

Establishment of Effectively Managed MPA Platform Sites as Foundations for Resilient Networks of Functionally-Connected Marine Protected Areas

Raja Ampat Islands, Papua Province, Indonesia

Annual project report (October 2006-September 2007)

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The Nature Conservancy Indonesia Program
Coral Triangle Center

TABLE OF ACTIVITY STATUS

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Establishment of Effectively Managed MPA Platform Sites as Foundations for Resilient Networks of Functionally-Connected Marine Protected Areas Raja Ampat Islands, Papua Province, Indonesia		
Objective 1	<i>Local policy support and development of a coalition for marine conservation and MPA management</i>	
1.1	District-wide legislative framework for declaration of MPAs, including guidelines for management planning, zoning, and management responsibilities of local entities.	Revised
1.2	Achieve formal declaration through Bupati decree of MPAs in SE Misool and Kofiau.	Completed
1.3	Commission the drafting of local fishery regulations that provide a means to limit fishing effort to sustainable levels.	Mixed Performance
1.4	Maintain strategic partnerships with WWF, CI, COREMAP, UNIPA, LMMA and ForBes.	On track
Objective 2	<i>Technical support for network design, site selection and MPA delineation</i>	
2.1	Complete draft zoning and management plans for Southeast Misool and Kofiau.	Mixed Performance
2.2	Complete draft network design.	Completed
2.3	Support study on gender issues.	Completed
2.4	Conduct research on Ecosystem-Based Management.	On track
Objective 3	<i>On-site Conservation: community outreach</i>	
3.1	Implement small contracts scheme	On track
3.2	Teacher training.	Mixed Performance
3.3	Local newsletter.	On track
3.4	Recognize local conservation champions through award program.	Delayed

3.5	Support village-based conservation outreach officers.	On track
Objective 4	<i>On-site conservation: monitoring & patrolling</i>	
4.1	Conduct ecological monitoring (reef health, SPAGs, cetaceans) in Kofiau and SE Misool.	On track
4.2	Conduct resource use monitoring / patrolling in Kofiau and SE Misool.	On track
4.3	Conduct perception monitoring.	On track
4.4	Support patrols with the Floating Patrol Station throughout Raja Ampat through two workshops.	On track
4.5	Visit Ayau Atoll to assess the status of a suspected spawning aggregation (SPAG) site.	Completed
Objective 5	<i>Field Presence for SEACMPA Raja Ampat Program</i>	
5.1	Operate field station in Kofiau.	On track
5.2	Establish and operate field station in Misool, equipped with monitoring supplies (SCUBA gear, etc.).	On track
5.3	Operate administrative and logistical support desk in Sorong.	
5.4	Operate two speedboats.	On track
5.5	Operate Floating Patrol Station, purchase and operate Awareness / Supply Vessel; additional support to Misool Field Station operations.	On track

Project Background

The Raja Ampat islands encompass over four million hectares of land and sea off the Northwestern tip of Papua in Indonesia, forming the center of the “Coral Triangle”, the area of the world’s highest marine biodiversity. The islands are located at the northeastern entrance of the Indonesian Throughflow from the Pacific to the Indian Ocean, thus occupying an important position upstream of many other high biodiversity marine areas in the Coral Triangle. Coral reef bio-

geographers identified the Raja Ampat area with Cenderawasih Bay as a single functional seascape, the Bird's Head.

Conservation International and TNC conducted Rapid Ecological Assessments of the Raja Ampat area in 2001 and 2002. The archipelago is estimated to harbor over 75% of world's coral species. A total of at 537 species of scleractinian corals can be found in Raja Ampat. Soft coral diversity is also very high. At least 41 of the 90 Alcyonacean genera known worldwide were recorded during TNC's REA. The Raja Ampat islands also have one of the world's richest coral reef fish faunas, consisting of at least 1,074 species. TNC's REA concluded that conservation of marine biodiversity in the area is an overriding priority and of major interest to the global community. Four areas of over-riding conservation value and opportunity were identified: the islands of eastern and southern Misool, Kofiau, Sayang and Pulau Ai, and the Wayag islands.

Overall, the reefs in Raja Ampat are in very good health. Reefs do not appear to be suffering from any recent serious detrimental effects. Up to now, there is no obvious evidence of the bleaching events that caused extensive mortality to reefs in the region in 1998. There is no evidence of current or recent Crown-of-Thorns Starfish outbreaks or damage from other corallivores. There was very little sediment and pollution impact.

Blast fishing and fishing with poison, however, is still common, and reef fish communities have suffered from over-exploitation. Assessments conducted under the GCP program show that spawning aggregation (SPAG) sites of valuable species have disappeared. After establishment of the Kofiau field office in 2005, TNC field staff reported that a local trader from one of the nearby villages was about to ship a large amount of live grouper, which may have been the last substantial shipment from this area. Through cascading effects in the food web, over-exploitation may eventually lead to a decrease in overall coral reef health, for instance through a more frequent incidence of Crown-of-Thorns Starfish outbreaks. Sea turtle eggs and sea turtle adults, both protected under Indonesian law, are commonly poached. Though the status of shark populations has never been assessed, one may safely assume that the high fishing pressure on sharks cannot be sustained.

Overall Assessment of Progress and Management Issues During FY07

The most significant accomplishment of the Raja Ampat program during FY07 was the declaration of 6 new MPAs by the Regent (*Bupati*) in December 2006. This declaration was then followed with a formal Regent's Decree no 66/2007 and a Ministerial declaration of the Raja Ampat MPAs by Minister of Fisheries and Marine Affairs in May 2007. These 6 new MPAs and one existing MPA form a network within Raja Ampat comprising almost 1 million hectares. In addition to the Regent's declaration, the traditional community in Kofiau also declared the Kofiau MPA. The declaration by the traditional leader signifies the traditional

community support for the MPA in Kofiau and provides the MPA establishment with a 'socio-cultural' endorsement.

