lebih besar pada tahap kedua dapat diberikan untuk mengembangkan peraturan-peraturan lokal.
- 15) Tahap I menguji pendekatan yang berbeda-beda terhadap MCS. Pengalaman ini memastikan bahwa sarana-sarana penegakan hukum terhadap pelanggar-pelanggar lokal hanya dapat tersedia jika sarana-sarana itu murah dan melibatkan masyarakat dan otoritas penegak hukum. Penggunaan metode pengawasan yang mahal tidak menguntungkan seperti penyediaan tenaga dan peralatan yang mahal, persyaratan operasional yang rumit dan tidak efektif dibandingkan dengan metode dan teknologi konvensional.
- 16) Program CRITC menghasilkan sejumlah kajian dan **monitoring** (penyeliaan) di antaranya kesehatan terumbu karang, dan sosial-ekonomi dan perikanan berbasis masyarakat. Suatu pemetaan yang lengkap yang menunjukkan sumber-sumber terumbu karang telah diterbitkan.

Sebagai tambahan, CRITIC telah menyediakan suatu **web site**, pelayanan GIS dan manajemen **data base**. Tetapi program ini masih tetap harus ditingkatkan untuk melengkapi berbagai macam petunjuk, yang semestinya diselesaikan sebelum Juli 2002, dan kelangkaan staff yang terlatih menjadi hambatan.

- 17) CRITIC seyogyanya memperhatikan kenyataan bahwa pengumpulan data yang tidak penting secara berlebihan hanya menghamburkan uang dan tenaga, dan menurunkan semangat dan tingkat akurasi para pengumpul data. Metode pengumpulan data dan format **data base** yang terlalu berlebihan sejak awal pelaksanaan proyek kini telah disederhanakan. Penyederhanaan lebih lanjut atas metode pengumpulan data seyogyanya diarahkan lebih kepada pelibatan masyarakat dalam aktivitas penyeliaan. Sebagai suatu prinsip umum, baik MCS dan CRITC harus bertujuan untuk mengurangi semaksimal mungkin biaya dan kompleksitas program dan untuk melaksanakan hanya kegiatan-kegiatan yang dilihat mempunyai kaitan langsung dengan pencapaian tujuan-tujuan COREMAP.
- 18) Komponen pelatihan yang didukung AusAID pada Tahap I telah terorganisasi secara baik dan berhasil mencakup sejumlah besar staff COREMAP dengan kursus-kursus singkat. Model responsif yang digunakan seyogyanya dipertimbangkan untuk diterapkan secara lebih luas pada Tahap II untuk merespon kebutuhan-kebutuhan desentralisasi. Kebutuhan pelatihan tetap besar pada Tahap II terutama untuk memperluas pelatihan masyarakat dan mengembangkan kapasitas staff pada tingkat kabupaten.
- 19) Komponen Komunikasi Publik yang memenangkan penghargaan telah berhasil meningkatkan kesadaran publik pada tingkat nasional dan di berbagai lokasi COREMAP, seperti ditunjukkan oleh sebuah survei independen. Program nasional dapat diteruskan dengan biaya yang jauh lebih murah pada tahap kedua, sementara sumber-sumber lebih banyak diperuntukkan untuk mencapai kelompok-kelompok target khusus dan untuk mendukung kegiatan-kegiatan di tingkat desa sebagai bagian integral dari program CBM di tingkat desa.
- 20) Kinerja lembaga-lembaga donor luar negeri tidak berimbang. Penundaan-penundaan dan lemahnya koordinasi di antara mereka telah menambah kesulitan-kesulitan dalam pengelolaan proyek yang rumit ini. Meski demikian, mereka telah mengambil pelajaran penting dari pengalaman ini, dan Bank Dunia dan ADB telah menyatakan komitmen mereka untuk bekerja sama dengan Pemerintah Indonesia atas dasar suatu visi dan **log frame** yang sama.
- 21) Suatu **Mid Term Review** perlu diadakan pada awal Tahap II untuk memungkinkan penyesuaian-penyesuaian sebelum tahun ketiga seturut dengan rencana peralihan kepada badan pelaksana yang baru dan program desentralisasi.
- 22) Tahap I memberikan bukti bahwa program ini dapat berkesinambungan karena program ini diperluas secara nasional. Modifikasi yang direkomendasikan dalam penilaian ini akan secara berarti mengurangi biaya per desa dalam memperkenalkan COREMAP pada tahap berikutnya dan menawarkan peluang untuk mengurangi biaya ini bahkan lebih jauh dalam tahap-tahap selanjutnya karena tanggungjawab dialihkan makin besar ke tingkat kabupaten dan desa.

Pelajaran

- 23) Pengalaman yang diperoleh pada tahap pertama menegaskan kearifan (ketepatan) menempatkan masyarakat pada pusat pengelolaan terumbu karang. Sasaran awal proyek ini “untuk mengembangkan suatu sistem pengelolaan terumbu karang yang praktis di Indonesia” mungkin perlu dimodifikasi menjadi “untuk mengembangkan sistem pengelolaan terumbu karang berbasis masyarakat yang praktis di Indonesia”.
- 24) Sifat program telah berubah dari rancangan awal yang menekankan pengelolaan terumbu karang menjadi suatu program yang mempertimbangkan aspek-aspek lingkungan dan pembangunan

sebagai komponen-komponen integral program tersebut. Faktor-faktor sosial dan ekonomi akan senantiasa merupakan determinan-determinan penting untuk pengelolaan lingkungan yang baik. Pendekatan yang lebih komprehensif ini semestinya diterapkan sebagai tujuan standar program pada Tahap II.

- 25) Beberapa pendekatan yang berbeda terhadap daerah-daerah percontohan dilakukan pada Tahap I. Pengalaman ini menegaskan bahwa Tahap II semestinya memberikan ruang untuk fleksibilitas dalam pelaksanaan program dalam kondisi budaya, sosioekonomi dan hayati yang amat beragam di wilayah-wilayah berbeda-beda di Indonesia. Rancangan Tahap II seyogyanya menfokuskan pada **outcome** yang telah ditentukan daripada menetapkan kriteria **output** yang ketat yang menghambat fleksibilitas. Pendekatan ini berarti bahwa perhatian lebih besar perlu ditujukan dalam rancangan proyek untuk isu tentang pengelolaan dan penyeliaan yang adaptif untuk memastikan akuntabilitas dan pemanfaatan sumber-sumber secara efektif.

Executive Summary

The Coral Reef Rehabilitation and Management Program (COREMAP) is a 15-year program aimed at establishing “a viable framework for a national coral reef management system in Indonesia” based on community management. It is funded by the Government of Indonesia, the World Bank, the Asian Development Bank, and AusAID.

Phase I aimed to establish over the three years (1998-2001) a national system for coral reef management to be followed by two phases of six years each intended to first expand the program to other sites and then to consolidate the program nationally on a sustainable basis. Phase I was extended one year to 2002 to allow more time to complete the Ph. I program.

There were three major external changes in Indonesia, subsequent to the project design, that have affected COREMAP performance in Phase I or will be important in Phase II design. The first is the political situation in the last few years that lead to several changes in pilot sites and delays in field programs. The second was the creation in 1998 of DKP, a government department that has responsibility for marine and coastal management. The third was the Autonomy law of 1999, which passes more authority to district governments to manage local program. The latter two changes have implications for the location of the implementing agency and the relative responsibilities of national and regional governments for future COREMAP programming.

The coral reefs of Indonesia represent a valuable but deteriorating resource. COREMAP provided the first major opportunity in Indonesia to overcome these problems. It recognized the need for an approach that combines bottom-up community-based management and top-down support.

While progress varies between participating communities, much success has been achieved in developing strong community awareness and commitment to sustainable fishing and the protection of the living resources on which their livelihood depends. As well, reductions in illegal fishing such as blast and poison fishing have occurred in most of those communities. Although achievements in some other areas have also been significant, problems remain and corrective action will be needed in a second phase. On balance, overall performance in Phase I has been strong enough to justify a second phase.

Summary of Findings and Recommendations

- 26) The planned project activities were largely completed at the time of the evaluation. LIPI, the executing agency, established a Project Management Office in a dedicated building and provincial and district governments in pilot site areas created management groups to implement the program at four field sites. Activities have been initiated in each of the major components dealing with Policy, Research, Surveillance and Enforcement, Training, Communications and Community Based Management.
- 27) The project was extended for one year to allow more time for completion of the original project plan. LIPI is a scientific institution and it did not have experience in managing a large program like COREMAP. The delay was partly due to an unrealistic design expectation that the capacity existed at inception to manage this program and to weaknesses and delays in creating a management team.
- 28) Management capability was an issue in Phase I with the lack of full time staff even at senior levels affecting performance. Considerable progress has been made with the appointment of a full time director and four part time Assistant Directors in 2001. The primary management weaknesses were the lack of integration between the different program components, the use of

part time staff and the difficulties of coordinating a program with other levels of government and distant sites.

- 29) Part of the reason for limited integration of the various components in the first phase was the funding by donors of separate components and employment of technical assistance teams working primarily on one component. The creation of DKP led to a decision to transfer responsibility for two components, MCS and CBM, to DKP. The training program supported by AusAID, which supported regional training, illustrates the benefits that can be derived by more integration. The Phase II design should increase the authority of the PMO for all components and technical assistance teams. This will require changes in donor agency approach as well as changes in the reporting relationship and accountability among the different program components.
- 30) The practice in Phase I of appointing government staff on a part time basis to COREMAP is a serious constraint to the development of a knowledgeable staff cadre. Remuneration levels are unattractive and staff lose promotion opportunities if they are posted to a program outside their home department. In addition there are frequent staff transfers. More COREMAP personnel might be recruited on contract where they can be provided with a remuneration level that will retain them for long periods and more readily replaced for unsatisfactory performance.
- 31) A major issue for the second phase is the choice of implementing agency. If DKP is given responsibility for implementing COREMAP in Phase II, it should ensure that existing COREMAP staff are employed in the program through the creation of joint teams with DKP, perhaps in the existing COREMAP facilities. Ideally, responsibilities for program components should not be divided between institutions.
- 32) The provinces and districts where the four pilot sites are located have created Pokjas, management committees composed of part time staff from different departments and interested agencies to implement COREMAP at the village sites. Their capabilities vary but there is evidence that each Pokja has some committed staff and that they have a good understanding of the program's objectives. Local LSMs or universities have been contracted to provide assistance in developing the village programs.
- 33) The decision to transfer more authority for coral reef management to the provincial and district levels is a positive change as evidence shows that coral reef management should be moved as close as possible to the local level. The capability of the district level governments to take on more management responsibilities is one of the most important issues to be addressed in the Phase II design. District governments will need to create a stronger management team or PMO with authority to implement COREMAP. The Pokjas representing different stakeholders with coral reef or community development interests can perform an important coordination and information mechanism.
- 34) There are four COREMAP field sites, of which one is only a year old, due to security concerns that forced a relocation. These sites demonstrate a variety of conditions and COREMAP approaches. One site has a primary focus on CBM and a low cost community based MCS system; one is in a national marine park and another has a capital intensive MCS component with a minimal CBM element.
- 35) The CBM component involved the appointment of NGO facilitators who are based in the villages. The communities select village motivators and create committees to prepare Coral Reef Management Plans that create sanctuaries and no-take zones. These have been prepared in a number of villages and some have been given district approval. COREMAP provides grants once this plan is completed and approved while seed funds are given to support AIG activities and community improvements. The Riau site has the most advanced CBM program. The villages

- have used community pressure to reduce violations and created local committees that generate some funding for the community reef watcher program.
- 36) The experiences in these different sites confirms that the most successful model comes from emphasizing a CBM approach in which communities have strong input and ownership. Program integration is particularly important at the village level to ensure a consistent overall COREMAP approach within the community. While MCS has had some success in Biak, the difficulties encountered in Biak from the lack of village ownership of MCS when CBM was not pursued demonstrates the need for an integrated approach.
 - 37) The resources available for CBM were too limited in the first phase. Coral reef management can only be sustained at the village level if they are able to benefit from coral reef management responsibilities. This should be reflected by an increase in the relative share of resources devoted to CBM in the next phase
 - 38) AIG activities were limited and sometimes defined without adequate assessment of their feasibility or other alternatives. More resources should be provided in a second phase for the recruitment of external expertise to assess the feasibility and develop a portfolio of possible activities for the community to consider
 - 39) Even with strong community support, coral reef protection cannot be completely successful unless there is a stronger legal and enforcement regime. Not enough progress has been made in creating a supportive legal framework and there are problems created by inadequate commitment by enforcement agencies. The rights and responsibilities of village authorities to enforce coral reef regulation should be addressed. If the Law for Control Zone Management and Small Islands is passed by parliament in the near future, then the national framework will be clarified and more attention in the second phase can be given to developing local regulations.
 - 40) Phase I tested different approaches to MCS. This experience confirms that enforcement measures on local violators are only viable if they are low cost and involve the community and local enforcement authorities. The use of expensive surveillance methods has disadvantages such as poor maintenance, expensive staffing and equipment requirements, complex operating requirements and ineffectiveness compared to conventional technology and methods.
 - 41) The CRITC program carried out a number of studies and monitoring including reef health, community based fisheries and socioeconomic. A first full map showing the coral reef resources of Indonesia has been published. In addition, CRITC has provided a web site, GIS services and data base management. Yet the program still has to complete various manuals, on track for completion by July 2002, and the lack of trained staff is a constraint.
 - 42) CRITC should take into account evidence that excessive collection of nonessential data leads to wasted resources and a loss of enthusiasm and accuracy by data collectors. Data collection methods and database formats have already been simplified from the excessive number established at the start of the project. Further work in simplifying data collection methods can lead to more community involvement in monitoring activities. As a general principle, both the MCS and CRITC should aim to minimize program costs and complexity and to carry out only those activities that are seen to have direct bearing on achieving COREMAP objectives.
 - 43) The AusAID supported training component in Phase I has been well organized and successful in reaching large numbers of COREMAP staff with short courses. The responsive model used should be considered for wider application in Phase II to respond to decentralization requirements. There will still be large training needs in Phase II to expand community training and to build staff capacity at the district level.
 - 44) The award winning Public Communications component has been successful in raising public awareness at both the national level and at the various COREMAP locations as confirmed by an

independent survey. The national program can be continued at much lower cost in the second phase while more resources are devoted to reaching particular target groups and supporting village level activities as an integral part of the CBM program at each village.

