Introduction

Perhaps the most difficult challenge facing most marine protected areas (MPAs) around the world today is that of securing sustainable funding for conservation management. Managing an MPA is an expensive affair; the costs of waterborne patrol systems and simple transport within MPAs is generally significantly higher than in terrestrial protected areas, and costs for outreach, neighboring community development projects, and other conservation activities only add to the burden. Many MPAs enjoy a significant initial injection of funding from either government agencies, international conservation NGO’s or development projects involved in the establishment of the MPA, but this funding often decreases dramatically or disappears altogether within a 3-5 year period after establishment. Those MPAs that are fortunate enough to enjoy the more “sustainable” funding sources of direct governmental budgetary support or a tourism-based fees system may find these sources unpredictable; government budgets can drop drastically (due to economic or political reasons) and user fee revenues are subject to the whims of global tourism trends (witness the recent sharp downturn in marine tourism as a result of global terrorist acts since 11 September 2001).

Increasingly there is a realization in the marine conservation community that MPA managers must work to diversify their portfolio of funding options to buffer against decreases in any single funding source (Spergel, 2001; Morris, 2002). MPA managers are now encouraged to show financial savvy and even develop business plans for increasing revenue and funding streams (Smith, 2003).

Bunaken National Park (BNP) in Sulawesi, Indonesia represents an interesting case study of a medium-sized (89,000 hectares), tropical developing country MPA that is currently forging ahead with a plan to diversify its funding portfolio in the hopes of securing sustainable financing for its management and conservation activities. BNP was established in 1991, and encompasses five islands, two separate mainland sections and 22 villages with approximately 30,000 residents. Situated firmly in the center of marine biodiversity, the park is home to fantastic coral reef drop-offs and extensive mangrove forests, and is now well-known as one of Indonesia’s premier marine tourism destinations. Located less than 10km from the provincial capital of Manado, BNP is serviced by an international airport and approximately 20 dive operations/resorts, and receives nearly 10,000 foreign guests and 15,000 Indonesian guests per year.

After its establishment as a park, BNP enjoyed initial support for five years (1992-1996) from the USAID-funded Natural Resources Management Project (NRMP). This initial support included development of a park management plan, stakeholder consultations, mooring buoy installation, several baseline biological
and socioeconomic surveys, and limited procurement including an office automobile and several patrol boats. The park has a management office with a staff of approximately 40 (including the park head, park rangers and administrative staff), and is under the authority of the Indonesian Department of Nature Conservation (PHKA) in the Ministry of Forestry. As a national park, it receives an annual operating budget that averages US$100,000 per year – enough to pay for salaries, office operational costs and at most one waterborne patrol per month. Although all national parks in Indonesia are required by law to charge an entrance fee, the open-access nature of BNP and the legal stipulation that entrance fees are channeled into the national treasury (providing no local incentive to implement a fee system) ensured that BNP had no entrance fee system for the first decade of its existence.

By late 1999, the need for development of a more diversified portfolio of funding sources was acutely felt by both park management and local stakeholders. Perhaps the most vocal proponent for increased management funding was the North Sulawesi Watersports Association (NSWA), a group of local dive tourism operators who were alarmed at the rapid increase in cyanide and blast fishing incidents in the park and saw the urgent need to find funding sources for a more proactive patrol system. By May 2000, the NSWA began charging a voluntary “preservation fee” of $5/diver, which, combined with donations from the operators themselves, was used to purchase fuel for patrols by police and rangers. However, this was clearly a stopgap measure, and the NSWA approached the NRM program for assistance in developing an official entrance fee system for the park. Additionally, local village stakeholders joined the chorus calling for funding for more patrol activities and a host of village development projects and mangrove rehabilitation.

Responding to these calls, NRM has been facilitating the development of a diversified range of financing options for BNP since 1999 (Rothberg, 1999). The first and most important achievement of this initiative to date has been the development of a decentralized user fee system that is strongly supported by all local stakeholders and that has the potential to raise up to half of BNP’s projected optimal annual operating budget of $500,000. While this paper will focus in large part upon the development of this system, it will also detail efforts to further diversify the BNP funding portfolio, including in-kind support from the local tourism sector, an international volunteers system to lower management costs, diversified government agency support and national and international grant support. Two additional sources of funding that are currently under development include visitor center merchandising and a possible endowment fund. Experiences gained during the development of BNP’s entrance fee system and other financing mechanisms provide a number of lessons learned that should prove useful to other MPAs working to diversify their funding portfolios.

**Bunaken National Park Decentralized Entrance Fee System**

**Background**

As mentioned above, national-level legislation (specifically, UU 20/1997, PP 59/1998, and PP 73/1999) stipulates that all Indonesian National Parks must charge a standardized entrance fee. As of 1998, these fees were set at Rp 20,000 per visit for foreign guests and Rp 2,500 per visit for Indonesian guests. By law, these fees are considered non-tax revenue of the central government, and 100% of the revenue collected must be deposited in the national coffers – with no guarantees that it will be returned to the park that generated the revenue (or that it will even be used for park management anywhere in Indonesia). In practice, the national system is generally implemented utilizing a single entrance gate – a concept which is well-suited for many terrestrial parks with a single entrance road, but one which is impractical for larger open-access MPAs.