A zoning process for the Kofiau MPA has been initiated. Consultation meetings with the community have started. The Southeast Misool team is currently in the process of developing their zoning scenario using MARXAN software.

Teacher training was completed, resulting in agreement from the teachers to incorporate the training materials into their lessons. Formal adoption of the teacher training materials into the curriculum remains challenging due to the complicated process for changing curriculum content and the teams' limited capacity; this will remain a focus for next year.

Outreach activities continue to be implemented and strengthened by the program. Printed materials such as calendars, Bulletin "Kadera", Raja Ampat tabloid, fact sheets, posters, and info sheets have been distributed in Kofiau and SE Misool. In addition to the printed materials, there is also the "Suara Pedesaan" radio program.

Village-based conservation outreach officers from 13 villages in Kofiau and Southeast Misool have been recruited. Training of village-based conservation outreach officers (VCO) from 13 villages in Kofiau and Southeast Misool included basic skills for meetings, facilitation, report and proposal writing. Some of these VCOs have started to implement and have facilitated their own village meetings. The LMMA network was introduced to the local community in Kofiau and Southeast Misool.

Perception monitoring and reef-health monitoring were implemented in Kofiau and Misool. The data collected in Kofiau have been used in the zoning process, and supported a MARXAN-generated first draft of a zoning scenario.

A Floating Patrol Station is available in support of a Joint Patrol in Raja Ampat waters. A draft Standard Operating Procedure (SOP) has been developed for endorsement in a technical workshop with partners in October 2007. After SOP endorsement, official joint patrolling can be started.

Refurbishing of a Southeast Misool field office was completed. In April 2007 the field team started to use the facility and it has provided effective support for the program implementation in Misool.

Objective 1: Local policy support and development of a coalition for marine conservation and MPA management

Activity 1.1: Develop a regency-wide legislative framework for the declaration of MPAs, including guidelines for management planning, zoning, and management responsibilities of local entities.

Anticipated Results in FY07:

- PERDA that provides guidance on the formal procedure towards establishing different types of MPA.
- More efficient establishment of MPAs (as opposed to re-inventing a procedure for every single MPA in the network).



The signing of the MPAs Declaration by Bupati Raja Ampat



The Ministry of Marine and Fisheries (Bpk. F. Numberi) declares seven MPAs in Raja Ampat

Results

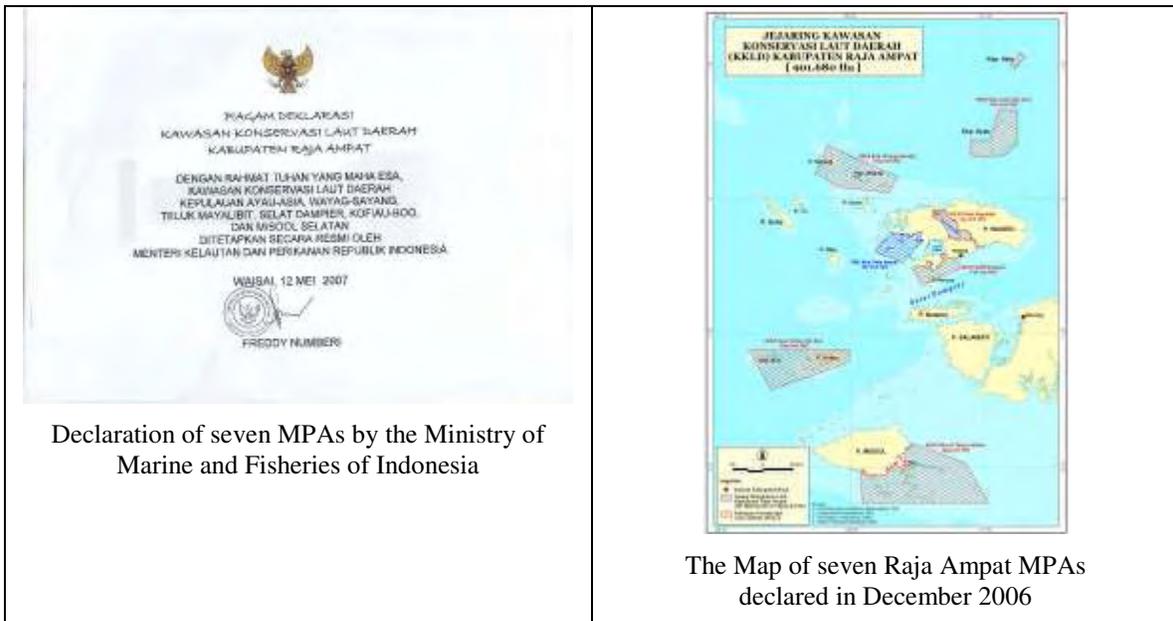
In coordination with partners, mainly Conservation International (CI), the program supported the Government of Raja Ampat with establishment of 6 new MPAs, including Kofiau, South-East Misool, Mayalibit Bay, Sayang-Wayag, Ayau-Asia, and Dampier Strait. The six MPAs cover a marine area of 901,680 hectares or about 50% of the coastal ecosystem of Raja Ampat. The six MPAs were declared by Bupati Raja Ampat in December 2006 and inaugurated by the Ministry of Fishery and Marine Affairs on May 12th in Waisai.

Previously, declaration of conservation areas could only be done by the central government after recommendation from the governor based on scientific inputs and community requests. The team and local government partners closely studied Law no 5/1990 on Conservation, Law no 31/2004 on Fisheries Management, and Law no 32/2004 on Local Autonomy as the available legal tools for the establishment of MPAs.