- 45) The performance of external funding agencies has been uneven. Delays and a lack of coordination between them have increased the difficulties in managing this complex project. They have, however, drawn the appropriate lessons and both the World Bank and the ADB have committed to work with the GOI on a common vision and log frame.
- 46) A Mid Term Review should be conducted early in Phase II to allow for adjustments by year three in light of the expected transition to a new implementing agency and program decentralization.
- 47) Phase I provides evidence that this program could be sustainable as it is expanded to a national level. The modifications recommended in this review would significantly reduce the cost per village of introducing COREMAP in the next phase and offer the opportunity to reduce these costs even further in subsequent phases as responsibility is increasingly moved to the district and village level.

Lessons

- 48) The experience gained in the first phase confirms the wisdom of placing the community at the center of coral reef management. The original project objective “to develop a viable coral reef management system in Indonesia.” might be modified to “develop a viable community-based coral reef management system in Indonesia”.
- 49) The nature of the program has changed from the original design that emphasized coral reef management to a program that has both environmental and developmental aspects as integral components of the program. Economic and social factors will often be the critical determinants of good environmental practices. This more comprehensive approach should be adopted as the standard program objective in Phase II.
- 50) Several different pilot site approaches were pursued in Phase I. This experience confirms that Phase II should allow for considerable flexibility in tailoring programs to the very diverse cultural, socioeconomic and biophysical conditions at different localities in Indonesia. The Phase II design should focus on definable outcomes rather than set up rigid output criteria that prevent this flexible response. This approach will mean that more attention needs to be paid in project design to the issue of adaptive management and monitoring to ensure accountability and effective use of resources.

Acronyms

ADB	Asian Development Bank
AIG	Alternative Income Generation
AMC	Australian Managing Contractor
AusAID	Australian Agency for International Development
BAPPEDA	Provincial Planning Agency
BAPPENAS	National Development Planning Agency
BME	Benefit Monitoring and Evaluation
Bupatti	Kabupaten Head
CBM	Community Based Management
COREMAP	Coral Reef Rehabilitation and Management Project
CRITC	Coral Reef Information and Training Center
CRMP	Coral Reef Management Plan
DKP	Dinas Kelautan dan Perikanan (Department of Maritime and Fisheries)
DPRP	Dewan Perwakilan Rakyat Daerah (Local Parliament/Legislative Assembly)
GEF	Global Environmental Facility
GIS	Geographic Information System
GOI	Government of Indonesia
IUCN	International Union for the Conservation of Nature
JHUCCP	Johns Hopkins University Centre for Communication Programs
Kabupaten	District
MPA	Marine Park Authority
KEHATI	Biodiversity Conservation Foundation
LIPI	National Institute of Science
LSM	Local Non-government Development Organisation
MCS	Monitoring, Control & Surveillance
MTR	Mid Term Review
NTC	National Training Coordinator
PIMPRO	COREMAP Financial Management Office
Pokja	Provincial or district COREMAP management committee
PMO	Project Management Office:
Rumsram	NGO based in Biak
TA	Technical Assistance
TBR	Taka Bone Rate
TC	Training Committee
TCU	Training Coordination Unit
TNA	Training Needs Assessment

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1. Introduction

1. The Coral Reef Rehabilitation and Management Program (COREMAP) is a 15-year program of the Government of Indonesia (GOI) with the following goal:

“To protect, rehabilitate and achieve sustainable use of coral reefs and associated ecosystems in Indonesia which will, in turn, enhance the welfare of coastal communities.”

2. COREMAP is funded by the GOI, the World Bank, ADB and AusAID.

3. The Program is divided into three phases: (i) a 3-year “Initiation” Phase designed to test and develop viable community-based management systems in pilot areas of Indonesia; (ii) a 6-year “Acceleration” Phase to build upon and expand community-based management systems to other sites in Indonesia; and (iii) a 6-year “Institutionalization” Phase for ensuring institutional (administrative, economic and financial) sustainability of program activities.

4. The development objective of COREMAP I is:

“To develop a viable coral reef management system in Indonesia.”

5. This phase contains several core activity areas. These include:

- Program Management
- Legal Review
- Research and Monitoring
- Capability Building and Training
- Program Policy and Strategy
- Monitoring Control and Surveillance
- Public Awareness
- Community Based Management

6. The Program operates nationally from the Program Management Office in Jakarta, and in Phase I is being implemented locally at four sites: Taka Bonerate in Sulawesi Selatan; Padaido Islands in Biak; Senayang Islands in Riau; and Maumere in Flores.

7. Phase I was launched in September, 1998 and its completion was originally scheduled for April 2001. However, the project was extended by one year following the MTR due to changes in pilot sites because of political turmoil and delays in project implementation. As of this writing (May 2002), most Phase I activities are being concluded.

2. Method

8. Under a contract from the PMO, IUCN fielded an independent team of evaluators¹ to assess the progress made in the major Program components during COREMAP Phase I. The evaluation team reviewed a wide range of Program documents provided by the PMO in Jakarta. It was involved in a series of meetings with representatives of the PMO and various representatives of relevant GOI agencies in Jakarta. In addition, the team traveled to all field sites (Mauwere, Riau, Biak, and South Sulawesi, see Exhibit 2.1). Group meetings were arranged with training personnel from all locations in Makassar and with senior government officials and COREMAP personnel in Makassar and the four district capitals. During the field visits, the evaluation panel was able to make general observations of the biophysical characteristics of the sites, and hold discussions with various stakeholders in the communities that have been participating in the COREMAP program. Due to the relatively short time available, these observations and discussions were limited in their scope and detail. However there was strong evidence and good documentation in most cases to support the main conclusions and recommendations in this report.

2.1 Acknowledgements

9. The team would like to thank COREMAP staff in general for arranging the program and mission travel at short notice and the COREMAP communities for their hospitality. Out of the many individuals who assisted the team, particular thanks are due to Anugerah Nontji, Kasim Moosa, Tom Walton, Linda Christanty, Del Afriadi Bustani, Mulyanto, SE, Drs Wanda, Suharsono and Hidayati, Rahmat Kom, Ir Endah Murtiningtyas, and Titi Marpaung. Ir Wiranti Sarasati, Andi Nurjaya, Herman Warwer, Kamaruddin, Jeffery Marein and Dina Saragih provided considerable information and assistance during the site visits as did Dr Baharuddin in Makasar. Phil Domanschenz, Program Management Specialist provided substantial and very proficient support in coordinating the overall mission program.

Exhibit 2.1 COREMAP Phase 1 Sites



¹ The evaluation team was on site during the period from 6 May to 30 May, 2002. Team members were Doug Daniels, Team Leader; Tommi. Legowo, Training and Policy Specialist; Graeme Kelleher, MCS Specialist; Torben Berner, Policy/Strategy and Program Management Specialist; James Berdach, Community-Based Management Specialist; and. Johannes Widodo, Research and Monitoring specialist.

3. Project Management

10. The COREMAP structure is divided into the national and regional levels. Overall technical management and administration of COREMAP are the responsibility of the PMO in Jakarta while the management at Provincial and District levels is carried out by the Pokjas under the coordination of the Provincial and District BAPPEDAs.

3.1 National Management

11. The project fell behind schedule and suffered from part time management problems in the early stages. The appointment of a full-time committed PMO Director and four part time Assistant Directors late in Phase I has provided a stronger institutional identity for the PMO and improvement in day-to-day management. The PMO Director and some of the senior staff have successfully built up COREMAP's image and credibility both externally and within the PMO

12. However there are still some significant problems of which the most important are the lack of program integration: part time staff; communication problems with the district offices; and field site support. The original choice of the sites, which were distant from each other and difficult to reach, created problems in achieving the kind of supporting and monitoring activities one would expect in a pilot phase. The project components tend to operate in isolation and have had parallel programs in some cases (communication activities at the village sites and different training activities). This problem has been exacerbated by the four TA teams who tended to work on one component only. The decision to move two components (MCS and CBM) to DKP has created further barriers to a cohesive program.

13. Assignment of government staff to COREMAP activities on a part-time basis and with low incentives/honoraria has weakened delivery of program outputs and caused a loss of staff motivation. Compounding this has been the frequent transfer of staff that undermines training efforts. The poor motivation of some staff and COREMAP committee members at all levels has been a common issue mentioned in COREMAP documents and in meetings with staff. Placing COREMAP in a line agency where staff can be appointed full time could address some of these issues. If it proves difficult to find and keep full time staff, especially in the more technical areas such as in CRITC, consideration should be given to recruit local consultants who can be paid adequate salaries to keep them for longer periods and whose contracts can be terminated for unsatisfactory performance.

14. Financial management is the responsibility of the project manager, PIMPRO while the PMO is responsible for technical aspects. The structure of dual reporting lines for financial management by PIMPRO and technical management by the PMO has created obstacles to the timely disbursement of funds. Financial management has been complicated by different donor requirements. As an example, there are three levels of approval up to the PMO needed to authorize a village grant as low as Rp. 200,000. Village grants require an additional approval level up to the external funding agency for one agency.

3.1.1 District and Provincial Management

15. The Pokjas are responsible for implementing COREMAP at the provincial and district levels. The Pokjas normally consist of key government agencies, NGOs, and program staff. The size of the Pokjas ranges from 10 to over 30 at the regional level. They have primarily been functioning as coordination committees with only a few key members assigned to support program management on a part time basis. Although provinces and districts varied in their level of understanding and knowledge of COREMAP's primary objectives, these were generally assessed as adequate. The Provincial Pokja in South Sulawesi demonstrated strong leadership and long-term vision for the Program (with strong support also coming from Kabupaten Selayar), while inadequate understanding of key COREMAP objectives by some key agencies in Riau were noted.

16. This structure proved adequate although not fully satisfactory in Phase I and the shift in focus towards district level responsibilities in Phase II will require a significant upgrade of capabilities and the creation of a stronger management function. Phase II will also have to address the adequacy and nature of part time assignments of Pokja members.

3.1.2 Steering and Technical Committees

17. A National Steering Committee composed of representatives of Bappenas, LIPI and DKP as well as several other government departments was created to provide a high level mechanism to address policy issues. It is supported by a Technical Committee that is mostly comprised of staff from the relevant government departments. Prior to being recognized in 2001, the National Steering Committee had not held a single meeting. It met for the first time in January 2002. The Technical Committee has also begun to meet frequently in recent months. Thus programmatic oversight and monitoring efforts have been inadequate for much of Phase I. This function is likely to become more important in a second phase as the program expands and responsibilities are shared over more levels of government. District governments will have to have a voice in any such oversight mechanism, given the major role they are going to assume.

3.2 Institutional Capacity

18. The implementing agency, LIPI is a scientific institution and not a line government department. While its initial capacity to manage a complex program of this kind was limited, it has managed to create a strong sense of commitment and ownership within the Program at all levels and has demonstrated a gradual improvement in overall management capability over time.

19. However, COREMAP cannot function as a stand-alone program over the longer term. Over the 15-year life of the Program, it will be necessary to institutionalize community-based coral reef management as part of the overall government infrastructure. DKP, the department for Marine Affairs and Fisheries created in 1998 is generally perceived as the proper institutional 'home' for the program. It does not appear to have shown a high level of involvement and it has a limited number of staff. It is unclear whether it has the ability to take on a major program like COREMAP at this stage. A critical issue for DKP if it is to take on this responsibility will be the appointment of a skilled, visionary and full-time senior program leader. Consideration should be given to the recruitment of skilled professionals outside the government when specific skills are not available within the implementing agency.

20. Keeping the existing key COREMAP technical and managerial personnel should be strongly considered, given the expertise and experience already in place. During the transition phase, relevant LIPI and DKP staff could be co-located in the Jakarta COREMAP Building. Ideally, responsibilities for components should not be divided between institutions. The progress of this transfer should be carefully monitored and an early Mid-Term Review (no later than two and a half years) undertaken to allow for adjustments.

21. Decentralization of the program in the second phase will require a clear outline of the responsibilities within each level of implementation. In general terms, this would require a more focused and limited role for the PMO in Jakarta in terms of providing guidelines, establishing National Standards, developing and refining Monitoring and Evaluation systems, and by providing an overall communication function. There may be a useful provincial role in areas such as information or training that cannot be efficiently addressed at the district level. It will be essential to provide very clear guidelines to the many districts on their authority and responsibilities so that they are empowered to pursue the essential functions of implementation at the village level.

3.3 Provincial, District and Community Capacity

22. Institutional capacity at the provincial and district level differs significantly at various sites and strengthening of weaker institutions should be an objective in the subsequent phase. This is particularly important in light of the impacts of the decentralization process underway in Indonesia

23. While the Pokjas in Phase I have been functioning as counterparts to the PMO in Jakarta, they have mainly functioned as *ad hoc* committees. A strong commitment and enthusiasm to take on more provincial and local level responsibilities has been consistently noted during the field visits, although it was also recognized that the Pokja committees were insufficiently equipped now to undertake these additional commitments. It will be necessary to strengthen the management capability through the formation of provincial and district PMOs with full-time assigned staff while maintaining the coordination role of the Pokjas.

3.4 Policy and Strategy

24. A national Policy, Strategy and Action Plan for coral reef management was prepared and disseminated to all the major stakeholders in 2002. The preparation involved a broad consultative process comprising two national and seven provincial level workshops, culminating in a consensus at a final national workshop. The policy addresses key issues of importance consistent with GOI environmental policies and the importance of community based management. The achievement of the process has been assessed as satisfactory. It is expected that a closer linking of the strategy to the COREMAP program will emerge later in Phase II.

25. Over time, it will be useful to integrate COREMAP policy and interventions with relevant international, regional and national initiatives, such as the International Coral Reef Initiative, the Global Coral Reef Monitoring Network, the Marine Stewardship Council, the International Coral Reef Action Network/Regional Seas Programme, the Indonesian Coastal Resources Management Program and the Co-Fish project.

3.5 Legal Framework

26. Seven main drafts of key legislation and twelve papers have been prepared by the COREMAP program. The papers together with the drafts of key legislation were submitted to DKP for follow-up. DKP has organized a legal review workshop in Jakarta involving legal experts from relevant authorities to discuss the drafts and to obtain feedback for revisions. Regional workshops have been held to review draft legislation for TBR National Park.

27. DKP has indicated that they intend to have a Fisheries Act and the Law for Coastal Zone Management and Small Islands tabled in parliament in September or October 2002. If passed, the latter Act in particular is expected to address many of the lacunae in the legal system that are hindering COREMAP activities. This should allow for more attention to be shifted to addressing the need for locally tailored laws and regulations.