Unfortunately, this national level entrance fee system is largely at odds with both the aspirations of BNP’s marine tourism industry and the overall goal of providing decentralized funding for local management initiatives. While the BNP tourism industry was supportive of an entrance fee, they were adamant in their demands for several key features to be incorporated in the design of the system:

- A one-time fee based on the Bonaire Marine Park annual entrance tag concept (Dixon et al, 1993; De Meyer, 1998)
- A simple sales system that does not inconvenience visitors or tourism operators
• No forced daily queuing at a single entrance gate
• A robust control system that ensures that all visitors are charged the fee and that minimizes opportunities for corruption.

Most importantly, BNP tourism stakeholders were clear that they would only support an entrance fee system in which the overwhelming majority of the revenues collected are retained locally to fund BNP management.

While this last requirement has been shown to be the most important factor determining success of MPA entrance fees the world over (Lindberg and Halpenny, 2001), it was also the most difficult to accommodate within Indonesian law. Fortunately, the massive government decentralization process begun in Indonesia in 1999 provided an opportunity to explore new options for retaining user fees at the local level. Capitalizing upon this, NRM undertook a comprehensive policy analysis of decentralized financing options for Indonesia’s protected areas system (Rothberg, 1999). Based largely upon this work and close cooperation with PHKA, NRM was successful in obtaining official “pilot project” status for BNP to develop a trial decentralized user fee system.

**Development of the Entrance Fee System**

With this major hurdle cleared, development of the BNP entrance fee system proceeded rapidly. With local government eager to begin implementing its newly-decentralized powers, it was a relatively straightforward process to generate support for a draft provincial law to implement a BNP entrance fee system. However, before the law could be drafted, three major issues required resolution:

1) The entrance fee schedule
2) The agency or management body who would manage revenue collection
3) The allocation of the revenue stream between BNP and the various levels of government involved in park management (city, district, province and national-level governments)

With respect to the actual setting of the fees, it was recognized immediately that the nationally-mandated Rp 20,000/international visitor (~US$2) was simply too low to generate the revenue stream necessary to fund a patrol system and other management initiatives. Previously-conducted Willingness-To-Pay (WTP) surveys in BNP had shown a substantially higher WTP on behalf of most foreign tourists; one such survey conducted by NRMP in 1996 showed an average WTP of US$31/international visitor/visit (Weber, 1996). After significant discussion with the tourism community, a compromise figure of Rp 75,000/international visitor/year (~US$7.50) was chosen (note that this applies to all visitors, irrespective of whether they are diving, snorkeling, or sightseeing). Most stakeholders felt it was best to start with a relatively modest fee and then plan to raise it in the future as visible improvements in management justified such a raise to both tourists and operators. Setting the fee at this relatively low level had the added benefit of keeping the overall revenue projection quite low and hence “off the radar screen” of many government officials (an important consideration in negotiating an allocation scheme favorable to park management – see below).

By contrast, local tourism representatives felt that the entrance fee for Indonesian guests was likely to prove more contentious – leading to the decision to keep the local fee at the same conservative level as proscribed in national law (Rp 2,500/visit). Additionally, a discounted fee of Rp 1,000/visit was offered for Indonesian students carrying their student cards. While these fees would generate only a minor revenue stream, they were considered essential if only for their educational value in coaxing local Indonesians to begin placing an economic value on the nature experience offered by protected areas. In the medium-to-long term, as local attitudes towards conservation and the value of nature mature, these fees may also be raised.

With the fee levels set, it was important to identify which agency would manage the entrance fee system. While national law mandates that the BNP office (BTNB) should manage park entrance fees, this was deemed untenable for this experimental decentralized system which was to be proscribed in provincial law. Instead, it was decided to tie the entrance fee system directly to the multi-stakeholder BNP Management Advisory Board (BNPMAB) that was under simultaneous development as part of the larger NRM objective of moving BNP towards a participatory, collaborative management model. By placing the
The entrance fee system in the hands of the newly-minted BNPMAB, the legitimacy and relevance of the board was immediately guaranteed. Moreover, placing such a diverse group of stakeholders (the 15 members of the management board comprise of local villagers, tourism operators, local environmental NGO’s, the local University, and a range of fisheries, tourism and environmental government agencies) in charge of the fee system provided extra insurance against the corruption, which is unfortunately rampant in many Indonesian revenue collection schemes.