Based on these laws, and taking into account the scientific inputs from the Rapid Ecological Assessment (REA) as well as building on the request of the local

traditional community to conserve and manage their marine resources, the local government established the MPAs.

The 6 new MPAs were formalized through Bupati Decree no 66/2007. Based on this development, the team will not invest in another local decree (PERDA) that would provide guidance on the formal procedure towards establishing different types of MPAs. Instead, the team will aim for a PERDA that legally endorses a framework for management planning and zoning, and that clarifies management responsibilities of local entities. The *Bupati's* Decree was considered legally binding and an adequate legal framework for the establishment of MPAs. The process has proven to be efficient, and expedited the establishment of MPAs. It also provides a precedent for future MPA establishment.



Activity 1.2: Achieve formal declaration through Bupati decree of MPAs in SE Misool and Kofiau

Anticipated Results in FY07:

- Bupati decrees which formally declare Kofiau and SE Misool as Marine Protected Areas, including designation of management responsibility.
- Legal basis for area-specific management of ecosystems strengthened.

Results

The six new MPAs were declared by *Bupati* Raja Ampat in December 2006 and inaugurated by the Ministry of Fishery and Marine Affairs on May 12th in Waisai. The establishment of six MPAs in the Raja Ampat area also received support from the traditional or '*adat*' community. During the declaration ceremony,

Traditional Council of Maya and Kalanafat clan representing the traditional owners of the land and waters in the MPAs, delivered the mandate of managing their land and waters to the Raja Ampat Government, for the benefit of the local people and for the future of the next Raja Ampat generation.



The delivery of the *adat* mandate to Bupati Raja Ampat at the MPA declaration ceremony



The ritual offering for Kofiau's MPA

The statement of mandate deliverance from the Traditional Council was then followed by a formal declaration of the six MPAs by the *Bupati*. Furthermore, the community leaders of Betew tribe in Kofiau also traditionally launched their MPA with a tribal ritual. The support of traditional leaders is an important factor to strengthening the legitimacy of the MPAs with local communities, as well as building the communities' sense of ownership of the MPAs.

Following this declaration, the *Bupati* issued a decree no.66/2007 in July 2007 formalizing the establishment of MPAs and providing the legal basis for area-specific management. The decree provides general guidelines for management of those MPAs, including the outer boundaries, the intended usages of these MPAs, and financing mechanisms. Furthermore, the *Bupati's* decree also states that the management of these areas will be done in a collaborative manner. The decree, however, does not specifically designate the management responsibility for the MPAs. In the future, the project plans to further strengthen this decree into a local regulation (PERDA) by obtaining endorsement from the local parliament. The PERDA will assign zoning and management responsibilities to local entities.

Activity 1.3: *Commission the drafting of local fishery regulations that provide a means to limit fishing effort to sustainable levels*

Anticipated Results in FY07:

- Draft PERDA agreed by the regency fisheries service.

Results

Discussions with the Raja Ampat Fisheries and Marine Affairs (DKP) office have been initiated, and DKP has agreed to lead this process. However, DKP's efforts for this fiscal year were geared towards the establishment of the 6 new MPAs and enforcement of protection of biodiversity (patrolling). The hiring of a consultant to help develop the local fishery regulations has been postponed until November 2007.

On the other hand, in partnership with Conservation International, the project team facilitated the issuance of an entrance fee system in the context of sustainable tourism in Raja Ampat. The tourist entrance fee has been regulated through a *Bupati's* decree was signed and put into effect in August 2007. Based on this decree, the Raja Ampat government will allocate the funds collected from the tourist fee for conservation activities and for community welfare programs.

Activity 1.4: *Maintain strategic partnerships with WWF, CI, COREMAP, UNIPA, LMMA and ForBes*

Anticipated Results in FY07:

- Strong collaboration and coordination among conservation groups working in the Raja Ampat region.

Results

The partnership between TNC, WWF, CI, and COREMAP continued to strengthen in FY07. A collaborative effort between CI, TNC and WWF in an Ecosystem-Based Management research program was a crucial ingredient that leads to closer collaboration on program implementation on the ground. The three organizations working together were able to roll out the development of the joint patrolling system and a tourism management system. In the near future this strategic partnership will embark on the next phase of an Ecosystem-Based Management program in the Raja Ampat area and surrounding seascape funded by the Packard Foundation. The program will provide a strong complement to GCP support in the Raja Ampat islands.

A work plan is currently being developed which involves further collaboration with another strategic partner, the University of Papua (UNIPA), through a socio-economic research component. The UNIPA staff and students have been involved in several field activities, such as perception monitoring and small research projects, as well as in the Packard-funded EBM studies.

Another strategic partnership that the program is developing is with the Locally Managed Marine Area (LMMA) network. LMMA is a method of community based management of a marine area in which local people play the main role in the process from planning and implementation through evaluation. A workshop was conducted in Sorong in April 2007 with participants from Kofiau and Misool communities to gain better understanding of LMMA, to include Kofiau and Misool communities within the LMMA network, and to develop a plan for initiation of LMMAs in Kofiau and Misool. As follow up, socialization workshops were

conducted in three villages in Kofiau and three villages in Misool in June 2007. A field visit from representatives of Kei or Biak, who are involved with LMMA, is being planned to share their experiences with LMMAs in their areas with the communities in Kofiau and Misool. Plans to hold community meetings in Kofiau and Misool to establish LMMA have also been laid out.