28. The Autonomy Law (No. 22/99) and the Spatial Use Act (No.24/92) provide the general legal framework for management at the local level. However there is a need for district laws and regulations at the local level tailored to different conditions in each location. COREMAP has made an effort to tailor legislation for Selayar, Maumere and Biak and a legal expert is close to completing further work for specific legislation for Maumere. Given the importance of local regulations, COREMAP may have to provide additional legal expertise in a second phase to assist in the implementation of local laws and regulations.

3.6 Recommendations

- 1) If DKP is given responsibility for implementing COREMAP in Phase II, it should ensure that existing COREMAP staff are employed in the program through the creation of joint teams with DKP. Consideration should be given to continuing to house the COOREMAP program in existing facilities. Ideally, responsibilities for program components should not be divided between these two institutions.
- 2) Full-time, experienced and committed senior management staff are a critical requirement for the more complex management system in Phase II. Consideration should be given to recruiting Indonesian professionals from outside government if suitable government staff are not available.
- 3) The PMO should assume more responsibility for integrating the different components of COREMAP and implementing measures to ensure prompt and adequate communication to all staff of the vision and activities of COREMAP. External TA firms should have contractual obligations to report through PMO and to develop counterpart capability.
- 4) There should be an early and clear delineation of responsibilities at each level of government with a common planning and monitoring framework agreed for the overall program. It will be essential to develop clear guidelines with the districts on their authority and responsibilities.
- 5) District level governments should create PMOs with responsibility for implementing COREMAP. Pokjas should continue to provide a coordination and information function. A review of district level capability and a plan to upgrade skills should be undertaken at an early stage, particularly for all proposed new sites.
- 6) The National Steering Committee should meet once a year to address major issues. The Technical Committee should include all major stakeholders, including regional governments and other interested government and non-government agencies, to allow for greater integration of COREMAP activities with other coral reef related programs and projects.
- 7) Financial approval procedures should be streamlined and a common donor reporting format developed.
- 8) Full time staff should be recruited whenever possible and procedures put in place to ensure fixed time allocations of part time staff to COREMAP activities. If problems for government employees of turnover, part time availability and inadequate remuneration levels cannot be solved, consideration should be given to employing local consultants.
- 9) It is recommended that the proposed coastal zone Act being planned for tabling later in 2002 be given high priority and that more resources be used to develop local laws and regulations to provide communities with a basis to enforce coral reef standards.
- 10) The National Coral Reef Management Strategy and Action Plan should be integrated into COREMAP programming so that all stakeholders are aware of common objectives and the community based management philosophy developed in Phase I. This community-based approach could be given more emphasis by changing the overall program objective to “develop a viable community-based coral reef management system in Indonesia”.
- 11) A Mid Term Review should be conducted after two and a half year as a mechanism to allow for early adjustments in light of the program decentralization, and the transition of responsibilities to DKP.

4. Research and Monitoring

29. Awareness and understanding of Indonesia's coral reefs, especially their conservation and management, need to be further developed among the stakeholders. Data and information on reef biology, fisheries, and community socio-economics play an important role in creating better awareness and understanding of the reef ecosystem, its contribution to human welfare, and in developing alternative management strategies.

4.1 Program and Activities

30. The major components of CRITC include:

Reef Health Monitoring: This includes studies on reef health, fish abundance and biomass indicators. This component is designed to international standards and monitoring indicators are consistent with most of those of Reef check and international data programs. This data has been used to provide for direct comparison between reefs and fish communities in Indonesia, Australia and other parts of Asia. Reports have been produced for all sites except Maumere.

Community Based Fisheries Monitoring: The community based monitoring (CREEL) is conducted at COREMAP sites through close linkage with CBM. Surveys conducted by local communities provide data on fish landings, fishing grounds, gear usage and local fish prices.

Socio Economic Monitoring: Socio economic data collected includes incomes, debt, assets and alternative income generation activities as indicators of welfare. This data is collected through household surveys every three years.

Research Agenda: Research projects are funded to increase knowledge of the overall environment and to support CBM in particular. Field CRITICs submit proposals which are then considered by the PMO for funding. They provide for studies in areas such as threatened species, wider environmental aspects and possibilities for AIG.

Support Functions: The CRITC also provides a web site, GIS services and data base management.

31. COREMAP Phase I established a national system of Coral Research, Information and Training Centers (CRITCs) in order to develop awareness and understanding of Indonesian coral reefs and their management and conservation requirements. The Central CRITC was established in Jakarta in April, 2000 following the creation of Provincial and District CRITCs in 1999. A manual and guidelines were created in 2001 covering the organization structure, research and monitoring, data management, and information systems. Moreover, CRITC's central office has created a documentation unit as well as a bilingual website although this will need further refining.

32. CRITC carried out a number of studies including reef base maps and GIS assisted mapping of COREMAP sites. These studies led to some notable achievements, including the development of a complete map of coral reef size and distribution for all of Indonesia carried out by satellite imagery and GIS. Baseline studies on ecology and socio-economic conditions were performed on the COREMAP sites and several other possible sites for a Phase II. Several specific studies, such as sand mining exploitation and trawling activities, were contracted out to other organizations with mixed results. The reef health monitoring system is built on standardized methodology, permanent transects and monitoring stations.

33. The benefit monitoring and evaluation (BME) component monitors project impact and performance. It provides data on reef health, community-based fisheries (fishing effort, data on catch, and catch per unit effort) and the socio-economics of the COREMAP sites.

34. Four of the five BME field manuals on coral reef monitoring, fisheries monitoring and socioeconomic monitoring are expected to be issued in July, 2002. Earlier drafts were used as working documents to assist the technical teams in the field. The manuals, together with the site specific survey

reports, should provide a strong baseline against which to monitor future progress on the key performance indicators for this program.

35. BME plays an important role in providing annual reports to all levels of the program (i.e., site, district, provincial and national levels) on the impact of the project and on the performance objectives relevant to reef health, reef fisheries and community socio-economics. The BME socio-economic monitoring system consists of three main approaches: (i) monitoring of a sample of monthly household income and expenditure once every 3 years, targeting mostly artisanal fishermen and fishing vessel crew; (ii) monitoring of individual AIG and revolving credit schemes is conducted by the village facilitator with information on a case-by-case and individual basis; and (iii) fisheries monitoring surveys which measure changes in productivity and net income from different fishing gears. The results are produced locally and publicized in places such as the CREEL surveys in Tanjung Pinang (Riau) Pokja offices.

The project design team created an excessive number of monitoring indicators on a CD-ROM that was far in excess of what was feasible or necessary. Different methods and measures were tested to determine the most cost efficient approach to monitoring changes in these indicators. As an example, live coral index transects of 3 x 10 m were adopted instead of the 100 m originally planned. These efforts should be continued to streamline data collection., all data and information collected through BME should directly serve monitoring purposes. By concentrating on pertinent and applicable data, assigned staff will likely derive a greater sense of accomplishment and motivation.

36. Field-testing of the BME system has been performed at all COREMAP sites, with varying degrees of completeness. While COREMAP staff have already made progress in keeping the level of skill of the surveyors to a minimum, involving field facilitators and local people as much as possible, efforts need to be continued to simplify the BME socio-economic monitoring approach so that local communities and fishers are able to participate and use the results as inputs for generating their own resource management plans.

37. Given the complexity of the program as well as the limited staff experience and resources, CRITC should focus only on activities that provide MCS data relevant to sustainable community-based management. CRITC could become an important source of information for formulating alternative management strategies at the national, provincial, and district or village levels.

38. There are some weaknesses in coordination between the different CRITC centers² that will need to be addressed. It was originally planned that the regional CRITCs would take primary responsibility for research and monitoring and no funding was provided to the central CRITC. While the regional CRITCs have a critical role, there is also a need for an active central CRITC role in coordination, provision of expert services (e.g. GIS, experimental design) and to establish with the regional CRITCs, national standards and to monitor compliance with these standards. At the regional level, Provincial Pokjas should be encouraged to review and integrate their action plans so that CRITC work is directed to support regional information priorities for information. A better process of coordination between central, provincial and district level CRITCs will need to be established, especially in determining what issues should be studied.

39. Staff and financial constraints are affecting the quality and quantity of CRITC work. CRITC staff contributions have been varied since most have full-time jobs at other government offices, which sometimes have no relation to COREMAP programs. Some CRITC staff such as those in the central CRITC demonstrate a very high level of commitment. Efforts should be made to maintain specialized and experienced CRITC staff in their work or arrange for CRITC staff to continue working with CRITC even if they are posted to new positions. It takes time to develop skills in sampling design, data analysis and results reporting along with a sound understanding of COREMAP objectives. On the job training of

² COREMAP Consolidated Report January 2001-April 2002, p.39

CRITC staff will be important to familiarize staff with evolving materials and methods for coral reef conservation and management studies.

4.1 Recommendations

- 12) The CRITCs should focus their programs on the ultimate objective of sustainable community-based management of the coral reef ecosystem while maintaining some high quality work on research and monitoring to international standards. This could be done by selecting existing sites such as at Riau and South Sulawesi for more intensive international standard analysis while pursuing more simple and community oriented assessment at other locations.
- 13) CRITC should collect only functional data useful for COREMAP objectives.
- 14) Survey and data collection should be designed to allow local communities and fishers to participate and to receive information useful for their own provided to the communities for planning and management needs.
- 15) Accessibility and utility of standardized CRITC data and information can be improved by establishing better linkages between the PMO, provincial and district level CRITCs as well as international coral reef networks.
- 16) Coordination between the different CRITC centers and program components should be improved to increase the effectiveness of planning, implementation and monitoring activities.
- 17) In view of limited number of staff with expertise in CRITC and the level of specialized knowledge necessary, there should be (a) more training, (b) efforts to keep staff on CRITC work, and (c) opportunities for staff to continue working on CRITC even if posted elsewhere.

5. Capability Building and Training

40. The Phase I design anticipated developing the capacity of COREMAP to provide training on an ongoing basis. Each donor/lender funded component had its own training element in Phase I but the majority of the training program was provided by an AusAID supported COREMAP Capability Building and Training sub project. A Training Coordination Unit (TCU) was created in the PMO, which worked with counterparts in the provincial Pokjas and districts to coordinate regional training. Although this project has a program-wide focus, it operates as a separate unit within the PMO. The PMO appointed a National Training Coordinator to promote a more coherent program-wide approach. It was agreed they would both serve on a Training Committee that selects and approves funding for specific training activities. It meets regularly in conjunction with Project Coordinating Committee meetings.

5.1 Strategy and Programs

41. The TCU's emphasis in its strategy on a participatory approach is designed to strengthen the capacity of the Pokja personnel at the regional level. The TCU has encouraged training coordinators in the Pokjas to create Training Coordination Teams at both the provincial and district levels. All training courses are based on proposals received from the regional COREMAP offices. The process of participating in Training Needs Assessment (TNA), preparing proposals for training and conducting training has strengthened the capacity at the regional level for managing training. It has been an appropriate strategy to advance the COREMAP objectives of developing local capability. As the COREMAP program is decentralized in the next phase with the PMO in Jakarta playing more of a facilitating role, this approach should be examined for possible replication in other components

42. The TCU has created a thorough and well-structured planning process from needs assessment through to evaluation. It has produced a procedures manual and a set of principles (participatory, applicable

competencies, affirmative action and practical training objectives) to guide the whole training process. It produces annual work plans based on TNAs and trainee feedback. Participant comments are assessed and used to modify the training program in the following year. As a result, other COREMAP components, which have their own training activities, have increasingly drawn on TCU support.

43. The program has succeeded in training large numbers with 1115 participating in 74 courses held in 6 locations in 2001. Some COREMAP personnel such as the reef watchers in Biak have participated in up to six courses. More than 60% of the participants rated the courses as useful. Most stakeholder groups were represented in these courses.

44. Field observation and discussions with community groups at the COREMAP sites indicated that the capability building and training program has contributed to significant changes in attitudes, both in relation to the level of society participation and to commitment to sustainable management of coral reefs. This attitude change should be recognized as an important indicator of success of the training efforts in view of the short period of time the program has been operational at these locations.

45. In summary, this project has been successful in creating a training strategy and process, establishing a training infrastructure and developing capacity. It has created a re-orientation in the training components approach from a top down to a more participatory and outcome-based approach. The regionally derived program approach provides a good model to be followed in a Phase II as more responsibility is transferred to the district level. Participant evaluations and consistent feedback in interviews indicated that the training program has improved motivation and capability.

46. There are some issues in Phase I that need to be addressed. Training carried out independently by different components in Phase I was not as efficient as it could have been had TCU developed and managed a more comprehensive strategy and program. TCU's more integrated approach of providing training across all regions should be pursued in a second phase.

47. The management infrastructure (which includes a Training Committee, the TCU and the NTC at the national level plus the training teams at the provincial level), has created a functioning training program. This, however, was not sufficiently integrated into the overall program and lacked coordination by the PMO. While the PMO created the TC and appointed a National Training Coordinator to promote greater integration, it would be better in a second phase to have one training unit headed by a chief who is part of the PMO management team..

48. The original Phase I design anticipated that CRITC would take on the role of training over time and there are logical reasons for this. However, both the significant demands on CRITC of creating a viable research and monitoring system and the separate specific expertise and demands of a training program in a Phase II suggest that it might be appropriate to maintain a separate training unit in the second phase, or at least for a significant part of the second phase.

49. The capacity of COREMAP staff continues to be limited in most areas even though each component has some very capable individuals. The focus of the program on strengthening COREMAP staff capacity at the regional level has been appropriate but the strategy will need to be re-considered for a second phase if the districts are to take on a larger management role. Short term courses are useful in providing upgrading of skills but an overall strategy and a more intensive training program may be necessary to create sufficient capacity at the district level, particularly for new sites. The limited number of capable staff at the district level has to raise concerns about their ability to manage major new responsibilities in a second phase. Staff in Phase II will need to be strengthened in both quality and responsibility with the use also of short and long term consultants.

50. A second constituency that needs more attention is training at the community level. While there was evidence that community training has been a factor in increasing support for COREMAP objectives, there were still many evident weaknesses in such areas as financial management and business skills to manage AIG activities. The TCU has begun to direct more attention to training at the community level but some training will probably need either much higher levels of training for the senior field facilitators based at

the district level who are giving some of the training and more outside expertise brought in as the range of training courses expands.

51. One problem, which might be addressed through the training program, is the jealousy felt by surrounding villages who feel they should also have COREMAP support. The COREMAP program does not have the capacity or the resources to respond to such demands even though these will likely grow. The training program could however offer training opportunities to other villages at little extra cost. This might spread the influence of COREMAP ideas to surrounding villages creating a broader impact than COREMAP can achieve by intensive work in a limited number of villages.