The final issue to be negotiated was that of allocation of the revenues collected between park management and government agencies. While tourism and conservation concerns pushed to have 100% of the fees collected dedicated to park management, this seemed politically impossible; the local city government was pushing for 100% of the fees to go into their coffers! After some tough negotiations (greatly aided by several environmentally-concerned government officials), an agreement was made that 80% of the funds would be allocated to the BNPMAB to fund Bunaken management activities, while the remaining 20% would be split between the four levels of government with authority in the park (5% to the national government, 7.5% to the provincial government, and 3.75% each to the city and district governments). While this allocation scheme continues to draw occasional fire from local government (see below in “problems encountered”), it has been largely accepted by the broader North Sulawesi community now that conservation benefits are visibly accruing as a result of increased funding from the entrance fee system.

Sales and Control Systems

With the dual fee structure (international vs. local guests) and revenue allocation scheme passed into North Sulawesi Provincial Law Number 14/2000, NRM worked closely with the tourism industry to draft the technical decree necessary to implement the fee system. One primary concern was to implement a sales system that was convenient to all involved (eg, avoiding the necessity of daily queuing at a single entrance gate). Borrowing again from the Bonaire system, a dual system of sales was created. For those tourism operators who could afford to do such, international tags and local tickets could be purchased in bulk and then resold to guests, thereby eliminating the need to visit an entrance gate. For independent travelers and those smaller tourism operators who could not afford to pre-purchase in bulk, three entrance fee ticket windows were constructed at strategic areas within the park (and staffed by employees recruited from the local village population in order to increase benefits to and acceptance by the community).

Following Bonaire’s model, the waterproof plastic tags for international guests are individually numbered in order to prevent resale of the tags, and the color of the tag changes annually. Upon purchase of an entrance tag, guests are required to fill out a triplicate receipt stamped with the tag’s number, on which they record their name, date of purchase, country of origin, the tourism operator they are using, and their email address (optional – in order to receive updates about the park). The top copy is given to the guest, while the second copy is returned to the BNPMAB and the third is for the tourism operator. Data from the returned receipts is promptly entered into a comprehensive database, allowing the BNPMAB to keep close tabs on any potential resale of tags or other means of corruption. The database has also been extremely useful in tracking tourism trends in the park (composition of guests by country of origin, peak months of visitor arrivals, etc). This type of data is invaluable in management planning and especially for considerations of diver carrying capacity.

Entrance tickets for local visitors are individually numbered (to prevent corruption by sales staff) and stamped with the date of purchase, as they are only valid for one day. Records are kept of the numbers of local guests per month (as a comparison to international visitors), but no detailed individual data is collected as with the tags.

Control for the entrance fee system is via an active patrol system, both boat- and land-based. On the water, one patrol boat is dedicated to entrance fee checks, which are generally executed directly onboard diving/snorkeling boats. On land, rangers and entrance fee staff check both beachgoers and tourists staying at any of the approximately 30 cottage and homestay complexes on the islands. On most days, a general check is conducted, whereby all visitors are required to show either a date-stamped ticket
or the properly-colored annual tag. However, detailed checks are also conducted on a regular basis, during which patrol staff actually record the names and tag numbers of international guests and then radio back to BNPMAB headquarters to ensure that the names and numbers match in the database and that there has been no resale of tags.

Once the full system was designed, a massive socialization effort was conducted before the fee system was initiated, with repeated meetings and presentations to all levels of the tourism industry. While the dive operators in the NSWA in particular had been instrumental in setting up the system, there were a number of additional park stakeholders and tourism industry representatives that required additional information and persuasion before they would readily accept the system. In particular, many local travel agents and smaller cottage and homestay owners (as well as a number of governmental tourism officials) were concerned that the implementation of the fee would drive away tourists. One extremely effective means of combating this view was the use of tables comparing the entrance fee schedules of other MPAs from around the world (eg, Lindberg and Halpenny, 2001). Once local tourism representatives understood that many other MPAs regularly collect entrance fees and that in fact many are quite significant, they were reassured that Bunaken’s entrance fee system would not be the death knell for tourism. Comparison of Bunaken’s fee to those in other MPAs was also a powerful argument for the eventual raising of the fee in the second year of the system (see below); it was straightforward to play the “pride card” and convince tourism stakeholders that Bunaken’s fee should reflect its position in the center of marine biodiversity.

With the majority of stakeholders supportive of the fee, a phased approach to implementation was agreed upon. The international fee would become operational in mid-March 2001, while an additional two months of socialization would be conducted before implementing the more contentious local fee. As per request of the tourism industry, NRM prepared a number of materials to broadly publicize the fee system to visitors. Announcements (and regular updates) were sent to a number of local and national newspapers and international diving magazines, as well as to the most popular travel guides used by budget travelers (including Lonely Planet and Rough Guides). A FAQ sheet about the entrance fee and its uses was prepared in 9 languages (English, Indonesian, German, Dutch, Italian, French, Spanish, Mandarin, and Japanese), laminated, and distributed to all hotels, cottages, dive and charter boat operations. Announcements and FAQ sheets were also posted on the BNPMAB’s website (www.bunaken.or.id) and the NSWA’s website (www.bunaken.info). Aluminum billboards announcing the fee were erected at strategic locations in the park and neon signs installed at the Manado airport. Finally, articles on the entrance fee system are also run in every edition of “What’s Happening”, the free newsletter on North Sulaweswi tourism distributed at airports and hotels.