Members of *ForBes* participated in an MPA training course facilitated by TNC-CTC in Sorong in November 2005. The program identifies *ForBes* as being a strategic partner and has continued to try to strengthening their capacity during the past year. The former manager was unresponsive to these efforts; he has now been replaced but *ForBes* has still not been able to develop a work plan through which TNC assistance could be provided. In the future, the team will continue technical support for *ForBes* through our field staff, and monitor the outcome of the next *ForBes* assembly next year to determine whether these management issues are resolved before providing funding directly to the forum.

Objective 2: Technical support for network design, site selection and MPA delineation

Activity 2.1: *Complete draft zoning and management plans for Southeast Misool and Kofiau*

Anticipated Results in FY07:

- Completed zoning options, where approximately 30% of the area is designated as no-take
- Zoning system contributes to biodiversity conservation & sustainable fisheries

Results

Four workshops on MPA design have been conducted to strengthen the team's capacity to develop zoning scenarios for the Kofiau and SE Misool MPAs. MARXAN-assisted MPA designs have been produced for Kofiau and SE Misool where 30% of critical habitats have been designated as no-take zones. SPAGs have been included within the no take zones to safeguard the spillover effect and larvae export for sustainable fisheries. Because our staff efforts were devoted to the time consuming process of declaring the establishment of 6 new MPAs across the Raja Ampat islands, the public consultation process for zoning of these specific MPAs has been delayed.

The Kofiau field team began consultation sessions with communities to obtain their inputs for the design and zoning of Kofiau MPA. Based on this consultation, the community produced a map of their own proposed zoning of the Kofiau MPA. The zoning scenario will have to go back and forth between the community and the authority before the final agreement is made on the zoning of Kofiau MPA. On the other hand, the Misool team had not yet been able to start public consultation on zoning. A more extensive effort will be focused in FY08 on consultation sessions to finalize the zoning scenarios to speed up the development of a management plan for the MPAs.

Activity 2.2: Complete draft network design for Raja Ampat

Anticipated Results in FY07:

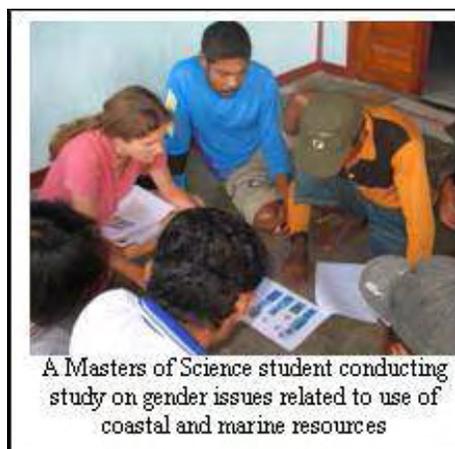
- Initial draft MPA network design, ready for consultation with local stakeholders

Results

A MARXAN-assisted MPA network design had been produced based on data collected and digitized in the previous years, data from resource use monitoring, data from the Rapid Ecological Assessment and participatory rural appraisals. The methodology applied was similar to that applied in the Lesser Sunda functional seascape. The Raja Ampat government used this MPA network design as the basis of the 6 newly established MPAs.



Village meeting to initiate the zoning system of Kofiau's MPA



A Masters of Science student conducting study on gender issues related to use of coastal and marine resources

Activity 2.3: Support study on gender issues

Anticipated Results in FY07:

- Study results inform better gender-sensitive management of coastal and marine resources in Raja Ampat.

Results

The Raja Ampat program supported a Masters of Science student's study on gender issues related to use of coastal and marine resources in Raja Ampat. The study was conducted in collaboration with the University of Hawaii and the University of Papua, and focused on two villages in Raja Ampat that differ in ethnology, religion, wealth, strength of traditional institutions, and a number of other attributes. The main objective of the study is to test the hypothesis that female and male resource users have different knowledge, attitudes, and perceptions towards the ecology of exploited organisms. Data collection was completed, preliminary results from this study were shared with the team and the first draft of the report is currently available.

Results from this study showed that although females are much less educated than males in a region where the average level of education is already low, the gender differences in knowledge, attitudes and perceptions are less pronounced than expected. Females in these areas actively partake in fishing and gathering, though methods and areas of operation differ somewhat. There was no evidence that females differ from males in their understanding of the ecology of exploited organisms. On the other hand, the low education level of women suggested that women are not well positioned to participate in management, and many women do not even consider participation in management an option.

Gender dimensions of the Raja Ampat program were further strengthened based on the preliminary results of the study. The team encouraged women's group participation in the small contracts program and steps were taken to increase women's access to information regarding conservation, and access to community conservation meetings and consultations. The program will also use the study results to inform gender-sensitive management of coastal and marine resources in Raja Ampat. The follow up actions to ensure gender issues are considered in the marine and coastal resource management are currently being discussed internally within the team.

The Raja Ampat program will not direct its efforts towards addressing gender inequality in Raja Ampat, but will strive to ensure the program is not gender discriminative and to ensure that gender concerns are taken into consideration within the program. In addition to the female monitoring officer for Kofiau, the program also employed a female intern for two months in FY07. This helped project a more gender balanced face of conservation, which will hopefully encourage women's engagement in the program.

Activity 2.4: Conduct research on Ecosystem-Based Management

Anticipated Results in FY07:

- One or two articles prepared for peer-reviewed scientific publications on the model (to be published in FY08).
- Progress toward decision-support for ecosystem-based management of near-shore marine habitats in Raja Ampat (to be completed in FY08)

Results

The Raja Ampat field team supported the CI/TNC/WWF Ecosystem-Based Management research program, led by staff specifically contracted for this project. The project also involved collaboration with University of British Columbia's Fisheries Center for a Post-Doctoral student who is constructing an ecosystem model of near-shore habitats in Raja Ampat. This model will be used to study the consequences of management interventions such as no-take areas and fishing effort restrictions. The UBC team will draft articles about the EBM work conducted in Raja Ampat for peer review in FY08.