52. The need for training is unlikely to decline at least in the first half of the next phase. It will be difficult to balance the need for more intensive training of COREMAP personnel at the district level with the need to also increase the level of training provided to communities.

53. The quality of trainers and the contents of training courses will need more attention in a second phase. A TNA workshop identified the need to improve the contents of courses and the development of more training material. This material should increasingly incorporate COREMAP experience so that it has greater relevance to participants and serves to bring lessons to the attention of COREMAP staff. The program has not yet been able to develop a certification process for trainers and the program will have to keep screening the trainers' capabilities in order to upgrade quality. The quality and commitment of LSM staff was noted and it may be useful to negotiate a more long-term agreement with some LSMs that will allow them to upgrade staff expertise and develop a stronger training cadre at the local level. There were limited opportunities to bring together COREMAP (and community) participants from different locations in Phase I as was done through networking for the provincial and district training coordination teams from all pilot locations. While the costs may be somewhat higher, there was evidence that COREMAP staff valued and were motivated by exchanging experiences from other locations.

5.2 Recommendations

- 18) All training activities in Phase II should be integrated and coordinated by a training unit. While the COREMAP program will be decentralized in a second phase, there will be a need for a small national component, not only to assist in planning training at the regional level but to organize specialized training that cuts across many locations. Strengthening and shifting more responsibility to regional trainer teams should be a primary objective.
- 19) The training strategy and participatory process pursued by the AusAID training program is a sound model appropriate to the objectives of COREMAP and should be continued in a Phase II. Continuing support for this program to the end of the overall AusAID project would allow for the development of skills needed to prepare for the decentralization expected in a second phase.
- 20) A major training needs assessment, particularly for new site locations, should be undertaken by all COREMAP components to assess what skill upgrading is needed to allow district governments to take on more responsibility for COREMAP
- 21) Community training should take an increasing share of training resources, targeting weaknesses such as financial and business management skills for AIG and community involvement in CRITC and MCS activities.
- 22) The training program should increasingly draw on COREMAP experience for training material and provide for more common training activities across different sites.
- 23) Consideration should be given to negotiating long-term training contracts with organizations such as LSMs to allow them to commit resources to upgrading their training capabilities.

6. Monitoring, Control and Surveillance

54. The World Bank COREMAP project design incorporated a major Monitoring, Control and Surveillance component to reduce destructive fishing activities, particularly the use of explosives and poisons and over fishing. Enforcement of fishery rules is necessary if COREMAP is to be successful. As in some other countries, there has not historically been in Indonesia a strong commitment to enforce fishery regulations and where they have existed, local communities have not been empowered to enforce them. The traditional approach to fisheries management globally has been for governments to attempt to enforce limits on fishing effort and/or on total catch. By themselves, these attempts have usually failed to achieve the objective of maximum sustainable catch for a variety of reasons, including continuous improvements in fishing technology and the difficulty of monitoring and enforcing these limits. Worldwide, there has been a growing realization that catch and effort management should be reinforced by no-take areas. COREMAP provides a framework for such combined management.

55. Similarly, in common with other countries, there has historically not been a strong awareness of the long-term destructive effects of various fishery methods, particularly blast fishing and the use of poisons. One major cause of this situation has been a lack of recognition that fish productivity in coral reefs is dependent on general reef health.

56. While progress varies between COREMAP communities, much success has already been achieved in some sites in applying this combined concept. This is evident in the COREMAP communities where strong CBM programming is positively linked to increased community awareness, commitment to sustainable fishing and the protection of the living resources upon which this depends. As well, significant reductions in illegal fishing have already occurred in those communities. Conversely, in those sites where the CBM program has not been developed, there is a much lower level of community awareness and commitment to the primary objectives of COREMAP, and a significantly smaller reduction in illegal fishing, even where the MCS program has been pursued and reef watchers have been well trained (e.g., at Bromsi in the Biak district).

57. There remain some threats to competent enforcement that still need to be addressed within COREMAP if communities are to maintain confidence that violators will be dealt with for the good of the community. The commitment of the GOI to autonomy at the provincial level is empowering communities. ADAT laws or new regulations have the potential to be used to maintain traditional rights of use in the marine environment- to encapsulate in regulations the traditional fishing rights of villages. It was noted that while a village is usually capable of enforcing fishing rules on its inhabitants, there are serious difficulties in that village enforcing those rules on others. The total reliance on the Navy, Military or Security (the police) to carry out enforcement has not been generally successful, but combined with CBM, the assistance of those forces can be very effective.

58. It is **recommended** that:

- 24) New regulations be enacted giving powers to each village to enforce rules prohibiting fishing by outsiders who have not traditionally fished in the area that has been traditionally fished by that village;
- 25) Regulations be established under Autonomy laws that control fishing at district and village level so as to discourage over-fishing;
- 26) Regulations be enacted as soon as practicable legally establishing coral reef management plans;
- 27) Under the CBM program, relevant Naval, Military and Security personnel be encouraged to attend management committee meetings at both district and village level and undertake to work with the community to enforce fishery rules; and

- 28) The Government of Indonesia considers ways of reducing the existing incentives for Naval, Military or Security personnel to encourage or ignore illegal fishing activities.

6.1 Integration of MCS into Community Based Management (CBM)

59. In Phase I, regard has been given to matching the MCS models to the attributes of the various regions. In the Riau area, the model has been based on CBM, using mainly equipment with which the local community is familiar, supplemented by technology that is relatively unsophisticated. This approach is clearly working very well in relation to enforcement of fishing rules by each village on inhabitants of that village. The villages are also obtaining support from the military and security by making them part of district committees, so that these forces can support the village in enforcement applied to non-residents.

60. This approach is considered ideal from all viewpoints. It maximizes the self-reliance and commitment of the villagers, minimizes cost and provides the best foundation for long-term organizational and financial sustainability.

61. This approach has not been followed at sites in Biak and Take Bonerate, where expensive, high-speed boats have been purchased. It is appreciated that the size and complexity of the Take Bonerate MPA and Biak area make the use of fast enforcement boats more justifiable for effective enforcement. However, the problems of training, sustainability and self-sufficiency caused by this policy have been exacerbated by installing Johnson outboard motors on purpose-built aluminum boats. These outboards are sophisticated and maintenance and repair are not available near the villages. The above comment applies equally to other equipment such as communication and position-fixing devices.

62. The resultant problems are manifold. The speedboats do not perform as well as “off-the-shelf” vessels, being “cranky” and difficult to sail smoothly. Local personnel feel that better enforcement results would be obtained from installing currently available powerful engines on conventional wooden boats. Apart from cost, ease of operation and maintenance, and reliability, these boats would be less recognizable and therefore more able to interdict illegal fishers “in the act.” The panel was assured that these wooden vessels have a life exceeding ten years, if reasonably maintained.

63. At both Biak and Take Bonerate radar systems have been installed. The radar system requires a lot of human resources to operate and benefits are questionable. Being unable to identify whether boats picked up on the radar are acting illegally, the radar must be complemented by direct field observation from boats or land in order to identify whether violations are occurring or even to determine what kind of boat is involved and what it is doing. COREMAP staff in Biak and Take Bonerate confirmed that radar has not been useful. Ironically, the only successful prosecution for illegal fishing that has occurred at the Pai site in Biak arose from a visual sighting from the radar site, without assistance from the radar.

64. Arguments for adoption of a less capital-intensive approach are not restricted to the initial capital cost and the ease of operation and maintenance. An important additional reason is that, in later phases of COREMAP, replacement and maintenance of sophisticated equipment will be a financial and operational burden on local communities or government that will threaten the sustainability of the program.

65. It is **recommended** that:

- 29) MCS be integrated into CBM at all COREMAP sites;
- 30) Equipment and methods used in MCS be at the lowest practicable level of sophistication and cost, commensurate with meeting MCS objectives;
- 31) The use of land-based radar be discontinued; and
- 32) Where high-speed enforcement vessels are necessary, a primary criterion for selection of equipment should be ease of maintenance and community familiarity.

6.2 Enforcement and Reef Watcher Training

66. Enforcement and appropriate training varies by site. In Riau, most infringements are by local villagers using relatively low-tech equipment, MCS training is comparatively straightforward and the materials and techniques are appropriate to the local levels of education. Villagers expressed appreciation for the training they have received and are confident in their ability to carry out effective monitoring, surveillance and enforcement with assistance from the Navy, and other enforcement agencies only in relation to violations by non-locals, which are less common than at other sites..

67. In Biak and Take Bonerate, the selection of high-tech equipment has made training and performance more difficult. Training in radar operation has been inadequate at both sites. Neither installation functions effectively and the manuals are in English only, even though local operators do not speak English. The problem has been exacerbated in Biak, where the MCS program has not been built on the foundation of a CBM program. For instance, at Bromsi, there was little evidence of general community awareness of COREMAP, and it was clear that the reduction in illegal fishing by members of the community was less than at sites where there was an integration of the MCS program into the CBM program.

68. While a high proportion of residents (70%- 90%) at Take Bonerate support the COREMAP objectives, villagers indicated they are afraid to report fishing violations by outsiders because they feel threatened by a few powerful locals or by Naval units that receive financial rewards from illegal fishing. There is a general failure by security personnel to pursue prosecutions, even when violators have been caught and evidence of the violation is obtained. This issue may in the long term be the greatest threat to the successful continuation of COREMAP. Communities are unlikely voluntarily to follow sustainable fishing procedures in the face of unpunished violations by important or powerful people or interests. This is particularly true when such interests include enforcement agencies.

69. Training in enforcement at all levels (from central government to village) is playing a critical role and must be continued at each level and site in view of the turnover in MCS personnel, site variations and expansion needs.

70. It is **recommended** that:

- 33) Training of reef watchers and others in local communities in monitoring, surveillance and control occur within the context of general community training and education under a properly financed CBM program;
- 34) The need for continued training in all aspects of enforcement at all levels (central government to village) be recognized.

6.3 MCS Manuals

71. Several features of the MCS manuals deserve positive comment. First, the objectives and policies on which they are based and that are set out in the National Manual are considered to be close to optimal. The recognition of the need for coordination at and between all levels of government and community is an important feature. Second, the realization that “fishers will comply with fisheries laws and regulations only to the extent they feel they will benefit or to the extent they consider non-compliance to be more costly than compliance” provides a criterion that should dictate all policies and actions relating to MCS. Third, the aim of COREMAP to develop a sense of “rights” of communities and individuals should provide a sound foundation for overcoming “the tragedy of the commons”. Fourth, the whole concept of establishing the reef watchers program and training them in all aspects of monitoring, surveillance and control (including conditional involvement in direct enforcement) will lead to the development of strong community commitment and sense of ownership of COREMAP, only if such training is accompanied by a strong CBM program.

72. In summary, the MCS National Manual (draft August 1999) is considered most appropriate in terms of objectives and policies.

73. The manuals for the individual sites are explicit and provide detailed guidance covering all operational aspects of MCS. However, there is little reference in these manuals to the general policies set out in the National Manual that will in the long term determine the success or failure of COREMAP. Recognizing that, even with explicit guidance, field operations encounter situations that demand the application of judgment based on general policies, it is recommended that all field personnel receive training in the fundamental policies set out in the National Manual.

74. It should be noted that there is a need for translation of all manuals into Indonesian since it was noted that the radar operators at Bromsi and at Rajani Kecil, have no instruction manual in Indonesian.

75. It is **recommended** that:

- 35) All field personnel should receive training in the fundamental policies set out in the National Manual.

6.4 MCS Patrolling

76. The situation regarding regular patrolling varies between sites. In Riau, no speedboats or large transport vessel have been obtained, and this is seen as beneficial, in both the short and long terms. The reef watcher program is functioning effectively. Support from Fisheries or the Navy may now be needed to deal with repeated infringements by a high-speed boat coming from a neighboring village.

77. At the sites in Biak and Take Bonerate, the situation is much less satisfactory. The communities have received no funding for fuel since March 2002 and patrols using speedboats have not been conducted regularly at Biak or Take Bonerate since then. The only way the MCS program has been able to be conducted at Biak has been for the project vessels to be used periodically for commercial traffic in order to obtain money for fuel. While this could be regarded as a step towards self-sufficiency, it should only occur formally within the COREMAP program, with proper accounting of all transactions. The MCS situation at Take Bonerate is unsatisfactory and must be rated as ineffectual. Reductions in illegal or destructive fishing have come from community pressure, not the MCS system. Apart from fuel and equipment problems, the MCS system cannot function effectively because fishers and other community members are afraid to report illegal activities because of fear of retaliation from the Navy, some elements of which support illegal fishing. There has been a complete failure by security or government agencies to pursue prosecution of violators.

6.5 Data Collection, Reporting and Recording

78. As with all data collection systems, COREMAP has to resolve the conflict between collecting all available data and limiting data collected to those that are essential to meeting the primary objective of an effective MCS.

79. Most databases collect and hold some data that are not essential to the primary functions for which the data system has been established. In the case of Indonesia, where the use of carefully collected data for management decision-making is a comparatively new development, it is necessary that only data vital to attaining the COREMAP objectives be collected; that those data be in a form suitable to assist decision-making; and that the data be conveyed quickly to decision-makers.

80. Samples of forms used by reef watchers for data collection for MCS purposes were very suitable. Forms from Biak have not been entered regularly because of the irregularity of patrols described above. As community based management evolves, there is a need for those forms to be used primarily at the community level for decision-making regarding the detection and prevention of illegal activities. The need for rapid conveyance of those data to CRITC in Jakarta is less, although copies of the forms should continue to be sent there regularly for analysis.

81. It is **recommended** that:

- 36) Only MCS data vital to attaining the COREMAP objectives be collected.

6.6 Compliance Levels

82. Compliance levels appear to be improving continuously at all sites visited. The highest levels of improvement were observed at locations where the MCS system is embedded in a Community Based Management program and where appropriate technology has been used, such as in Riau. Lower levels of improvement were reported by reef watchers at sites where CBM has been developed less, such as in Biak, and where emphasis is on sophisticated equipment, such as in Biak and Take Bonerate.

7. Public Awareness

83. Phase I included a substantial proportion, representing more than 30 per cent of the World Bank loan, for a public awareness component. The effort devoted to public communication activities was based on the view that there was limited awareness of the risks posed by destruction of the coral reefs and that the public needed to be persuaded of the importance of preserving the coral reefs if there was to be any chance of sustaining this resource.