On 15 March 2001, the international fee was kicked off at a gala media event that included presentation of commemorative entrance tags to the four pioneers of Bunaken diving, as well as a public auction of the first 15 numbered tags. Tag number 0001 sold for Rp 2 million (almost 30 times its face value), and the whole affair succeeded in generating a great deal of publicity for the fee system as well as over Rp 50 million (~US$5000) in auction and regular sales. After a month and a half of significant local media coverage (both positive and negative), the local entrance fee system was brought on line on 1 May 2001.

**Results of Bunaken Entrance Fee System (2001-2002)**

In its inaugural year, the BNP entrance fee system was quite successful, with total entrance fee receipts of Rp 418,187,500 (~US$42,000) recorded during the period of 15 March-31 December 2001. These fees were collected from a total of 15,055 visitors to the park (including 5183 foreign guests, 8387 adult Indonesians and 1485 Indonesian students). Taking into account the late start of the entrance fee system and the effects of the 11 September 2001 terrorist attacks on tourism, the overall visitation for the park for 2001 was projected at the level of 25,000 visitors (15,000 Indonesians and 10,000 foreigners). Although they represented only 34% of visitor numbers, international guests generated almost 95% of the entrance fee receipts. In total, 37 countries were represented in the entrance fee database, with the top country of origin being the UK, followed closely by the USA, Italy, Holland, and Germany. A second tier was comprised of Singapore, Japan, France, Taiwan, Hongkong, Switzerland, and Spain.
Of the revenue collected, 20% was distributed to the various levels of government as per provincial law. Approximately 50% of the proceeds were used to fund the joint ranger/police/villager patrol system for BNP, while another 10% was used to purchase and install village information billboards in all 30 settlements within the park. The remaining 20% was set aside for use in the following year’s BNPMAB budget.

Based upon the overall success of the fee system in 2001 and broad support from the tourism industry, the annual fee for international visitors was doubled in 2002, becoming Rp 150,000 (~US$17). It is interesting to note that such a rapid raise in the fee is quite unusual for most MPAs and underlines the importance of working closely with the tourism sector; De Meyer and Simal (these proceedings) report that Bonaire tour operators have resisted a fee raise for over a decade. Additionally, a one-day ticket (Rp 50,000) for international guests was introduced at the request of the local cottage owners (see below). Despite a drastic decrease in international visitors following the Bali bombing incident on 12 October 2002, the BNPMAB managed to record total yearly receipts of Rp 983,750,500 (~US$110,000). These revenues were generated from a total of 25,697 paying guests, composed of approximately 2/3 local Indonesian guests and 1/3 international visitors. Of the 17,435 Indonesian guests, most were adult guests (14,525), while 2,910 students also were recorded. By contrast, a total of 8262 international guests were recorded from 48 countries. Most of these international guests (5,294) purchased one-year waterproof entrance tags, while an additional 2,968 visitors purchased single-day entrance tickets. Taiwan, Italy and the United Kingdom were the top three countries of origin for international visitors to BNP during 2002, with 1431, 1075, and 793 guests, respectively. The notable predominance of the Taiwanese and the significant drop in American visitors can be attributed to the introduction of direct international flights to Manado from Taiwan in early 2002 and the American reluctance to travel internationally in the wake of the 11 September 2001 terrorist attacks.

As with the 2001 revenues, 20% were allocated to national, provincial and local governments, with an additional 40% of the revenues spent on support for the joint patrol system. New in 2002 was an expenditure of over 30% of total revenues on village-level conservation and development programs (including a 30-station park-wide VHF radio system, beach cleanups, construction of public toilet and water facilities and paved footpaths, and mangrove rehabilitation programs). Additional expenditures for 2002 included support for a nascent biological monitoring program and villager environmental education.

Problems Encountered and Ongoing Improvements to the Entrance Fee System

Over the course of two years’ of operation, two major problems have arisen: the issue of non-compliance on behalf of certain tour operators and certain visitor “types”, as well as that of local government clamoring for a larger percentage of the revenues from the successful system.