The Raja Ampat team assisted with EBM “eco-path” design research through two field activities: fish stomach sampling and a fishery questionnaire to local fishers. The monitoring team collected sampling of reef and pelagic fishes’ stomachs to analyze food consumed by those fishes. The fishery questionnaire was aimed to see the trend of fish catch according to local people.

Despite bad weather, the second aerial survey of the distribution of fisheries and other coastal activities in Raja Ampat was successfully conducted during the week of 18-22 September 2006. The survey completed 10 flights, totaling 30 hours of flying time, and covered almost all of the Raja Ampat area, nearly 5,500 km. We collected 1169 records of fisheries activities and 103 records of marine faunal sightings (whales, dolphins, dugongs, mantas, turtles, and tunas), and captured approximately 9,500 digital images during the survey. Interesting observations made during the survey included mining activity in Manuran Islands (North Waigeo), an oil spill in Aljui Bay, a huge pod of pilot whales in Dampier Strait, a manta ray aggregation in Ayau reef, and a new dive resort in Batbitiem Islands (Southeast Misool). Importantly, officials from the Raja Ampat department of fisheries joined the surveys and now have a much better understanding of some key aspects of marine resource utilization in Raja Ampat. In addition to the aerial survey the on-water phase of this assessment has also been carried out in Kofiau. A DVD with a clickable map that links to pictures from this survey is now available.



Aerial photograph shows sedimentation in a coastal area



A TNC staff member conducts fish stomach sampling

A workshop was conducted to present preliminary results of the EBM surveys in the Bird’s Head Seascape marine areas, including Raja Ampat, Cenderawasih Bay, Fakfak and Kaimana. The workshop was also used to consult with stakeholders regarding the implication of the findings for conservation and sustainable marine resource use. As an outcome of this workshop, stakeholders committed to make use of the scientific data and information collected in policy development for the natural resources use in the Bird’s Head Seascape. The studies will be completed in December 2007. Workshops will then be conducted to disseminate the study results. It is expected that policy makers and the *Bupatis* in the Bird’s Head Seascape area will adopt the EBM based fisheries

management as opposed to the current maximum sustainable yield (MSY) based fisheries management. Results from the EBM research will also be used in developing MPA zoning plans and the Raja Ampat district spatial plan.

Objective 3: On-site conservation: community outreach

Activity 3.1: Implement small contracts scheme in Kofiau and Southeast Misool

Anticipated Results in FY07:

- At least 5 additional small contracts completed in FY07
- A supportive local constituency for conservation in Southeast Misool & Kofiau.

Results

The small contracts scheme enables village-based field staff to engage local community members in diverse, low-cost activities that are compatible with the objectives of the conservation program. It can be accessed by community groups in Kofiau and SE Misool and has proven useful in building a local constituency for conservation actions. Preliminary visits were conducted to the 10 villages in Southeast Misool and three villages in Kofiau to socialize the program and to identify potential activities that might be funded with small contracts. The program facilitated village meetings so the community could share their perceptions. Short training on how to identify activities and write simple proposals was carried out for community groups. Activities proposed by the community included beach clean-up, Crown of Thorns starfish clean up, rubbish bin installation, installation of environmental awareness billboards, mangrove planting, and local community patrolling. In Kofiau, the program provided 9 small grants to community groups. The Misool field team has just completed an assessment of submitted proposals; six are currently being considered for small contracts.



Team member discusses potential activity for small grant scheme with villagers



MPA training for Raja Ampat's junior high school (Waisai, Raja Ampat)

Activity 3.2: Teacher training

Anticipated Results in FY07:

- 20-30 local elementary school teachers have an improved understanding of conservation.
- Contents from the teacher training workshop are adopted in the local elementary school curriculum.

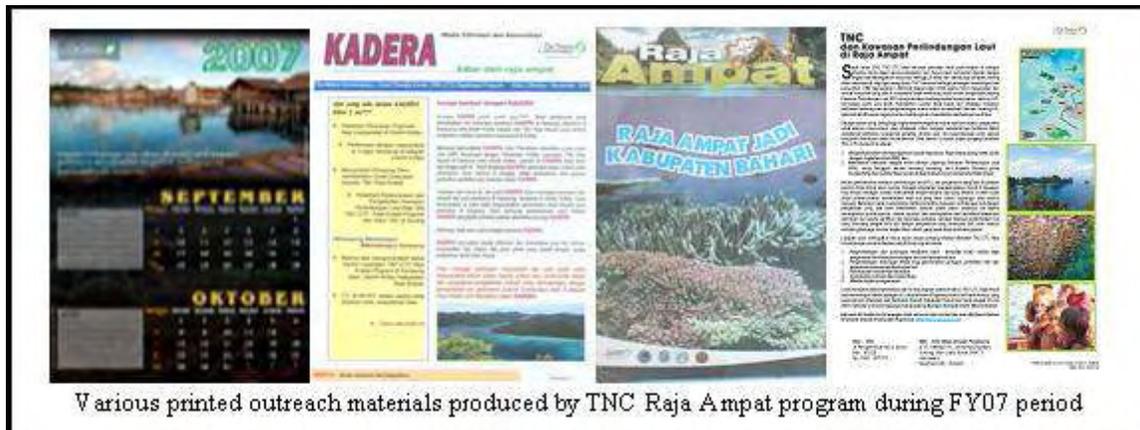
Results

A four-day training course for junior high school science teachers in Raja Ampat was conducted in November 2006. The objectives of the training were to develop and increase participants’ knowledge on coral reef ecology and introduce Marine Protected Areas as a tool for sustainable fisheries. The event was also used to foster commitment from the teachers to include marine conservation in the curriculum and to use the tools provided for class teaching. Twenty teachers from 16 junior high schools in Raja Ampat participated. At the end of the training, there was high commitment from the teachers to adopt materials into at least 10 hours of class time and use the materials as basic materials for local content subject in teaching their students. However, formal adoption of the teacher training materials into the local curriculum proved to be more complicated and challenging than previously thought. We will continue to work with the teachers and those responsible for approving the official school curriculum and tests to incorporate this material.

