

TURTLE ISLANDS

RESOURCES AND LIVELIHOODS UNDER THREAT

A Case Study on
the Philippines



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TURTLE ISLANDS

RESOURCES AND LIVELIHOODS UNDER THREAT

A Case Study on the Philippines

This case study from the Turtle Islands in the Philippines is one in a series of similar analyses being undertaken by WWF to highlight issues and lessons from conservation and development initiatives. The case studies are built on the recognition that this is a complex and emerging field where much has been learnt but not necessarily shared among field practitioners, programme and policy staff, partners and donors.

The intention is that these case studies will help both in building stronger understanding of the issues as well as in promoting further learning and sharing of both successes and challenges. We welcome feedback on what you thought of this case study and subsequent ones. Please send any feedback to Sejal Worah (sworah@wwfindia.net) and Dominic White (dwhite@wwf.org.uk)

Bakkao, Taganak Island



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Boan Island

FRAGILE SANCTUARY

Like a handful of jewels scattered on the fringes of the Sulu Sea, the Turtle Islands sit, remote and isolated, on the southernmost edge of the Philippine archipelago. Home to relatively poor communities of gentle seafarers known as the Jama Mapun, they have come to prominence as one of two of Southeast Asia's most important breeding and nesting ground for green sea turtles.

Innoh Muhammad is a Mapun elder in the Turtle Islands, who arrived on the main island of Taganak, decades before, as a child. Pah Innoh (*pah* is a title of respect for elders) remembers a childhood when sea turtles were so unafraid of people that they swam right up alongside whenever he and his friends frolicked in the water. In those days, turtles were seen surfacing to lay their eggs even in mid-afternoon. Pah Innoh and Pah Issan, another elder, describe the process of harvesting turtle eggs on Baguan, the island with the largest nesting population, as 'endless.' 'In my day, you

didn't bring a sack when you went around Baguan to collect eggs—you brought a boat and paddled around the island so you could carry all the eggs,' Pah Issan recounts. Both men remember a time when as many as 100,000 turtle eggs were laid per night on Baguan alone.

These days, however, Bogs, Ison and Unot, workers with the Philippine government's Pawikan Conservation Project or PCP (*pawikan* is sea turtle in many Philippine languages), say that the numbers are infinitely less dramatic. In 2003, only once did they find 80 complete nests with an average of a hundred eggs each. Normally, they find only 30 to 40 complete nests. During the off-peak season of 2004, that number went down to 'sometimes 10, sometimes two, sometimes zero.' Between 1951 and 1983, turtle egg production in Taganak dropped by 84%. If Pah Innoh's estimates are correct, it now takes 35 days for sea turtles to lay the 100,000 eggs that used to be laid in a single night.



Chelonia mydas (Green Sea Turtle)

The gardeners' haven

Sea turtles are known as the 'gardeners of the oceans,' playing an important role in the food chain. Belonging to the family *Cheloniidae*, sea turtles are agents for the dispersal of plants and nutrients in the sea as well as on the beaches where they nest. They keep corals healthy by eating algae, which would otherwise smother the reefs if left unchecked. They are food for a wide array of predators, from birds to sharks, and in areas where turtles are present in abundance, they also provide humans with meat and eggs.

Having survived natural hazards for millennia, sea turtles are now under severe threat from human activity. They are caught in nets through trawl and long-line fishing. Dynamite fishing blows up their food sources. They are deprived of nesting sites when sandy areas are converted into beachside condominiums, and their eggs are harvested indiscriminately, leaving few to hatch and replace the current population. The decrease in egg production of green turtles has ranged from 65% to 90% in different parts of Southeast Asia between 1930 and 1993. The region, in fact, is considered the world's greatest consumer of turtle eggs.

In an effort to save the decreasing population, the Turtle Islands Heritage Protected Area (TIHPA) was established in 1996. Straddling the border of Malaysia and the Philippines, the TIHPA is the