On the issue of non-compliance, the problems have largely arisen from two related groups: the smaller budget cottages and dive centers (often owned and managed by Indonesians) and the budget travelers (“backpackers”) that frequent them. While strong efforts have been made to reach out to these groups (via meetings with the operators and the broad publication of the entrance fee to visitors, including via the “backpacker bibles” of Lonely Planet and Rough Guides), resistance continues to this day. Amazingly, even though all entrance fee staff are dressed in official uniforms with prominent picture identification cards, and carry with them FAQ sheets and official copies of the provincial law mandating the entrance fee, there are still budget tourists who complain (in letters and internet “chat-rooms”) that BNP has “hoodlums extorting travelers for bogus fees”. Equally perplexing, though live coral cover has risen 11% in the two years since the inception of patrols and most divers comment upon the increase in large fishes since the park came under collaborative management, several Indonesian-owned cottages continue to complain that the entrance fee is useless and only hurts their business. Both groups also complained bitterly in the first year of the entrance fee that it was “unfair” to require all visitors to purchase an annual entrance tag. For balance, it is important to note that the vast majority of operators and tourists have been extremely supportive of the fee system, and in fact many supported an immediate raise of the fee in its second year in order to fund more extensive patrols and village-level conservation programs.
Based upon these varying perspectives, several important changes were made during the second year of the entrance fee system (again, proscribed in North Sulawesi Provincial Law No. 9/2002). The international visitor annual fee was doubled, while a one-day international ticket was also introduced. Additionally, the BNPMAB began charging fees for researchers and professional filmmakers. Perhaps most importantly, the law was given “teeth”; any visitors found within the park without having paid their entrance fee were fined at a rate of double their respective fees (Rp 5,000 for locals and Rp 300,000 for international guests). Patrols begin specifically targeting known “fee-evaders”, and in the case of operators with a history of encouraging guests not to pay the fee, the BNPMAB wrote letters of complaint to the local tourism department to recommend that their tourism licenses be revoked. needless to say, compliance increased dramatically during the second year of the fee system.

The second major problem encountered was that of local city government claiming rights to a larger percentage of the entrance fee revenues. Despite the fact that dive tourism is now estimated to bring over US$4,400,000 annually to the local economy (LaFranchi and Sasmitawidjaja, 1999), including a 10% local government tax on all tourism-related goods and services, government officials often complained bitterly in local newspapers that the city government should receive a larger share of the entrance fees. Fortunately, the allocation of funds was firmly established in provincial law, and the North Sulawesi Vice-Governor was a particularly effective advocate of the importance of providing sustainable conservation funding to maintain BNP as a valuable economic asset to the province. The BNPMAB also stressed the importance of avoiding double taxation and the fact that tourists would be much less willing to pay a fee that did not directly benefit the park. While there are still occasional complaints from local government, most officials seem to have accepted the current allocation in its third year of operation.

One smaller, but nonetheless interesting problem has been the generation of unrealistic expectations due to the very success of the entrance fee system. Many local villagers, encouraged by the initial efforts of the BNPMAB to spread public benefits from the entrance fee system to all 22 villages in the park, are now requesting that the BNPMAB fund a plethora of public works projects that are clearly the responsibility of local government (eg, provision of electricity to remote villages, building of schools and medical clinics, etc). International visitors have likewise increased their demands; many now complain that the BNPMAB should eliminate the floating plastic waste problem generated by Manado city government’s abysmal failure in solid waste management. While the BNPMAB does fund beach cleanups and continues to exert pressure on local government to implement solid waste management, it is wholly unrealistic to expect that a management advisory board with a current annual budget of less than US$100,000 can fund not only patrols and conservation programs but also solid waste management for a city of over half a million inhabitants!

Despite these problems, a key factor in the continued success of the BNP entrance fee system has been continuous engagement with all levels of the tourism sector to obtain feedback and adapt the system to any perceived shortcomings. One clear requirement from the tourism community has been the need for continuous socialization of the fee system and full transparency regarding results. The BNPMAB regularly updates FAQ sheets and posts the results of the entrance fee system (monthly revenues and expenditures, etc) on websites, bulletin boards throughout the park, and via email lists. Brief updates on entrance fee results are also submitted to international dive and nature magazines.

Another key area of improvement suggested by the tourism industry (and highlighted by the detailed statistics collected by the entrance fee system) was a new focus on meeting the demands of local Indonesian tourists. During the first year of the entrance fee system, the BNPMAB focused on foreign divers and snorkellers as primary customers, devoting most management efforts towards improving patrols and other activities to maintain and improve the quality of the reefs. However, it soon became evident that local tourists are far more numerous, and that they have quite different demands for a “quality MPA experience”: clean beaches and public picnic and toilet facilities – with reef quality being largely irrelevant! More recently, the large increase in day-tripping Taiwanese snorkel tourists has required yet another management paradigm shift; unlike BNP’s original clientele of relatively experienced (and environmentally-enlightened) divers, this type of tourist requires specific education and patrol programs to prevent reef trampling. With both of these situations, close monitoring of entrance fee data combined with continuous engagement with the tourism community has allowed adaptive management changes.
Yet another improvement to the fee system suggested by the tourism sector was the provision for an incentive system for tag sales to further prod uncooperative operators to participate willingly. Under this agreement, a 5% "commission" (Rp 7,500/tag) is offered by the BNPMAB on all entrance tag sales. However, to promote institutional strengthening of the tourism sector and better cooperation, this incentive is not paid directly to individual tourism operators, but rather to the trade association of their choice (including the NSWA, the local cottage-owner association, the charter boat association, and the travel agents’ association). Moreover, the commission is only paid on yearly entrance tags, in order to encourage operators to sell the tags instead of one-day tickets. This system has also improved compliance and cooperation, and allowed some interesting initiatives to develop; the NSWA uses the proceeds of these commissions to fund a scholarship fund for local high school students from within the park, and the cottage owner association uses their commissions to fund weekly beach cleanups by local villagers.