Activity 3.3: Local newsletter: Tabloid Raja Ampat

Anticipated Results in FY07:

- Conservation messages reach important audiences and support project activities in SE Misool and Kofiau



Various printed outreach materials produced by TNC Raja Ampat program during FY07 period

Results

To increase local people’s knowledge and awareness on conservation, 1000 copies of the 2007 awareness calendar were printed, and they have been distributed to villages and sub-district and district government leaders as well as to the related other stakeholders in Sorong. The outreach team has also produced and distributed the four editions of 2006/2007 bi-monthly bulletin

“Kadera”. The bulletin contains MPA management issues and environmental education. TNC’s outreach team disseminated outreach materials in south and east Misool villages including calendars, Bulletin “Kadera”, Raja Ampat tabloid, fact sheets, posters, and information sheets.

Six editions of “Tabloid Raja Ampat” (published jointly by TNC, CI and the Raja Ampat district government) have been produced and distributed to the related stakeholders in Raja Ampat since January 2007. The target audiences are local communities, local government institutions, and other stakeholders. The objective of this tabloid is to increase awareness of the rich marine biodiversity of Raja Ampat and promote marine conservation efforts.

In addition to the printed materials, the program also collaborated with the Radio Republic Indonesia (RRI) local chapter to air an awareness program on the conservation of Raja Ampat regency. The radio program is called “Siaran Pedesaan” and the conservation segments aired every night in June 2007.

Activity 3.4: Recognize local conservation champions through an award program

Anticipated Results in FY07:

- Awards ceremony, and coverage in local press on the event, reinforces conservation messages and behaviors.

Results

The selection process for award recipients is currently underway. The selection committee consists of local leaders, government officials, journalist and members of the NGO community. The nominees are selected based on community inputs with the main criterion being a proven commitment to marine and coastal conservation/environment. Nominees should also have demonstrated outstanding conservation efforts or results, contributing to the improvement of quality of life for his/her community as well as achieving large and sustainable impact to conservation and environment. Announcement of this champion’s award has been made but the selection committee extended the nomination period due to the limited number of nominations received to date.

Activity 3.5: Support village-based conservation outreach officers

Anticipated Results in FY07:

- Village-based outreach officers “open up” local communities for program activities.
- Site activities are improved through participation of village-based outreach officers.
- Conservation messages are effectively communicated through village-based outreach officers.

Results

Together with Conservation International, TNC established a network of village conservation outreach officers (VCOs) who are based in their home villages. These officers help facilitate conservation activities in the village and organize the villagers in dealing with conservation and environmental issues. They also serve as a great source of information on resource use issues. The nomination of these village-based conservation outreach officers was done by the community leaders and the villagers themselves. Seven candidates from Southeast Misool and 3 from Kofiau were identified as potential VCOs.

In order to increase the VCO capacity, we conducted training on community organizing at TNC's field station in Harapan Jaya village (Misool) from April 28th to May 7th. More people participated in the training in addition to the 10 potential VCOs, evidence of the high interest and support for conservation in the area. In total, 20 potential candidates from 13 villages in Kofiau and SE Misool, as well as 7 other village representatives from Kapatcol, Fafanlap and Harapan Jaya participated in the training.



During this training participants learned about community organizing, MPAs, monitoring activities, how to design simple programs related to conservation activities, and community engagement. The training was an outstanding success as it resulted in:

- 13 facilitators signed a statement to be a village based community outreach officer/facilitator and words of honor (*ikrar*) signed by each facilitator to work with respect to marine conservation;
- Kofiau-Misool village facilitators network created;
- terms of references for village facilitators developed;
- work plans developed for each site – Kofiau and Misool; and
- correspondents were selected for Tabloid Raja Ampat and Bulletin Kadera.

Following their recruitment and training, some of these VCO facilitated village meetings and socialization sessions in every village in SE Misool area. The main

objective of these activities was to socialize about MPA establishment in Southeast Misool and to raise community awareness on conservation and the benefit of MPA. The involvement of VCOs in the on-site activities proved to be highly beneficial to the project as it encourages more participation from the village communities. The presence of VCOs in the village activities also helped the outreach team in communicating conservation messages more clearly to their target audiences.

Objective 4: On-site conservation: monitoring & patrolling for biodiversity

Activity 4.1: *Conduct ecological monitoring (reef health, SPAGs, cetaceans) in Kofiau and SE Misool*

Anticipated Results in FY07:

- Improved knowledge of status and use of near-shore marine habitats informs adaptive management and used for measuring management success.
- Increased field presence of Raja Ampat program staff and local partners, resulting in prevention of illegal or unreported fishing.

Results

The main goals of reef health monitoring are to record long-term changes in live coral coverage, and biomass of commercial fish. Reef health monitoring was implemented at 50 sites in Kofiau and 91 sites in SE Misool. The monitoring results showed that the condition of the reefs ranges from bad to good. Blast fishing traces were found in most of the sites, and some damaged areas are recovering. Data collected did not indicate mass coral bleaching events. Local people have been involved in the activities as field guides, to foster a better understanding about field activities and to strengthen community support for MPAs.