84. The program was delayed in starting but achieved its objectives during this first phase. A substantial proportion of the resources used in this program were devoted to general public awareness with video, radio and other media events to raise awareness of the importance of preserving the coral reef. Children's games were produced for schools along with a teacher training workshops. The quality of the program was recognized by an award from the International Association of Business Communicators.

85. The success of this program was validated in the number of outreach activities achieved and the effects on public understanding as measured in a public survey undertaken in 2000 and 2001³.

86. By December 2001, 63% of the general public and 71% of coastal community residents were aware of COREMAP's *Selamatkan Terumbu Karang--SeKarang!* (Save the Coral Reefs—Now!) campaign. Campaign effects from media activities were larger within the general public than within coastal communities, probably due to greater urban access to media. People with higher exposure were more likely to think that coral reef destruction will affect them personally and less likely to think that corruption makes environmental management impossible or that fish stocks are inexhaustible (see Exhibit 7.1).

87. The survey found that over time, people see the role in marine resource management of central government, the army, and the police to be declining. The role of provincial government, local government, religious leaders, and – most importantly – of local people themselves in coral reef management has increased in perceived importance. People with more exposure to COREMAP communications were more likely to say that individual fishermen and the community together should take the initiative.⁴

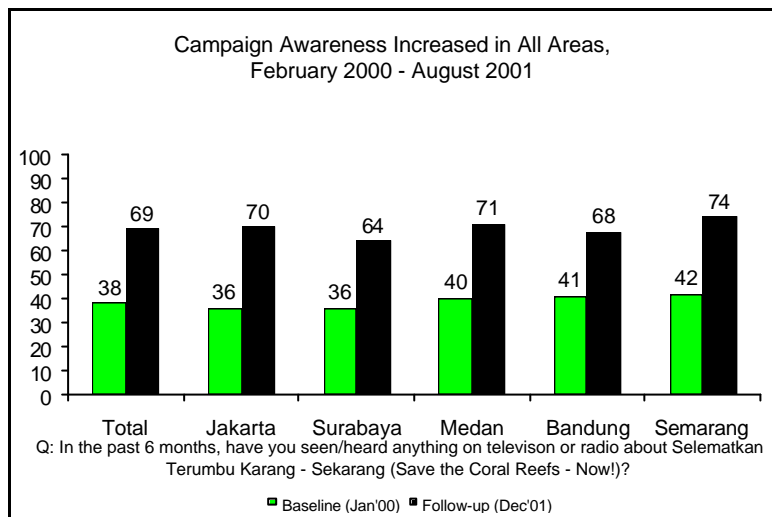
88. In coastal areas, although some attitudes toward coral reef management continue to be negative overall, exposure to COREMAP reversed that trend. Attendance at community meetings rose from 31% with no exposure, 45% with low exposure, and 57% with high exposure. Overall participation in COREMAP meetings rose from 25% in the six months prior to January 2000 to 45% by December 2001.

³ ACNeilson surveys commissioned in 2000 and 2001 by COREMAP cited in John Hopkins University Final Report,

⁴ JHUCCP COREMAP Final Report, 13 September 1999-31 January, 2002. p iv

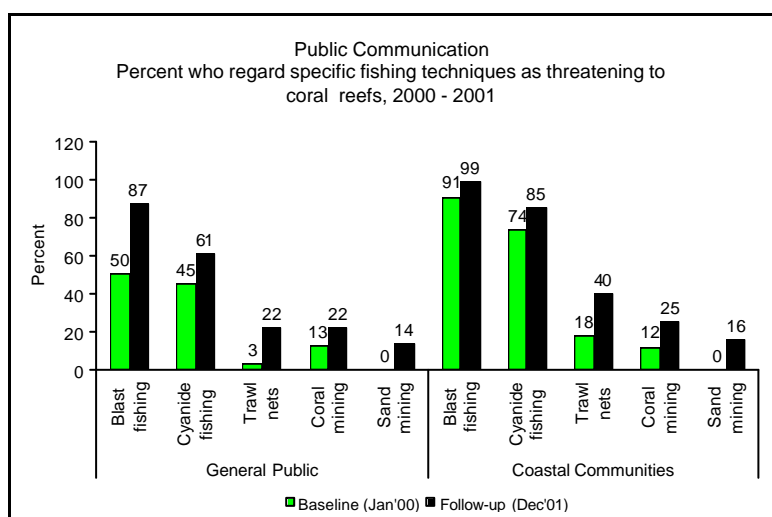
Only 38% of fishermen with no exposure to COREMAP communications reported having any discussions about coral reef, compared to 64% with high exposure.

Exhibit 7.1 Campaign Awareness



89. An increase in the reported use of relatively reef-friendly techniques appears to be related to COREMAP exposure. About 39% of fishermen with low to medium exposure to COREMAP communications reported using hook & line techniques, compared to 46% of fishermen with high exposure. Approximately 1% of those with low exposure reported using cast nets, compared to 6% with medium or high exposure, and roughly 2% with low exposure reported using rumpon, compared to 11% with high exposure.

Exhibit 7.2 Awareness of threatening fishing techniques



90. All COREMAP locations were positively affected by the campaign, but the overall impact was greatest in Riau and lowest in Biak, which correlates closely to the level of CBM activity in each location. There was however a lack of integration with the CBM work at the village level which reduced the value

of this component at the village level.⁵ There was good educational material at the community level with signposts placed in all communities and teaching material for schools, although the quantity was very limited in some community libraries and local schools.

91. One interesting development has come about through the Coral Reef Ambassadors program that brings committed young people to Jakarta for an award ceremony and national publicity. Other coral reef programs supported by other agencies have begun to participate in this award program. This is a positive step toward cooperation among all coral reef programs in Indonesia, which should be extended to other areas.

92. The Public Communications program needs to be maintained if it is to continue reinforcing the messages developed in the first phase and add some new dimensions. There was limited effort in the first phase to identify specific stakeholder groups, determine their interests, produce materials and create appropriate dissemination methods. The role of enforcement agencies is crucial for effective MCS but representatives from these agencies said that their colleagues had little information available to them. The support of various political bodies will be necessary, targeting groups from the House of Representatives at the village level right up to the national parliament.

93. The program should also be more closely linked with the CBM program at the villages supporting the public communications plans of local staff, using more print media to reach the coastal communities and linking more closely with the BME efforts of the CRITC program.

7.1 Recommendations

94. It is recommended that a public communications component be continued in a second phase with the following changes:

- 37) The program should be continued with a national program maintained at a lower cost by using the effective material and staff expertise developed in phase I. External technical assistance should not be necessary in a second phase.
- 38) More resources should be targeted to areas and groups most immediately involved with COREMAP activities. Additional material may be required to reach groups who have not been sufficiently targeted such as NGOs, enforcement agencies and the justice system, key decision makers at the political level and the seven universities with marine science departments.
- 39) It should be integrated with the other components at the district and local level as a component of the CBM program.
- 40) COREMAP staff at the district level, facilitators and others involved in CBM should be given more opportunity to identify strategies and material most effective in informing and enhancing community support. This may involve the production of local knowledge material at the village level and activities such as cross community exchanges and presentations.

8. Community Based Management

95. Community-based management (CBM) of coral reefs is intended to be the 'core' of COREMAP. The Program aims to empower communities to design, implement, monitor and secure legal endorsement of coral reef management plans as well as to introduce reef sanctuaries, controls on fishing access, and other activities for reducing threats to reefs and achieving sustainability. CBM activities are supported through

⁵ Hunnam, P. Mid-Term Evaluation, 1998-2000 p.17

field facilitators, technical assistance, training, and small grants. The design stresses process, flexibility, and an intensive focus on a small number of sites to draw lessons for future phases.

96. Four pilot sites were selected for the initiation phase although two of the original sites selected were changed due to security concerns.

97. The CBM component was found to have contributed significantly to the success of Phase I in Riau and TBR. There was a high level of awareness and motivation of community groups in Riau, which developed modest AIG activities, supported the reef watchers and developed CRMPs. CRMPs were established in all 7 villages in Riau and no-take zones were created. There are few external violators in Riau and the community was able to exert pressure on village violators. The rate of success was also satisfactory in TBR where the same elements were in place. CRMPs have been created in all villages and received some level of formal endorsement at up to the district level. However the evidence of community support was not as strong and the MCS component was not as integrated into the CBM program. Enforcement problems also make the TBR experience somewhat less positive.

98. With no CBM component in Biak, COREMAP has made very limited progress in developing community participation. Virtually all concerned stakeholders (including members of the local government and the local COREMAP team) agreed that the success of the Program in Biak will depend on the full implementation of CBM. The inability of COREMAP to foster a strong CBM component in Padaido must be regarded as one of the major failings of the Program. See Exhibit 8.1. The experiment of trying a MCS Plus approach should probably not be pursued in a second phase and with good NGO capability in Biak, it should be possible to quickly develop CBM in Biak in future.

99. COREMAP activities at Maumere have only recently begun, and consequently, no major CBM milestones have yet been achieved

8.1 Recommendations

- 41) The community needs to be defined in broad and inclusive sense. All relevant stakeholders should participate in COREMAP training, and committees as legitimate actors..
- 42) CBM must be recognized as the main Program thrust if efforts to preserve reef ecosystems are to be sustainable. The integration of other components with CBM (including MCS, training, research, awareness-building) needs to be given a high priority.
- 43) The Riau model, which includes a flexible, adaptive approach to management appears to be the most appropriate for replication in the next phase of the Program. Such an approach allows for variations in management strategies that are needed to respond to site-specific differences.
- 44) A balance must be achieved between activities aimed purely at reef conservation and those targeting improvements in the quality of life within a community. In keeping with the overall conservation objectives of the Program, community improvement should emphasize sustainable socioeconomic activities that promote alternative livelihoods and social infrastructure projects that conserve resources, improve public health, or reduce pollution.⁶
- 45) A systematic plan should be drawn up in part of Phase II to gradually transfer responsibility for self-management to the communities. Community facilitators could begin to reduce their time in one village and start working in new villages.

⁶ Hunnam, Peter November 2000. *Mid-term Evaluation Report, 1998-2000. COREMAP Phase I*. p.21: "...it is essential to take into account all aspects of the lives of the local people who depend on coastal marine resources...CBM needs to be guided at least as much by social and economic considerations as by biological protection."

- 46) COREMAP should adopt a broader ecosystem-based approach in addressing coral reef and biodiversity conservation, and take steps to ensure that all assistance given is consistent with these broader objectives. The current conservation focus of COREMAP (the prevention of blast and poison fishing) is fairly narrowly focused on blast and poison fishing and there has been little recognition given to other negative factors especially from over fishing.
- 47) A uniform 'environmental code of conduct' should be defined and adopted by the Program and promoted within the communities. While complete compliance may be difficult to achieve, communities may ultimately accept at least a voluntary code of conduct
- 48) More technical assistance is needed to develop a portfolio of viable AIG possibilities and the risks involved to present to villagers along with more training and assistance in developing AIG activities.
- 49) A cooperating NGO partner must be identified as a priority issue for the Biak-Padaido site. COREMAP should build on the substantial outputs of Rumsram in the communities in this area.

Exhibit 8.1 The case of Padaido

The Case of Padaido
<p>The World Bank indicated that it was asked by Rumsram not to engage in CBM activities at Padaido during the design of Phase I.⁷ Rumsram, a local NGO has been working for eleven years exclusively on developing community-based management of coastal resources in the local communities of the Padaido Islands and Eastern Biak. It has a demonstrable track record in Padaido including the establishment of village-level working groups; revitalization of traditional tribal councils; conduct of community mapping; identification of protected coral reef areas; training and development of AIG activities. While there is no formal agreement with COREMAP, Rumsram has assisted COREMAP through conducting small business management training; helping in the selection of Reef Watchers for the MCS program; assisting in the launch of the Sekarang program, placing COREMAP billboards in the region and training of teachers. While some of this was done under a contract from the Public Communications program, other support was freely provided.</p> <p>The Bank and Rumsram have different perceptions on the reasons for the difficult relationship that exists between the two. At a meeting in August 2001, KEHATI, a national NGO that has been providing funding to Rumsram, suggested that it would be better to integrate and create synergies between KEHATI and COREMAP sponsored efforts at Padaido. It is clear that some such form of integration would be desirable and that an NGO partner needs to be identified for the CBM program in Padaido. Rumsram expressed interest in a contract to work on CBM for COREMAP. The World Bank decided to use a competitive bidding process and gathered, a number of NGOs, including Rumsram in May 2002 to invite them to submit new proposals for NGO services at Biak-Padaido.</p> <p>Whatever the reasons for the delay in initiating CBM in Padaido, it has had a negative impact on the program in this location. This experience illustrates the importance of carefully considering the social and economic factors when choosing new sites.</p> <p>Bank procedures for competitive bidding also create the potential for a very difficult situation if Rumsram is not selected. Either Rumsram would have to withdraw from the only area they work on and start somewhere else or there would be two competing NGOs active in the same villages with similar programs. The World Bank should consider sole source contracting in such a case.</p> <p>At some point, COREMAP will have to develop a strategy for working with other organizations active in coral reef preservation or coastal community development to pursue complimentary activities that do not involve a contractual relationship with COREMAP. This may have been a missed opportunity to test the value of working in partnership with another organization, perhaps with some financial support for agreed activities, rather than pursuing only contractual arrangements where the local partner works under contract for COREMAP..</p>

⁷ Annex A, Joint World Bank—Asian Development Bank Aide Memoire, Identification Mission & Preliminary Discussions, Second Coral Reef Rehabilitation and Management Project (Second COREMAP). February 4—March 1, 2002.

8.2 Community Representation and Participation

100. Significant differences are found in the levels of community involvement and participation at the different COREMAP sites reflecting both the social diversity of Indonesia as well as COREMAP implementation effectiveness.

101. Although CBM activities at Maumere have only recently begun, some community groups have been formed (around gender and the environment) and expressed support for the COREMAP program.

102. Both in Riau and TBR, the following elements have been utilized in the mobilization and socialization process: formation of community groups and democratic selection of Village Motivators; community-based village profiling and data gathering (e.g. Reef Check, history transects, etc.) and selection of a marine sanctuary area. Community representation is also enhanced through other supporting activities, such as the public awareness campaign and development of community-based MCS capabilities.

103. Site visits confirmed high levels of community awareness and support which were reported to be up to 80% of the communities in Riau and even higher in some of the villages in TBR. At both Riau and Take Bonerate, three community groups (production, conservation, and gender) have been established in all COREMAP villages, and each village has democratically elected motivators (1 per village in Riau, 3 per village in TBR).