A final improvement suggested by the tourism community was the introduction of an entrance tag design contest open to all guests visiting the park. For the first two years, the tag design was decided internally within the BNPMAB. While the tag designs were enthusiastically received and the tags have in fact become a collector’s item (the BNPMAB received several requests from abroad to purchase tags without visiting the park!), members of NSWA suggested that a tag design contest would only further promote the entrance fee system. The 2003 tag design contest was announced in June 2002, with a deadline of October 2002 to provide ample time to select and print the winning tag design by December 2002. Participants were allowed to submit up to three photographs or graphic designs each for consideration, with the winning prize being a return airfare from Singapore to Manado (donated by SilkAir) and a 5 day all-inclusive diving package at one of 6 participating dive resorts. Importantly, any submitted photos or designs become the non-exclusive property of the BNPMAB for use in printed conservation materials for the park. The contest has proven very popular and is now in its second year.

It is interesting to note that Bunaken’s entrance tag system, originally inspired by Bonaire Marine Park’s tags, has likewise become the model for a “third generation” entrance tag system for Namena Marine Reserve in Fiji. Numerous other MPAs have expressed interest in developing this system, which seems particularly well-suited for open-access marine parks.

**Additional Financing Resources**

While Bunaken’s entrance fee system has proven highly successful and is currently the primary source of conservation funding for the park, it is subject to several important limitations that have required the park’s management board to develop other financing options as well. Perhaps most obviously, the entrance fee system is dependent upon tourism arrivals – which have fluctuated dramatically in the past several years of global terrorism events and international health scares such as the SARS virus. However, even in a more stable tourism climate, proceeds from the entrance fee system are limited by the sustainable tourism carrying capacity of the park and the upper limit of tourists’ willingness-to-pay entrance fees. In the long run, the BNPMAB is targeting up to US$250,000 a year from the entrance fee system – with the projected increase in revenues stemming from a combination of increased visitor numbers and eventual fee raises for both local and international visitors. NRM is now working with the BNPMAB and the tourism sector to set visitor carrying capacity limits and legislate these limits to prevent the onset of mass tourism. Increased user fees will likely be one tool that will be used in the future to limit visitor numbers to a sustainable level.

Given an estimated optimal annual operating budget of US$500,000, the BNPMAB has worked to develop a range of additional financing resources to cover the budgetary shortfall left from the entrance fee system. These include in-kind support from the private sector, an international volunteers system, diversified governmental budgetary support, and grant support. These efforts are detailed briefly below.
**In-kind Support from Private Sector**

As mentioned previously, the North Sulawesi Watersports Association (NSWA) has proven a highly supportive partner for conservation efforts in the park. Besides their key support for the entrance fee system, the 14 dive operators in the NSWA have sponsored a wide range of additional programs that assist park management. Examples include the NSWA scholarship donation program that provides high school and university scholarships to youths from villages within the park, a handicrafts program that provides village men and women with significant extra income from sale of reef-friendly handicrafts, and donation of educational materials (including books and children’s masks) for conservation education programs in local schools.

Just as importantly, the BNPMAB frequently relies upon the NSWA to provide in-kind boat and diving support for management activities. NSWA operators voluntarily participate in beach and reef cleanups, and donate boat time to bring school groups to Bunaken Island for conservation education activities. Dive guides from the NSWA have been trained in fish spawning aggregation site monitoring and a system is being devised to have individual operators “adopt” key spawning areas and monitor them regularly (while also providing rental dive gear and boat time to rangers also trained to monitor). To date, five park rangers have received free SCUBA certification training from NSWA operators, and the BNPMAB is targeting complimentary SCUBA training for all remaining rangers. Dive guides also assist in occasional Search and Rescue operations, and dive boats are an integral part of Bunaken’s patrol system – reporting all violations observed to the patrol system via VHF radios and cellular phones. By relying on the watchful eyes of the 50+ dive boats operating in the park, fuel costs related to patrol boat operations are significantly reduced. Finally, NSWA operators have donated significant boat and diver time to the installation of EcoReef reef rehabilitation modules and mooring buoys – saving the BNPMAB tens of thousands of dollars in fuel, equipment and diver costs.