The objectives of spawning aggregation sites (SPAGs) monitoring are to monitor functional SPAGs of three grouper species. The results from the SPAGs monitoring will be used in MPA zoning and outreach activities. Spawning

aggregations in Kofiau have apparently been depleted before a serious on-the-ground effort towards protection of spawning aggregations could be made. In Southeast Misool the situation was similar. There were 9 suspected sites of SPAGs (based on a 2004 Coastal Rural Appraisal survey) but there was no evidence that these area are still functioning as SPAGs in FY07.

“Occasional observations” on cetaceans, dugong, manta rays and coral bleaching were recorded during other field activities. The objective is to record occurrence of target species or specific events, and to provide the information to local people and MPA managers. Manta rays were observed occasionally. Although local communities mentioned dugongs, these animals were not encountered in the field. Several cetacean species were observed, including False Killer Whales, Pilot Whales, unidentified Baleen Whales and Spinner, Spotted and Bottlenose Dolphins.

Monitoring has increased field presence of Raja Ampat program staff and local partners in the MPA areas. However, it is not yet determined whether this increased presence has prevented illegal fishing.

Activity 4.2: Conduct resource use monitoring / patrolling in Kofiau and SE Misool

Anticipated Results in FY07:

- Improved knowledge on status and use of near-shore marine habitats informs adaptive management and used for measuring management success.
- Increased field presence of Raja Ampat program staff and local partners, resulting in prevention of illegal or unreported fishing

Results



The monitoring team implements regular monitoring to assess the use of marine resources. Local community members also served as members of resource use monitoring teams. The team interviewed every fisher met, marked their boat positions, and recorded their catch. Results from resource use monitoring showed that most fishing effort around Kofiau is conducted by fishers from Maluku and Sulawesi (especially Buton). In addition, the results also found that

illegal fishing practices were still taking place around Kofiau Island. The resource use monitoring increased field presence of the Raja Ampat program staff and local partners in the area.

Activity 4.3: Conduct perception monitoring in Kofiau and Misool

Anticipated Results in FY07:

- Information on the local community's perceptions on the status, use and management of near-shore marine ecosystems provide a basis for assessing the awareness activities conducted to date and input for future activities.

Results

A perception monitoring team for the second round was formed in July 2006. This team consisted of eleven male and female independent interviewers, including students from University of Papua, local university lecturers, community conservation volunteers, and local NGOs. The team conducted perception monitoring for 13 villages in Kofiau and Misool during the first quarter of FY07. In total, 522 respondents were interviewed, 269 males and 253 females.



An interesting result from this survey compared to the baseline survey conducted in the previous year is the significant difference in the perceptions of respondents regarding MPA development. The baseline survey data in 2005 indicated that less than 25% of respondents were 'supportive', about 70% were 'not sure', and the rest were 'not supportive' of MPA development. The current survey indicated that 75% of respondents were 'supportive', about 22% were 'not sure', and only the remaining 3% were 'not supportive' of MPA development. The Raja Ampat team seems to be successfully shifting the perceptions of those who were 'not sure' to become supporters of MPA development. There is also a slight difference in the perception of respondents on the person and or/institution in charge of solving the environmental problems in their villages. The baseline survey indicated that respondents mostly named the head of villages, but it this changed in the follow up survey to be the enforcement agency. This information is important to inform the outreach team to maintain and improve their

communications with enforcement agencies to update them on the knowledge and all relevant issues pertaining to marine conservation in the villages.

Activity 4.4: Support patrols with the Floating Patrol Station throughout Raja Ampat through two major workshops.

Anticipated Results in FY07:

- Effective operational coordination among government agencies and environmental NGOs.
- A shared understanding of the purpose of the Floating Patrol Station.
- Patrols contribute to the abatement of illegal and unreported fishing in Raja Ampat, furthering biodiversity conservation and sustainable resource use.

Results

The wooden joint patrol vessel or “floating patrol station” (FPS) has been completed and the FPS with its seven crew is now operational.



To roll out the joint patrolling activities in Raja Ampat, a series of meetings were conducted in FY07 in order to complete the standard operating procedures for joint patrols. The main outcome of these workshops was Raja Ampat government approval for the joint patrol development and the final draft of Standard Operation Procedures (SOP). The series of meetings have also brought common understanding among the Raja Ampat team, local government counterparts and other partners of the purposes of FPS. Moreover, coordination between partners has been significantly improved through this series of meetings, which is an excellent start for strengthened operational coordination once the patrolling SOP is complete and patrolling begins. The final draft Joint Patrol SOP will be discussed in technical workshops with local government agencies and other partners in October 2007, followed by endorsement from the respective government agencies. After this endorsement, joint patrol activities can be implemented.

Activity 4.5: *Visit Ayau Atoll to assess the status of a suspected spawning aggregation (SPAG) site*

Anticipated Results in FY07:

- Knowledge of the status of the Ayau SPAG site will inform the design of the MPA network

An assessment on the status of suspected SPAGs in Kofiau conducted last year suggested that most SPAGs in Raja Ampat may already be depleted. One possible exception is a suspected SPAG in Ayau, an atoll in the north of Raja Ampat, where the catch of coral trout is still plentiful. Together with Conservation International, experienced field staff from the Kofiau field station confirmed the site during the new moon period at the week of November 16-22 in Ayau. One site previously identified as a likely grouper SPAG was surveyed and approximately 50 *Epinephelus fuscogutatus* and 30 *Plectropomus areolatus* individuals were found. Along with this survey, 5000 floater vials for an egg and planktonic dispersal study were released at the SPAG site in Ayau. A follow-on survey in December was also conducted at the same site in Ayau to observe the spawning aggregation during the full moon period. Based on this confirmation, Ayau area was also included in the Bupati's decree creating six new MPAs in Raja Ampat.