104. There were notable differences in the styles of decision-making at the village sites, ranging from more openly democratic to clearly 'top-down' structures. Tensions have developed in some villages when the COREMAP mobilization process began. In one case in TBR, a village headman misinterpreted a COREMAP community forum as a decision-making body that would challenge his authority.⁸ While such problems have been resolved, the formation of community groups will need to be carried out with care and sensitivity in order not to disrupt traditional structures that ensure community stability while, at the same time, promoting effective representation for all stakeholders.

105. In summary, the processes employed in Phase I of COREMAP to mobilize the community and to introduce community-based management have been generally effective. They can be enhanced through further complementary activities that reward the community for their participation without, encouraging excessive dependency on external support

8.2.1 Role of LSMs

106. In Riau, a consortium comprising two LSMs and a local university has provided effective field facilitators who live in the communities. At TBR, a local NGO, LP3M, has also been quite effective. Although Rumsram is not formally operating as part of COREMAP, Rumsram has been active in the villages at the Biak site and has made some significant steps in organizing community-based management. NGOs are involved in the POKJA and have contributed in training, RRA and other activities in Maumere. Overall, the level of participation of local NGOs working in the community is a key element that is directly linked to the relative overall success rate of CBM in the various sites.

8.3 Seed Funds, Village Grants, and Revolving Funds

8.3.1 Seed Funds

107. Once defined milestones have been achieved, COREMAP provides seed funds to communities in several stages as shown in Exhibit 8.2.

⁸ Hunnam, November 2000. p. 21.

Exhibit 8.3 Milestones and Description of COREMAP Seed Funds in Riau

MILESTONE ACHIEVED	FUNDING TO FOLLOW
Initial community preparation done	Rp. 2 million 'community trust fund'
Community profiling completed	Funds for environmental improvement activities, including such functions as improvement of water supply, solid waste management, and mangrove reforestation
Delineation of marine protected area (MPA) done and preparation of coral reef management plans (CRMPs) initiated	Funds for promotion of alternative income generation (AIG) activities

8.3.2 Village Grants

108. Village grants are funds contributed jointly by GOI and the donor (in Riau, 60% government contribution and 40% ADB contribution). Release of village grant funds is tied to successful completion of the coral reef management plan. These funds are used to support such activities as development of community social infrastructure; the establishment of marine sanctuaries; and the setting up of information centers.

109. As of December 2001, Rp. 182,584,000 of seed funds and Rp. 209,743,000 of village grants had been disbursed to the communities in Riau.⁹ These village grants have been used to develop water resources, to install mooring buoys, and to set up information centers. At Take Bonerate, three tranches of seed funds have been disbursed to each village, totaling Rp 196,132,500. The communities in Take Bonerate utilize community information boards to track flow of seed funds – a process that has proven effective in ensuring transparency and financial accountability.¹⁰ Village grant funds will be used for water tanks, electricity, sanitation facilities, signboards for sanctuaries, installing mooring buoys, and setting up information centers. No seed funds or village grants have been disbursed in Biak and not yet in Maumere. While some tangible improvements within these communities have been achieved as a result of the seed fund and village grant programs, greater support could be given to improving community social infrastructure.

110. Some problems have arisen in the disbursement of village grant funds. In Rejoin Kecil, TBR, village motivators reported a delay in the release of promised village grant funds of Rp. 150,000,000 for completing the CRMP although the CRMP is not yet one year old. The CRMP had been approved by the Kabupaten, and informally accepted by PMO. However, the World Bank recommended that it be delayed until financial management capacity within the community was further strengthened. While the Bank's decision may have been justified on the basis of weakness in the community's financial management skills, villagers appear to have expectations for quick disbursement and every effort should be made to avoid long delays between completion of the CRMP and release of the grant funds to maintain village motivation.

111. The process of tying the release of village grant funds to the completion of conservation milestones has been criticized in an earlier review.¹¹ However, the evaluation team found that, even with the problems encountered at Rajuni Kecil, the community appreciates the close link between reef conservation and their own livelihood, particularly the importance of the reef for the live fish trade. Similarly, in Penaah, Riau, CBM groups have given 10% of their AIG proceeds to the reef watchers.

⁹ COREMAP PMO. March 2002. COREMAP Consolidated Report, January 2001-April 2002.

¹⁰ Ibid.

¹¹ Hunnam, November 2000, p. 21: "Grants should not be tied to designation of a sanctuary or production of a management plan. This would give the wrong message about COREMAP paying for reef protection measures. In TBR the prospect of COREMAP giving out money has led to an unhealthy pre-occupation with 'what do we have to say or do to get some?'"

Communities do need to have some inducement at the start and to see some benefit from the organizational and planning efforts that they put into conservation work, and thus these grants would appear to be an important stimulus for CBM. However, such incentives should be applied with caution so that it remains clear that coral reef protection is in the interest of the community and hence their responsibility.

112. The benefits of revolving fund scheme for the delivery of micro-credit have been well demonstrated elsewhere.¹² COREMAP provides Rp. 10 million in seed funds in each village as starting capital to a CBM group. Credit is provided to support collective, village-based activities. While all of the seven target communities at the Riau site have developed AIG activities, only four have established credit programs. At Take Bonerate, the seed fund has been revolved at least once, and by January 2002 a 63% repayment rate had been achieved on the first two seed fund tranches.¹³ Data on default rates was unavailable although the team was informed that there are some borrowers in default.

113. Proposals for loans in TBR are screened for environmental acceptability. These factors may have reduced the loan repayment rate somewhat (better repayment would be expected from individuals rather than groups, and on loans given for projects that focus primarily on economic viability rather than environmental sustainability). Applicants are required to go through a lengthy, five level approval process, before being granted access to small loans. Further experimentation is needed to determine the mixture of grant and loans, the use of loans for commercial ventures and methods to ensure financial accountability.

8.4 Alternative Income Generation

114. AIG activities are intended to promote community “buy-in” by offering new economic opportunities that will provide attractive alternatives to environmentally destructive practices. AIG activities have shown some initial but modest success. Small-scale enterprises in Riau, include tailoring, grouper fattening, food processing, coconut oil production, baked goods production, and handicrafts. An equally diverse range of activities has been initiated at TBR, comprising smoking and drying of fish by women’s groups, fishing net manufacture, retail fishery kiosks, seaweed farming pilot projects, floating cages (*karamba*), and manufacturing of coconut fiber products.

115. There was not enough evidence to show that COREMAP had adequately addressed the complexities in developing its AIG strategy. In some cases, recommendations made for AIG did not appear to be well thought-out. For instance, ecotourism development has been an element of the government plan for economic growth in Padaido and Biak. Periodic flights between Biak and Honolulu once gave international tourists access to the area, and small-scale tourism accommodations were established on some of the islands. These efforts suffered a critical setback when the international flights were cancelled. Nonetheless, the government still promotes ecotourism and COREMAP has conducted ecotourism training in the area. In Take Bonerate, ecotourism is also viewed as a promising alternative livelihood activity although it is unlikely that this will become a viable option until the necessary transportation infrastructure is established. Without this support, efforts to develop community-based ecotourism may fail, and participants will face considerable disappointment.

116. Since AIGs are intended in part to replace illegal or destructive fishing practices, fishers are the principal target beneficiaries. Certain AIG activities may not gain ready acceptance by fishers who may be unwilling to take up proposed land-based activities. Such activities may require extensive socialization before being accepted. These issues are difficult to address, and may only be resolved when highly

¹² Informants at Biak mentioned that certain GOI grants had been given with no consideration of how they might affect recipients’ attitudes toward pursuing productive employment.

¹³ COREMAP PMO. March 2002. COREMAP Consolidated Report, January 2001-April 2002.

lucrative yet sustainable activities are identified. There are clearly going to be cases when new AIGs will fail and community participants should be prepared during AIG training for this possibility.

117. These examples illustrate that the potential success of AIG activities depends on proper training and on being able to make informed decisions about which AIG options are the most feasible. The present bottom-up approach being used to define AIG options through a community needs assessment should be complemented by providing technical assistance for the conduct of comprehensive feasibility studies on different possibilities¹⁴. This is particularly important for sites like Biak and TBR which are distant from any major markets. COREMAP should finance studies to prepare a more diverse portfolio of AIG options that could then be provided to the communities, to be used for more informed decision-making.

8.5 Coral Reef Management Plans

118. The process of developing a CRMP or RPTK follows a logical sequence beginning with involvement of the community in resource identification and needs assessment activities. Community-based monitoring in cooperation with the global Reef-Check program has been conducted at some sites (Riau), and is planned for others (Maumere). Data gathered by trained technical specialists (coordinated through CRITC) and community stakeholders has contributed significantly to the database of targeted reef areas and the key issues that must be addressed for effective coral reef management (e.g., control of dynamite fishing, use of cyanide, illegal trawling, over fishing, impacts of sand mining and pollution, among others). The process of preparing CRMP by the community produces a tangible product that can be used not only for actual resource management, but also as a teaching tool to increase awareness.

119. Once the ecosystem is adequately described, and key problems identified, additional steps need to be undertaken for completion of the CRMP:

- Design of a management system for coral reef resources through the establishment of sanctuaries, adoption of zoning plans, enactment of local regulations;
- Monitoring systems such as the establishment of permanent monitoring stations or transects that allow comparative measurements over time to assess changes in reef health;
- Village organizations who will participate in the management and protection of coral reef and other coastal resources
- Drafting and formal adoption of the coral reef management plan which requires approval from the village head and the bupati and then adoption of the CRMP as a district regulation:

120. All villages in Riau have produced CRMPs, and have received approval by the bupati. They have been involved in mapping, developing history transects and identification of environmental problem areas (e.g., sand mining and erosion). Good participation of women and youth is reported. Twenty-two permanent monitoring sites in 7 villages have been set up with assistance from the CRITC. Similarly, in TBR, CRMPs have been finalized and endorsed by the *kepala desa* and village parliament in each community, and at least some have received endorsement from the kabupaten (district level), but still have not been adopted as PERDAs. A key feature of the CRMP process has been the establishment of coral reef and mangrove sanctuaries. All COREMAP villages in Riau and Take Bonerate have delineated such sanctuaries as ‘no-take’ zones. The MMA in Pasir Panjang is an example of establishing management zones over the total sea area surrounding an island, with one area “open access” and a

¹⁴ Hunnam’s report (1998) notes that: “the challenge for COREMAP is to make available information about a wider range of options – AIGs. COREMAP as a whole should invest in directed research and development analysis, to prepare a thicker portfolio of AIGs worth considering. An initial list of ideas includes tourism, ‘Earthwatch type researcher-tourists’, seaweed culture, fish processing and handling, live reef fishing (by non-destructive means), crafts, furniture making, local marketing, cooperative stores, schools and community services. COREMAP should make the analyses available to communities but not become a promoter (p.22).

second area subject to “restricted access” to a subset of fishing gears, which excludes trawlers and favors artisanal fishing methods. At Riau, sanctuaries were set up in areas with at least 15-25% live coral cover, and in close proximity to the villages so that they could be easily monitored. Similar criteria were used in TBR to identify proposed sanctuary areas, but with more emphasis on biological diversity as a selection criterion.

121. It was reported in both sites that coral reef sanctuary sites were selected on the basis that these areas were not heavily fished. While such a strategy is convenient and avoids conflict with fishers, they may be less rich than heavily fished areas. Therefore, some no-take zones should be set up in areas where there are high populations of commercially-important target species in order to ensure that protected breeding grounds are set aside for these species.

122. The ultimate measure of success would be demonstrable reduction of harmful practices (which can be detected over the short term) and measurable improvements in the quality and health of reefs (which typically take a longer time to observe¹⁵) as well as productivity and fish size. At Take Bonerate, an 85% reduction in the number of local fishers involved in illegal fishing activities has been recorded.¹⁶ Similar results have been achieved in Riau. However, these statistics may apply mostly to reductions in illegal activities from within the community.

9. Comparison of Field Trial Approaches

123. Different approaches to community-based management have been tried at Kepulauan Riau (ADB supported sites) with those implemented in Take Bonerate (TBR) and Biak (World Bank supported sites). Drawing lessons from the different experiences at these sites has to be done with caution since the number of sites is still very limited, the programs are still at an early stage of development and those communities exhibit very different social and economic conditions. However there do appear to be some lessons that can be drawn from this first phase.

Rigid Adherence to Targets vs. Flexible, Adaptive Approach

124. The World Bank supported component utilized intensive and detailed evaluation procedures, to ensure that targets for defined outputs have been met. However, this approach does not necessarily guarantee a desired outcome. By contrast, considerable flexibility and adaptability have been demonstrated in Riau. Specific problems that have occurred with the more programmed approach in TBR were:

- Stakeholder signatory statements were required acknowledging acceptance of the COREMAP program. It was found that this resulted in polarizing the community into two factions (of COREMAP adherents and non-adherents).¹⁷
- Community profiling was carried out in isolation from more technical, scientific profiling, and a ‘meshing’ exercise was conducted at the end of the separate profiling activities. Because each separate profiling methodology led to different conclusions and recommendations, it was difficult to ‘mesh’ the results later on.¹⁸

¹⁵ World Bank accepts 2% annual increase in live coral cover as an indication of improving reef health. This can only be reliably measured over a ten year timeframe or longer, and only in the absence of larger natural events.

¹⁶ COREMAP PMO. March 2002. COREMAP consolidated report, Jan 2001-Apr 2002.

¹⁷ Pers. Comm., Max Zieren, AMSAT consultant team.

¹⁸ Ibid.

125. These examples illustrate that “It is easy to become preoccupied with project deliverables and lose sight of the need for flexibility and innovation.”¹⁹

Lesson Learned:

126. In dealing with diverse and dynamic communities, it is important that flexibility is incorporated into the design of all activities. Allowing communities to determine program targets that are realistic is often more appropriate than setting artificial targets which, though measurable, do not yield meaningful benefits to the community.

Strict vs. Broad Interpretation of Coral Reef Protection Objective

127. Another issue that has been raised is whether the CBM program has paid adequate attention to the environmental objective in Riau. Organizers at Riau have been criticized for not placing more emphasis on interventions intended to have direct impacts on coral reef ecosystems. However, the experience in Riau indicates that it may be more important in the initial phase to gain the acceptance and support of the community, if coral reef management initiatives are to be ultimately successful. It is apparent from discussions with the communities at Riau, that the COREMAP program has the strong support and acceptance of the community and they are prepared to fund reef watcher programs and use community pressure to stop violations.