**International Volunteers System**

The nature of tropical MPA management makes it inherently “sexy” to a variety of formal volunteer organizations, and the BNPMAB has taken advantage of this in attracting expert volunteer support from the UK-based Voluntary Service Overseas (VSO). VSO recently placed a coastal community livelihoods development expert for a two year volunteer stint with the BNPMAB. Additionally, a local environmental NGO partner has similarly attracted the placement of an American Volunteers in Asia (VIA) volunteer in community conservation education. Volunteers from VSO and VIA receive intensive Indonesian language training prior to placement, making them a hugely valuable asset to park management. Besides their individual expertise and ability to carry out important management functions (an important cost savings for the park), these volunteers have also proven invaluable in their assistance with preparing international grant proposals to support park programs (see below).

In addition to attracting volunteers from these “formal” volunteer programs, the BNPMAB is now targeting a wide range of “informal” volunteers as well. This has been largely demand-driven; as Bunaken’s management system continues to produce results and generate positive publicity, the number of international enquiries regarding the opportunity to volunteer for the park system has skyrocketed. In order to capture and optimally utilize this important source of support, the BNPMAB has now developed a Bunaken National Park Volunteers Program. Interested candidates can download information on the program and brief application forms from the BNPMAB website (www.bunaken.or.id). Based upon the applicant’s interests, skills and available volunteer time, the BNMAP attempts to find a suitable placement for the volunteer that will both provide them stimulating experiences while benefiting the park in a tangible manner.

Still in its infancy, this program has generated some important lessons learned for other MPAs wishing to develop such a volunteers program. While there is considerable international interest in such a program (predominantly from young university graduates wishing to gain “real-life” marine conservation and management experience), developing a volunteer program requires significant effort in planning and oversight to ensure that volunteers have a workload that is sufficient to keep them interested while at the same time feasible for them to achieve with limited expertise. In Bunaken’s case, the language barrier is an extremely important consideration; volunteers staying a few months are limited to tasks that can be
accomplished using English or very basic Indonesian. While this rules out the possibility of training and outreach programs with local villagers and other stakeholders, there are a range of other activities that are still considered highly beneficial to park management. Some key examples of volunteer tasks include:

- participation as independent observers on routine patrols and entrance fee checks, as well as providing assistance with explanation of the entrance fee system to problematic international guests
- making presentations to tourists on Bunaken’s management system and unique ecology and natural history
- conducting interviews with tourists and local cottage and homestay owners to assess current attitudes on park management and seek constructive input
- assistance with reef monitoring and reef and mangrove rehabilitation activities
- monitoring of diver and snorkeller behavior and impacts on the park’s reefs
- designing and updating park educational materials for visitors (including brochures, posters and websites)
- writing articles on Bunaken for international travel and dive magazines

The Bunaken Volunteers System is now rapidly expanding and the BNPMAB envisions eventually sponsoring up to 10 volunteers at a time.

**Diversified Governmental Budgetary Support**

From a governmental budgetary support perspective, Bunaken has one mandated source of support – from the Bunaken National Park Office (via the Ministry of Forestry’s Department of Nature Conservation, PHKA). Unfortunately, this budget is currently averaging US$100,000 per year – just enough to cover salaries and office expenses, with very little to run any conservation programs in the field.

Fortunately, the BNPMAB is a multi-stakeholder board that includes local government agencies with overlapping authorities in the park – including fisheries, tourism, and environmental impact agencies. Over the past several years, the BNPMAB has begun leveraging its member agencies to commit governmental funding to park programs. Each of these agencies has an annual budget for field programs; the “trick” has been to convince them to dedicate this to programs within the park. As an example, the provincial fisheries department has limited funding to assist fisherfolk with training and credit schemes – and the BNPMAB has gently pressured the department to prioritize fishers from within the park for these programs. Another member agency of the BNPMAB, the environmental impact agency, recently sponsored a number of Earth Day and Environment Day activities that were focused in the park.

The BNPMAB is also beginning to focus on non-member governmental agencies, using its clout as an effective multi-stakeholder board. Several national Department of Health programs have been prioritized towards villages within the park, while the BNPMAB is aggressively targeting the Department of Public Works to fund several infrastructure projects within the park’s villages as well. Such diversified governmental budgetary support seems to be an overlooked source of funding for many tropical MPAs, and there is great potential to capitalize upon this. In the case of Bunaken, the inclusion of a range of government agencies in a multi-stakeholder management board has greatly facilitated development of this funding option.

**National and International Grants**

While not “sustainable” in the strict sense of the word, grants from national and international donors can provide an extremely important source of additional funding for one-time equipment or workshop costs, trial programs, and other non-routine expenditures. The BNPMAB has only begun to develop this part of its funding portfolio, but has already been quite successful in attracting grants from WWF Wallacea (patrol support, training for fish spawning aggregation site monitoring, and several workshops), Seacology Foundation (community landing dock and reef rehabilitation program), International Coral Reef Action Network (ICRAN; support for development of sustainable dive tourism manual and study tours with another MPA), and of course USAID’s NRM program (workshop and training support, capital equipment procurement, and start up operational funding for BNPMAB secretariat). A key stumbling block for the
BNPMAB in this regard is again the language barrier (most donors require proposals to be written in English), though the board recently hired an executive director with good English skills and has also been relying upon its international volunteers to assist in grant writing. The volunteers have helped not only with grant writing, but also in alerting the BNPMAB to grant opportunities of which it was previously unaware. While the BNPMAB is wary of developing a dependence on grants, donor support is an undeniably important part of any conservation financing portfolio.