Objective 5: Field presence for the CTC Raja Ampat Program

Activity 5.1: *Operate field station in Kofiau*

Anticipated Results in FY07:

- Efficient support provided for the Raja Ampat field program.

Results

The field station in Kofiau continues to be an effective base for all activities implemented on site contributing significantly to the improved efficiency of activities in terms of time and resources. The field station, featuring a wooden jetty equipped with fuel storage and electricity generator, also promotes field presence of our staff. This contributes to strengthened relationships between the staff and the program constituents, fostering local support for the program.

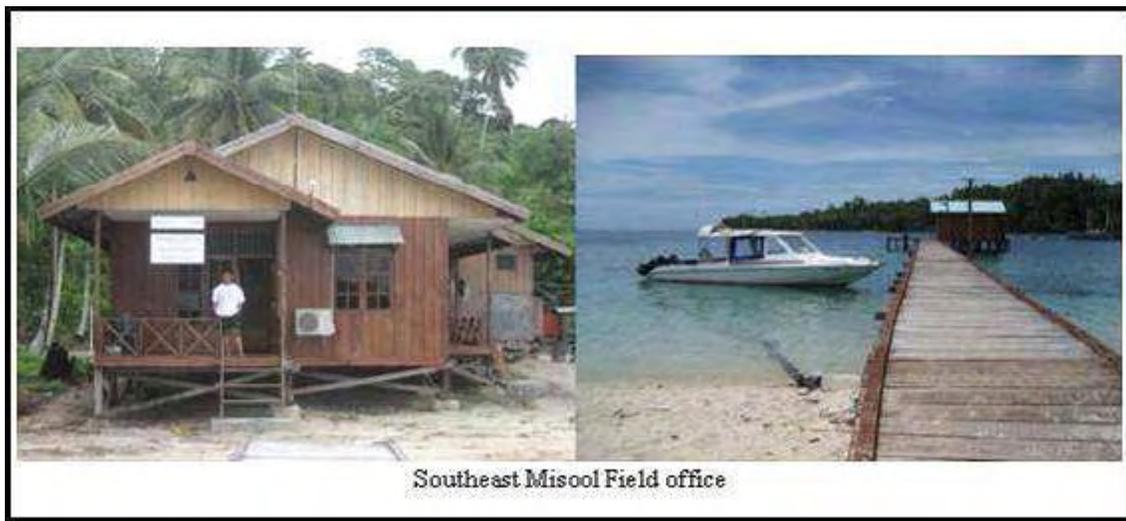
Activity 5.2: *Establish and operate field station in Misool, equipped with monitoring supplies (SCUBA gear, etc.)*

Anticipated Results in FY07:

- Efficient support provided for the Raja Ampat field program.

Results

Based on the field assessment and public consultation, Harapan Jaya village was identified as the location for TNC's field office in Southeast Misool. Refurbishing was completed in March 2007 and the field station is now equipped with communication facilities including radio, satellite phone and VSAT. Since April 2007, the field station is fully operational and has been used by the Raja Ampat team as a base to support all field/conservation programs in Southeast Misool. Similar to the situation in Kofiau, the field station in Misool promotes field presence of program staff. Since there is no electricity in Harapan Jaya village, the Misool field team had agreed to provide limited electricity to some public facilities. This way the villagers see the existence of the field station as a benefit to them and are thus more inclined to be supportive toward the program.



Activity 5.3: Operate administrative and logistical support desk in Sorong

Anticipated Results in FY07:

- Efficient support provided for the Raja Ampat field program.

Results

Sorong is the gateway to Raja Ampat, connecting the rest of Indonesia to Raja Ampat. Sorong is essential to provide administrative and logistical support to our field stations in Raja Ampat. The Sorong office continues to provide efficient and effective support for administrative, logistical, event and travel arrangements. Furthermore, the Sorong office is often used as a meeting venue with other partners in Raja Ampat.

Activity 5.4: Operate two speedboats

Anticipated Results in FY07:

- Efficient support provided for the Raja Ampat field program.

Results

One speed boat (North Sea X2K, two 200 HP outboard engines, max, speed 30 knots), acquired in FY05, has been in operation for nearly two years. A second brand new X2K speedboat with two 140 HP outboard engines became available in FY07 to support the program (monitoring, outreach, and emergency transport) in Southeast Misool. The crews for this speedboat have been recruited and trained to maintain the engines. The speed boat crews also received on-site coaching from a more senior and qualified boat captain/mechanic from another TNC site. We are currently considering the permanent deployment of this senior mechanic in Raja Ampat help ensure continuation of effective support for the program.

Activity 5.5: Operate Floating Patrol Station, purchase and operate Awareness / Supply Vessel; additional support to Misool Field Station operations

Anticipated Results in FY07:

- Efficient support provided for the Raja Ampat field program.

Results

The construction of a 24m wooden joint patrol vessel or “floating ranger station” (FRS) has been completed and the FRS with its seven crew is now operational. The FRS has a gross tonnage of 30 GT and is equipped with 190 horsepower engine. It can accommodate 7 crew members and 8 passengers. The FRS was named ‘Inbekwan’ by the Bupati, which is the local name of “Garfish”, is a member of the “Hemiramphus” family. The FRS Imbekwan is already in Raja Ampat waters, currently waiting for the joint patrol SOP to be formally endorsed. After this endorsement it is expected that the FRS can start its official patrol throughout the Raja Ampat waters. For the time being, the FRS has been supporting the activities in Kofiau and Misool, especially for the biological and resource use monitoring.

A second vessel for outreach and educational purpose has been acquired and refurbished. In addition to its main purpose to support outreach activities, the vessel can also be used as a supply vessel to support the field stations in Kofiau and Misool. The TNC Raja Ampat program is in close collaboration with Conservation International to conduct an awareness program using the vessel.