Lesson Learned:

128. Developing community support should be the first objective in new sites and a balance achieved between activities aimed purely at reef and related ecosystem conservation and those targeted on improvement of the quality of life within the community.²⁰

Integration in an overall CBM approach.

129. In Riau, there has been a mutual strengthening achieved among all Program components as a result of the recognition of CBM as the ‘core’ component. Thus, on the island of Penaah, COREMAP has assisted in the formation of three community working groups (production, gender and conservation). Economic activities are being carried out by the production group and gender group with a portion of their income going to pay for the coral reef watchers. The members of those groups said that they supported the MCS activity because it benefited the whole community. Such a high level of commitment would not have been achieved without the complementary input of a strong public awareness program. In contrast, a theoretically strong MCS program at Biak has not been embedded in a core CBM program. This has clearly led to a lack of overall community awareness and commitment to COREMAP and the separation of the MCS personnel from the rest of the community. All elements of the program, including MCS, have therefore been less effective than at sites where CBM is at the core.

Lesson Learned:

130. In order to be sustainable, conservation activities must be community-based. In turn the success of CBM depends also on other supporting elements, and thus linkages among the various Program components should be strengthened, with CBM at the core.

¹⁹ Hunnam, Peter November 2000. *Mid-term Evaluation Report, 1998-2000. COREMAP Phase I.*

²⁰ Hunnam, Peter November 2000. *Mid-term Evaluation Report, 1998-2000. COREMAP Phase I*, p.21: “The underlying philosophy of COREMAP is that to achieve effective conservation of coral reefs in Indonesia, it is essential to take into account all aspects of the lives of the local people who depend on coastal marine resources.....CBM needs to be guided at least as much by social and economic considerations as by biological protection.”

High-Tech vs. Low-Tech Approaches in MCS

131. The section on MCS notes the different approaches to MCS and the better results achieved with a low cost MCS strategy that is fully integrated within the overall CBM approach.

8.6 Recommendation

50) Phase II should allow for considerable flexibility in tailoring programs to the widely different cultural, socio-economic and biophysical conditions at different localities in Indonesia. The Phase II design should focus on definable outcomes rather than set up rigid output criteria. This will mean that more attention needs to be paid in project design to the issue of adaptive management and monitoring to ensure accountability and effective use of resources.

9. Procurement Summary

Exhibit 9.1 Project Financing by Component

Project Financing by Component for IBRD Loan No. 4305 IND & Grant GEF TF-028373							
(in US \$ million equivalent)							
No	Description of Category	Loan		Actual Expenditures		Percentage	
		Allocation		as of June 7, 2002		Appraisal	
		IBRD	GEF	IBRD	GEF	IBRD	GEF
1	a. Surveillance Equipment C1(b) & (c) i & iii	1.14	0.60	1.09	0.60	96.09	99.95
	b. Surveillance Equipment C1 (c) ii	0.40	0	0.40	0.00	101.02	0.00
2	Awareness activities B1, B2 and B3	2.28	0.94	1.99	0.83	87.01	88.30
	Awareness activities B4	0.00	0.08	0.00	0.08	0.00	100.00
3	Community support services D1 (i) & (ii)	0.10	0.34	0.03	0.25	28.70	72.93
4	Special studies	0.12	0.12	0.09	0.10	74.71	76.72
	Special studies Part A4 (b)	0.00	0.22	0.00	0.06	0.00	29.58
5	Surveillance O&M C1 (b) & C2 (b) i, ii & iii	0.61	0.03	0.16	0.05	26.89	149.05
6	Conference, Workshop & Seminars	0.28	0.23	0.23	0.19	81.95	82.94
7	Consultants services	1.63	1.63	1.23	1.23	75.28	75.83
8	Training	0.16	0.00	0.11	0.00	67.45	0.00
9	Village grants	0.17	0.00	0.00	0.00	0.00	0.00
	Total	6.90	4.19	5.34	3.39	77.39	80.90

10. Environmental and Social Issues

10.1 Coral Reef and Associate Ecosystem Issues in Indonesia.

132. As in other tropical coastal countries, the issues relevant to sustaining coral reefs and their associated ecosystems in Indonesia can be summarized as;

- Water quality- nutrients, pollution;
- Destructive fishing methods- blast, poison, trawling;
- Habitat destruction- construction, mining;
- Over-fishing- nets, gleaning;
- Climate change- temperature increase, rising water levels
- Crown-of thorns starfish infestations; and
- Exotic species.

133. Of these, the first four can be classified as predominantly the result of human activities and can therefore be addressed directly by COREMAP in relation to maintaining ecosystem health and productivity. If COREMAP proceeds to Phase II, it will be essential that sites are carefully selected with this in mind. An essential question should be whether COREMAP could help control human activities to minimize the destructive effects of the first four issues.

134. As a general principle, control of those activities will probably be very difficult or impracticable where the destructive effect is generated outside of the COREMAP site, particularly when those involved in carrying out the destructive activities have no incentive to conserve the coral reefs, For example, where nutrients or pollutants that enter reef waters are generated by agriculture or industry remote from the affected reefs, control will usually be impracticable. Similarly, where destructive fishing methods or over-fishing is carried out principally by people from another country, control will be difficult.

135. Climate Change induced variation of water temperatures have significantly affected the reefs of the Indian Ocean with death of over 90% of the corals in some countries. There is a real possibility, that during the implementation of the COREMAP project, significant temperature related destruction could occur in Indonesia waters. The design of the next COREMAP phase needs to build in resilience in management options that could provide for early recovery strategies of damaged reefs. Addressing possible dramatic changes in livelihoods and vulnerability of reef dependant communities should form part of the design. Monitoring efforts could address the issues of reef recovery under different management approaches.

10.2 Social Issues

136. Social issues are likely to play a primary role in COREMAP success. The regional autonomy program will lead to a greater role for the district level, which they will be anxious to assume. However district capability varies greatly especially in terms of the number and quality of staff. The level of capability has to be assessed when looking at new sites. Different expectations and perceptions between the national, provincial and district levels of government are likely, particularly between provincial and district levels and it will be important to clarify roles and provide ample opportunity for exchange and dialogue between the different levels of government.

137. Secondly, there is great diversity in Indonesia in terms of the social and cultural patterns in coastal communities as well as in capability of local organizations who can work with them. COREMAP will have to adapt to these different conditions and accept different models and practices.

138. Third, the expansion of the program into more regions is likely to lead to pressure to expand the program quickly into other regions if it is seen to be successful. This could lead to tensions between regions and pressures on COREMAP to expand too quickly. Phase II project design will have to consider regional balance.

139. It should be noted that COREMAP's focus on participatory and community-based development has resulted in a gradual empowering of individual project communities. As empowering the society is the key principle of regional autonomy, COREMAP is contributing significantly to some real achievements for the regional autonomy objective.

140. The support of regional governments will become more important with decentralization. At present, the legislatures have much more power than the elected executive. COREMAP should recognize include the local House of Representatives (DPRD) at the district and provincial level as important stakeholders.

141. It is therefore **recommended** that:

- 51) The practicability of ecosystem health management, productivity as well as social and economic factors should form major criteria for selecting COREMAP expansion sites that can achieve early acceptance. Competitive advantages may include such factors as good access to commercial markets and absence of environmental factors that would be difficult to address (e.g., high levels of pollutant runoff). Expected outcomes will need to be adjusted if more challenging sites are selected for inclusion in the Program.

11. Performance Evaluation

11.1 Performance of the Borrowers and Executing Agencies

142. The GOI committed to creating a high level Steering Committee to provide political oversight although it met for the first time only in 2002. The Technical Committee was also relatively inactive until recently when it has met frequently. This level of political support may create problems in a second phase if significant issues arise in terms of intergovernmental and interdepartmental disagreements.

143. The GOI also agreed to provide counterpart funding equivalent to US\$1.2 million combined for the ADB and World Bank loans. Despite the enormous political and economic turmoil during the life of the project, the GOI did manage to provide most of the recurrent costs of this program. A second area of difficulty with the government's contribution arose from delays in receipt of funds although such delays are not uncommon. It should also be noted that some of the provincial and district governments have demonstrated their support for COREMAP by providing some of their own funds.

144. LIPI was designated as the implementing agency. As a scientific institution, it required considerable change to set up and manage a complex program. It was slow in being able to set up a functioning management team and a full time PMO Director was only appointed latter in the project on August 31st, 2001. With few exceptions, GOI arrangements prevented seconded LIPI staff from working full time in COREMAP as seconded staff were required to satisfy LIPI requirements for publications. LIPI was most comfortable with the biophysical aspects of coral reef management and it took some time for it to fully appreciate the importance of the social and economic issues involved in CBM. However LIPI has generally demonstrated a high level of interest and commitment to COREMAP, which has been a positive element in the success of COREMAP in the first phase. LIPI staff have acquired considerable expertise in coral reef programming and a number of LIPI staff have shown a high level of commitment which will be a valuable asset for COREMAP in a second phase.

11.2 Performance of the Donors

145. The ADB, World Bank/GEF and AusAID each developed separate projects with different log frames and termination dates in support of COREMAP. There was a lack of coordination and cohesiveness in the approaches of the different donors, which made for a lack of cohesiveness. External technical assistance firms sometimes took direction from the donor agencies although they were contracted by LIPI. This accentuated the task of the PMO coordination since the various technical assistance firms tended to focus only on the component for which they were responsible.

Exhibit 11.1 Donor (WB, ADB, AUSAID) Activities In Several COREMAP I Sites

SITES	PC	CBM	MCS	CRITC	CBT
Biak	WB	WB	WB	ADB	AusAID
Selayar	WB	WB	WB	ADB	AusAID
Kep. Riau	WB	ADB	ADB	ADB	AusAID
Sikka	WB	AusAID	AusAID	ADB	AusAID

Note: PC = Public Communication; CBM = Community Based Management; MCS= Monitoring, Control and Surveillance; CRITC= Coral Reef Information and Training Center; CBT= Capability Building and Training

146. In addition there was a degree of micro-management in some cases that caused resentment at the local level. Donors need to be aware of the costs to COREMAP of organizing missions to isolated sites and the need for sensitivity in repeated missions to the limited number of villages involved.

147. Site selection was an area where more attention could have been paid during the project design since the sites selected were distant from Jakarta for a pilot learning phase. In other cases, the level of detail suggested such as for monitoring indicators was excessive.

148. The World Bank and ADB have already drawn lessons from this first phase and have committed to the very important principle of working with a common vision and common log frame. Although AusAID has not indicated whether it will support a second phase, it would be useful if it could participate in the design of a second phase with the GOI to ensure its own experience and views are considered. The donors have also expressed a willingness to consider ways to maintain the program in the first phase until a second phase is funded. It will be particularly important to maintain COREMAP activities at the local level. While the COREMAP program now has strong Indonesian interest and ownership, the donors could play an important role in coordinating and sharing their views with the GOI in a forum that might include other external and national agencies funding coral reef programs. They may wish to select one person who would monitor the program most closely and serve as a common link among different donors.

149. Recommendation

52). Funding for the key activities of Phase I, particularly LSM activities, should be maintained until Phase II commences to maintain continuity.

12. Key Lessons Learned

150. No marine protection can be successfully established without general community support; enforcement measures alone cannot work

151. This requires a top-down and bottom-up approach in which government rules, enforcement and support reinforce community efforts

152. Local people must be deeply involved from the earliest stage and must receive clearly identifiable benefits from coral reef protection plans; socio-economic issues are critical and require equal attention to biophysical factors from the outset in selecting sites

153. Time spent in preparation is an essential investment

154. Sustainability must be built in from the start for the program as a whole and the program at each community so that it can continue after special funding terminates

155. Flexibility is required in program management and responsive to different community situations with decisions made as close to the specific locations as possible.

156. Full time committed senior management is critical to program success.

157. Frequent contact and communication among different stakeholders, including different levels of government and program components to coordinate and integrate activities is important in building commitment and effectiveness. Working with other actors including other projects and NGOs to promote a broad national program is likely to be more effective than concentrating only on directly funded activities.

13. Key Action Recommendations

158. If DKP is given responsibility for implementing COREMAP in Ph. II, it should ensure that existing COREMAP staff are employed in the program through the creation of joint teams with DKP.

Consideration should be given to continuing to house the COREMAP program in existing facilities. Ideally, responsibilities for program components should not be divided between these institutions.

159. COREMAP will require full time committed senior management in the second phase.

160. With devolution of responsibility to the regions, district governments will need to create their own PMOs with dedicated staff and management responsibilities. The existing Pokjas can play an important coordination and facilitation role in assisting the PMOs.

161. The project design of Ph. II should build in responsibility for all component and technical assistance staff to be accountable to the PMO to ensure greater integration and communication.

162. Full time staff should be recruited whenever possible and procedures put in place to ensure the availability of part time staff on fixed term basis. More COREMAP personnel should be recruited on local contract since they can be provided with a level of remuneration that will retain them for long periods and can be more readily replaced for unsatisfactory performance.

163. Equipment and methods used in MCS and CRITC should use the lowest practicable level of sophistication and cost, commensurate with meeting their objectives. Where expensive equipment is necessary, a primary criterion for selection should be ease of maintenance and familiarity.

164. CRITC and MCS should focus on collecting only data vital to achieving COREMAP objectives and procedures should be modified to allow villagers to participate in data collection and to provide them with information they can use for coral reef management activities.

165. The proposed Marine and Coastal Resources Management Act being planned for tabling in parliament later in 2002 should be given high priority and more attention given in Phase II to developing local laws and regulations such as the ADAT laws to provide communities with a basis to enforce coral reef standards. Regulations should also be enacted to establish coral reef management plans and to discourage over-fishing.

166. Effective management of coral reef resources depends on adequate enforcement. The Ph. II design should provide for training, greater involvement in COREMAP committees and targeting of more public communication material to enforcement agencies,

167. Capacity building through training should continue to be a priority in Ph II with more opportunity provided for exchange across regions as field experience increases.

168. The public communication component can maintain a national program at lower cost while targeting key stakeholders such as enforcement agencies and allowing more development of local knowledge material in COREMAP sites.

169. The CBM component should be recognized as the core component with additional budget resources and integration of all the other components within a CBM strategy at the community level.

170. Phase II should allow for considerable flexibility in tailoring programs to the widely different cultural, socio-economic and biophysical conditions at different localities in Indonesia. The Phase II design should focus on definable outcomes rather than set up rigid output criteria. This will mean that more attention needs to be paid in project design to the issue of adaptive management and monitoring to ensure accountability and effective use of resources.

171. A balance must be achieved between activities aimed at reef conservation and those targeting improvements in the quality of life within the community.