Lessons Learned

As detailed above, the experiences gained by the BNPMAB over the past three years’ of developing a diversified portfolio of financing options provide a number of important lessons learned for other tropical MPAs looking to expand their funding options. Among the most important of these include:

1. **Tourists are willing to pay reasonably high entrance fees as long as they see their money is resulting in visible conservation management.** Willingness-to-pay for effective conservation management is high, but can only be sustained when tourists see results from their payments (i.e., the majority of the funds collected must be devoted to local management activities). In Bunaken, the entrance fee system started well below the actual willingness to pay so that we could first demonstrate progress in conservation and management. Now, it is easier to raise entrance fees based on real progress.

2. **Tourism sector support for entrance fees is essential.** This is best achieved by involving the tourism sector in the development and continuous improvement of the entrance fee system – in order to ensure the system is most efficient and least inconveniencing to guests and tour operators. The tourism sector generally sees a direct benefit to their business from increased conservation funding – it is simply a matter of creating a sense of ownership and trust in the system to gain their full support.

3. **User fee systems MUST be applied evenly, so focus enforcement efforts on potential fee-evaders.** Even the strongest private sector support for a user fee will rapidly disintegrate if cheating is evident. As “backpackers” and budget travel operators are among the most likely to attempt to beat the system, MPA managers should focus socialization and enforcement on these groups – and make sure to publish notices of the user fee in budget travel guides like Lonely Planet.

4. **Entrance fee systems require continuous socialization.** MPA managers need to capitalize on every opportunity to publicize their fee system in order to gain and maintain acceptance and compliance.

5. **Transparency of results of entrance fee systems (and especially programs funded by revenues) is extremely important to maintain public support.** The BNPMAB publishes monthly financial reports and distributes them by email, newspapers, magazines, and websites, as well as posting them in key public places around the park.

6. **Managers should anticipate that local government may attempt to commandeer funds generated by an entrance fee system.** It is imperative to ensure that revenue distribution has a strong legal basis from the outset. The BNPMAB purposefully began with a relatively small entrance fee in order to minimize the potential greedy response of local government agencies interested in revenue sharing.

7. **Even in tropical developing countries, managers should not underestimate the value of domestic tourists to an entrance fee system.** In Bunaken, domestic tourists outnumber international guests by 2 to 1, and domestic tourism has remained robust throughout the recent downturn in global tourism. Domestic visitors may have very different expectations and requirements, and these should be strongly considered.

8. **Funding for conservation management needs to be diverse.** Reliance on a single source like entrance fees is dangerous. This is demonstrated by the sudden drop-off in revenues from the Bunaken entrance fee system after 11 September 2001 and subsequent global threats. Long-term sustainability requires significant financial diversification.

9. **The private marine tourism sector can be a strong financial supporter of MPA management if relationships are cultivated properly.** As the marine tourism sector is
generally dependent upon healthy, well-managed ecosystems, it is not difficult to convince operators of the mutual benefits of providing in-kind support for management and conservation activities.

10. **International volunteers are an important potential source of indirect financial support, providing free labor and expertise and assisting with fund-raising.** While an effective volunteers system takes significant effort to set up properly, the cost savings can be well worth the time.

11. **Managers should be creative and persistent in seeking to diversify budgetary support from various governmental agencies with potential interest within their MPA.** While the management authority for MPAs varies widely from country to country, it is not uncommon for a number of governmental agencies to have overlapping authorities within an MPA – and all of these agencies are potential sources of funding for MPA programs.

**Future Plans**

In addition to the various elements of Bunaken’s funding portfolio discussed above, two further sources of funding that are currently under development include visitor center merchandising and a possible endowment fund for the BNPMAB. Bunaken’s visitor center is targeted for completion in early 2004, and there is great potential for revenue generation from the sale of official park shirts, towels, hats, books, postcards, etc. At the same time, the BNPMAB is proceeding cautiously with these plans, as there are already a number of villagers who make their living from selling handicrafts and clothing to visitors. In order to avoid marginalizing these villagers, the BNPMAB is planning to offer only non-overlapping, non-competing goods in the visitor center store.

While the portfolio discussed above has required significant effort to develop, it must be said that it has largely evolved without a formal, holistic planning process. This is set to change in the near future; Bunaken National Park has been selected as one of four MPAs to participate in a pilot study to develop business plans for Asian MPAs under the auspices of the World Commission on Protected Areas South East Asia Marine (WCPA SEA Marine) working group. It is hoped that this business planning process will identify further opportunities to both enhance the funding options already in place as well as to develop new ones – thereby setting Bunaken NP on the road to financial security while providing a model for similar MPAs throughout the tropical developing world.

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