172. More technical assistance is needed to develop a portfolio of viable AIG possibilities and the risks involved to present to villagers to complement the bottom up approach and more training and assistance provided in developing AIG activities.

173. COREMAP should develop a broader ecosystem approach in addressing coral reef and biodiversity conservation, paying particular attention to reducing fishing pressure in coral reef areas.

174. New program sites should be carefully assessed for social and economic as well as biophysical conditions that can contribute to successful implementation.

175. A Mid Term Review should be conducted early in Ph. II to allow for adjustments by year three in light of the major transition to a new implementing agency and program decentralization.

Appendix I Performance Monitoring Table

Checklist Item		<i>5=highest; 1=lowest</i> General Ratings		
1	Draft COREMAP policy/strategy presented at workshops	satisfactory		
	Policy			
	Strategy	satisfactory		
2	Policy/strategy presented to DKP	satisfactory		
3	Capacity of LIPI/PMO			
a	No. of staff	4		
b	Compensation package	2		
c	Skills/experience	4		
d	Understanding of COREMAP objectives/procedures	4		
e	Equipment	4		
f	Cooperation w/other agencies	3		
g	Communication w/province/districts	4		
h	Progress reports/plans	4		
i	Time to process contracts	2		
		District Ratings:		
		Riau	Biak	Sulawesi
4	COREMAP provinces/districts			
a	No. of staff	4	3	4
b	Compensation package	2	2	2
c	Skills/experience	4	3	4
d	Understanding of COREMAP objectives/procedures	4	4	4
e	Cooperation w/other agencies	4	4	3
f	Equipment	4	3	3
5	MCS designs appropriate	5	2	3
6	90% Trained	4	4	4
7	MCS manuals	4	3	4
8	MCS patrols	4	2	2
9	Data collection/accuracy/feedback	3	2	2
10	Improving compliance	5	4	3
11	CBM model w/NGOs appropriate	4	3	4
12	Guidelines/training provided	5	1	4
13	Link between MCS and CBM	5	1	3
14	Involvement of stakeholders	4	1	4
15	60% Support for CBM	5	1	5
16	60% Importance of CRMP and sanctuaries	5	2	4
17	Completed CRMP and village head endorsement	yes	yes	yes
18	Village credit schemes	yes	no	yes
19	AIAs operating/funds revolving	yes	no	yes
20	Effective/transparent financial management	5	NA	4
21	Reduction in illegal/destructive fishing result of CBM	4	NA	3
22	CRITC			
a	No. of staff	4	3	3
b	Skills/experience of staff	4	3	3
c	Understanding of COREMAP objectives/procedures	4	4	4
d	Equipment	4	3	3
e	Cooperation w/other agencies	4	3	3
23	CRITC information system nationally standardized, flexible local content	3	3	3
24	BME			
a	Reef health/community welfare database linked to CRITC info system	3	4	4
b	CRITC able to produce annual BME status reports	3	3	3
25	Staff trained and functioning effectively	4	3	2
26	Effective operation/maintenance/usage of CRITC database	4	3	2
		General Ratings		
27	60% Aware of SeKarang! campaign	yes		
28	60% Aware of Coremap	yes		
29	75% Aware of threats of blast fishing and cyanide	yes		
30	% Indicators completed	100.0%		
31	% Disbursement	96.8%		

Appendix II Recommendations

Program Management

- 1) If DKP is given responsibility for implementing COREMAP in Phase II, it should ensure that existing COREMAP staff are employed in the program through the creation of joint teams with DKP. Consideration should be given to continuing to house the COOREMAP program in existing facilities. Ideally, responsibilities for program components should not be divided between these two institutions.
- 2) Full-time, experienced and committed senior management staff are a critical requirement for the more complex management system in Phase II. Consideration should be given to recruiting Indonesian professionals from outside government if suitable government staff are not available.
- 3) The PMO should assume more responsibility for integrating the different components of COREMAP and implementing measures to ensure prompt and adequate communication to all staff of the vision and activities of COREMAP. External TA firms should have contractual obligations to report through PMO and to develop counterpart capability.
- 4) There should be an early and clear delineation of responsibilities at each level of government with a common planning and monitoring framework agreed for the overall program. It will be essential to develop clear guidelines with the districts on their authority and responsibilities.
- 5) District level governments should create PMOs with responsibility for implementing COREMAP. Pokjas should continue to provide a coordination and information function. A review of district level capability and a plan to upgrade skills should be undertaken at an early stage, particularly for all proposed new sites.
- 6) The National Steering Committee should meet once a year to address major issues. The Technical Committee should include all major stakeholders, including regional governments and other interested government and non-government agencies, to allow for greater integration of COREMAP activities with other coral reef related programs and projects.
- 7) Financial approval procedures should be streamlined and mechanisms created for more effective collaboration between PIMPRO and the PMO.
- 8) Full time staff should be recruited whenever possible and procedures put in place to ensure fixed time allocations of part time staff to COREMAP activities. If problems for government employees of turnover, part time availability and inadequate remuneration levels cannot be solved, consideration should be given to employing local consultants.
- 9) It is recommended that the proposed coastal zone Act being planned for tabling later in 2002 be given high priority and that more resources be used to develop local laws and regulations to provide communities with a basis to enforce coral reef standards.
- 10) The National Coral Reef Management Strategy and Action Plan should be integrated into COREMAP programming so that all stakeholders are aware of common objectives and the community based management philosophy developed in Phase I. This community-based approach could be given more emphasis by changing the overall program objective to “develop a viable community-based coral reef management system in Indonesia”.
- 11) A Mid Term Review should be conducted after two and a half year as a mechanism to allow for early adjustments in light of the program decentralization, and the transition of responsibilities to DKP.

Research and Monitoring

- 12) . The CRITCs should focus their programs on the ultimate objective of sustainable community-based management of the coral reef ecosystem while maintaining some high quality work on research and monitoring to international standards. This could be done by selecting existing sites such as at Riau and South Sulawesi for more intensive international standard analysis while pursuing more simple and community oriented assessment at other locations.
- 13) CRITC should collect only functional data useful for COREMAP objectives.
- 14) Survey and data collection should be designed to allow local communities and fishers to participate and to receive information useful for their own provided to the communities for planning and management needs.
- 15) Accessibility and utility of standardized CRITC data and information can be improved by establishing better linkages between the PMO, provincial and district level CRITCs as well as international coral reef networks.
- 16) Coordination between the different CRITC centers and program components should be improved to increase the effectiveness of planning, implementation and monitoring activities.
- 17) In view of limited number of staff with expertise in CRITC and the level of specialized knowledge necessary, there should be (a) more training, (b) efforts to keep staff on CRITC work, and (c) opportunities for staff to continue working on CRITC even if posted elsewhere.

Capacity Building and Training

- 18) All training activities in Phase II should be integrated and coordinated by a training unit. While the COREMAP program will be decentralized in a second phase, there will be a need for a small national component, not only to assist in planning training at the regional level but to organize specialized training that cuts across many locations. Strengthening and shifting more responsibility to regional trainer teams should be a primary objective.
- 19) The training strategy and participatory process pursued by the AusAID training program is a sound model appropriate to the objectives of COREMAP and should be continued in a Phase II. Continuing support for this program to the end of the overall AusAID project would allow for the development of skills needed to prepare for the decentralization expected in a second phase.
- 20) A major training needs assessment, particularly for new site locations, should be undertaken by all COREMAP components to assess what skill upgrading is needed to allow district governments to take on more responsibility for COREMAP
- 21) Community training should take an increasing share of training resources, targeting weaknesses such as financial and business management skills for AIG and community involvement in CRITC and MCS activities.
- 22) The training program should increasingly draw on COREMAP experience for training material and provide for more common training activities across different sites.
- 23) Consideration should be given to negotiating long-term training contracts with organizations such as LSMs to allow them to commit resources to upgrading their training capabilities.

Monitoring Control and Surveillance

- 24) New regulations be enacted giving powers to each village to enforce rules prohibiting fishing by outsiders who have not traditionally fished in the area that has been traditionally fished by that village;
- 25) Regulations be established under Autonomy laws that control fishing at district and village level so as to discourage over-fishing;
- 26) Regulations be enacted as soon as practicable legally establishing coral reef management plans;
- 27) Under the CBM program, relevant Naval, Military and Security personnel be encouraged to attend management committee meetings at both district and village level and undertake to work with the community to enforce fishery rules; and
- 28) The Government of Indonesia considers ways of reducing the existing incentives for Naval, Military or Security personnel to encourage or ignore illegal fishing activities.
- 29) MCS be integrated into CBM at all COREMAP sites;
- 30) Equipment and methods used in MCS be at the lowest practicable level of sophistication and cost, commensurate with meeting MCS objectives;
- 31) The use of land-based radar be discontinued; and
- 32) Where high-speed enforcement vessels are necessary, a primary criterion for selection of equipment should be ease of maintenance and community familiarity.
- 33) Training of reef watchers and others in local communities in monitoring, surveillance and control occur within the context of general community training and education under a properly financed CBM program;
- 34) The need for continued training in all aspects of enforcement at all levels (central government to village) be recognized
- 35) All field personnel should receive training in the fundamental policies set out in the National Manual.
- 36) Only MCS data vital to attaining the COREMAP objectives be collected.

Public Communications

- 37) The program should be continued with a national program maintained at a lower cost by using the effective material and staff expertise developed in phase I. External technical assistance should not be necessary in a second phase.
- 38) More resources should be targeted to areas and groups most immediately involved with COREMAP activities. Additional material may be required to reach groups who have not been sufficiently targeted such as NGOs, enforcement agencies and the justice system, key decision makers at the political level and the seven universities with marine science departments.
- 39) It should be integrated with the other components at the district and local level as a component of the CBM program.
- 40) COREMAP staff at the district level, facilitators and others involved in CBM should be given more opportunity to identify strategies and material most effective in informing and enhancing community support. This may involve the production of local knowledge material at the village level and activities such as cross community exchanges and presentations.

Community Based Management

- 41) The community needs to be defined in broad and inclusive sense. All relevant stakeholders should participate in COREMAP training, and committees as legitimate actors..
- 42) CBM must be recognized as the main Program thrust if efforts to preserve reef ecosystems are to be sustainable. The integration of other components with CBM (including MCS, training, research, awareness-building) needs to be given a high priority.
- 43) The Riau model, which includes a flexible, adaptive approach to management appears to be the most appropriate for replication in the next phase of the Program. Such an approach allows for variations in management strategies that are needed to respond to site-specific differences.
- 44) A balance must be achieved between activities aimed purely at reef conservation and those targeting improvements in the quality of life within a community. In keeping with the overall conservation objectives of the Program, community improvement should emphasize sustainable socioeconomic activities that promote alternative livelihoods and social infrastructure projects that conserve resources, improve public health, or reduce pollution.²¹
- 45) A systematic plan should be drawn up in part of Phase II to gradually transfer responsibility for self-management to the communities. Community facilitators could begin to reduce their time in one village and start working in new villages.
- 46) COREMAP should adopt a broader ecosystem-based approach in addressing coral reef and biodiversity conservation, and take steps to ensure that all assistance given is consistent with these broader objectives. The current conservation focus of COREMAP (the prevention of blast and poison fishing) is fairly narrowly focused on blast and poison fishing and there has been little recognition given to other negative factors especially from over fishing.
- 47) A uniform 'environmental code of conduct' should be defined and adopted by the Program and promoted within the communities. While complete compliance may be difficult to achieve, communities may ultimately accept at least a voluntary code of conduct
- 48) More technical assistance is needed to develop a portfolio of viable AIG possibilities and the risks involved to present to villagers along with more training and assistance in developing AIG activities.
- 49) A cooperating NGO partner must be identified as a priority issue for the Biak-Padaido site. COREMAP should build on the substantial outputs of Rumsram in the communities in this area

Comparison of Field Trial Approaches

- 50) Phase II should allow for considerable flexibility in tailoring programs to the widely different cultural, socio-economic and biophysical conditions at different localities in Indonesia. The Phase II design should focus on definable outcomes rather than set up rigid output criteria. This will mean that more attention needs to be paid in project design to the issue of adaptive management and monitoring to ensure accountability and effective use of resources

Environmental and Social Factors

²¹ Hunnam, Peter November 2000. *Mid-term Evaluation Report, 1998-2000. COREMAP Phase I*. p.21: "...it is essential to take into account all aspects of the lives of the local people who depend on coastal marine resources...CBM needs to be guided at least as much by social and economic considerations as by biological protection."

- 51) The practicability of ecosystem health management, productivity as well as social and economic factors should form major criteria for selecting COREMAP expansion sites that can achieve early acceptance. Competitive advantages may include such factors as good access to commercial markets and absence of environmental factors that would be difficult to address (e.g., high levels of pollutant runoff). Expected outcomes will need to be adjusted if more challenging sites are selected for inclusion in the Program.

Performance of the Donors

- 52). Funding for the key activities of Phase I, particularly LSM activities, should be maintained until Phase II commences to maintain continuity.

Appendix III Financial Summaries

(Not Included)

Appendix IV Phase I Evaluation Terms of Reference

(Not Included)

Appendix V Maumere Site Visit

175. The Maumere site was only recently established because security considerations forced the project to move from another site. Discussions were held at the site with the Pokja, the AusAID team leader and other stakeholders. As it commenced only in April, 2001, it is too early to make any realistic or in-depth comments on the progress achieved. However the early indications are positive. Noteworthy was the support of the district government for the project as well as the commitment of the team leader, advisers and field staff.

176. An Office for Project Management has been established and will soon be moved to a new office building close to the BAPPEDA offices. The present office does not have email facilities so the working environment is not very efficient for the team.

177. A district Pokja has been created by Bupati Decree(SK) and the Pokja has created three committees dealing with CBM, MCSs and CRITC. Discussions with different individuals suggested that good working relations have been established with both provincial and district staff and the team has worked in collaboration with several selected local NGOs. Counterpart staff have been appointed to work with the Training Coordinator and are actively involved with the program..

178. The project is working in six villages and a facilitator have been appointed for each village. Three of the six facilitators are women. A CBM framework has been created to guide the program in the village work. A Participatory Rural Appraisal(PRA) has been undertaken in each village and there will be a PRA meeting as the district level shortly to assess the results and plan follow up.

178. The only comment made that may need to be addressed is the suggestion by several stakeholders that there could be more effort to improve communication and coordination through regular meetings.

179. Overall the progress made at this site is promising and the methodology being followed in terms of emphasis on CBM as the core component is consistent with the best practices found at the other sites.

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