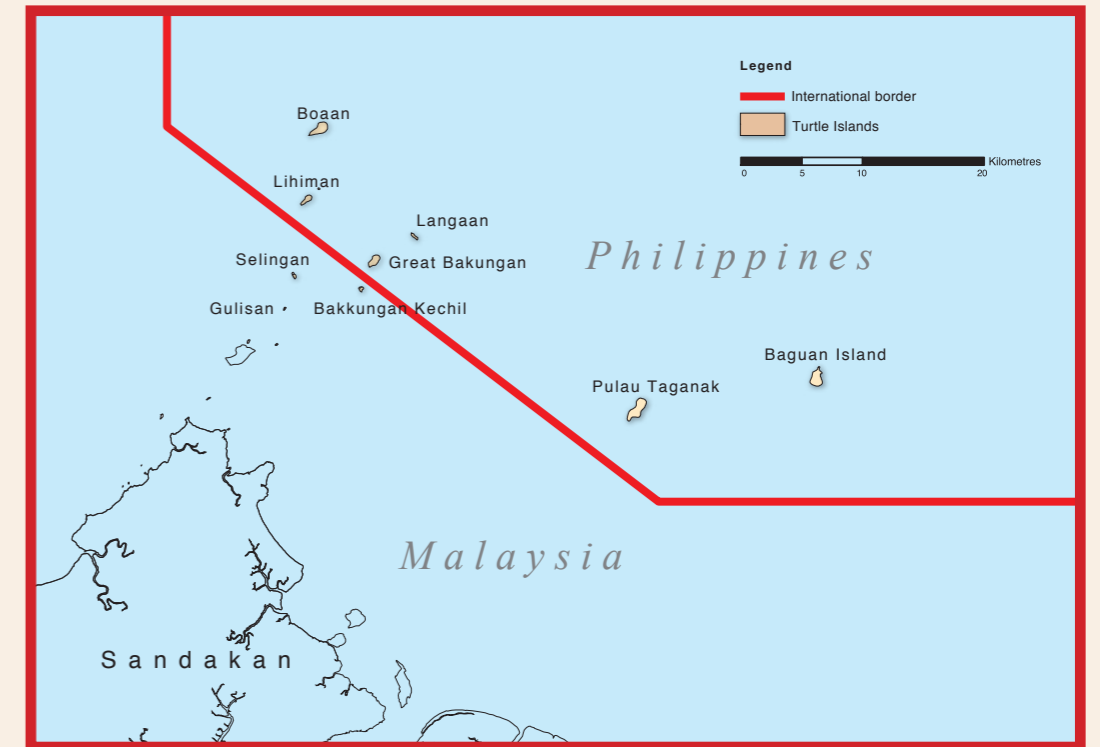
world's first trans-border marine protected area for sea turtles. Of the nine islands in the TIHPA, three are on the Malaysian side and six in Philippine territory—Taganak, Boan, Bakkungan, Lihiman, Langaan and Baguan. These six islands have a total land area of 308 hectares, with only Baguan remaining uninhabited since it was declared a marine turtle sanctuary in 1982.

The TIHPA is Southeast Asia's largest remaining nesting site for green turtles (*Chelonia mydas*). Eighty percent of turtle nestings in the Philippines happen in this area. On Baguan, 98,000 completed nests were documented between 1984 and 1998.

Turtles are not the only inhabitants of the rich marine ecosystem of the Turtle Islands, however. The Sulu Sea is among the most abundant fishing areas in the country—an abundance that has put the area under threat. The islands are magnets for commercial fishermen from both Malaysia and the Philippines who often practice destructive fishing methods. Large vessels ply the area at all times, ignoring the invisible, often indistinguishable international boundaries set in the water. Small-scale fishermen, taking advantage of the erratic law enforcement in the area, also practise dynamite and cyanide fishing. Although there are regulations on turtle egg harvesting, the trade continues to flourish.



Map of the Philippines showing the isolated location of the Turtle Islands in relation to the rest of the archipelago.



The Turtle Islands straddle the border of Malaysia and the Philippines

People of the islands

The Turtle Islands are as isolated from the rest of the Philippines as any area could possibly be. The nearest Philippine land mass is Palawan, 270 kilometres away. Getting to the islands from the Philippine capital city of Manila requires a two- to three-day journey. Sabah is actually closer, a mere 25 kilometres away, and travelling by speedboat to the Malaysian city of Sandakan takes only half an hour.

Historically, the Turtle Islands have always been part of the Sultanate of Sulu. They officially became part of the Philippines under the 1898 Treaty of Paris, although they remained under the administration of the British North Borneo Trading Company until 1947. Up until then, the islands were still largely uninhabited. Migration of the Jama Mapun from the island of Mapun to the Turtle Islands began in the 1940s.

The protracted civil war in Mindanao from 1970 to 1990 saw refugees fleeing to the Turtle Islands. Tension with Malaysia due to the Philippine claim over Sabah as part of the Sulu Sultanate brought in civil servants and military personnel from Luzon. Malaysia's phenomenal economic growth from 1980 to 1995 attracted Filipino job seekers who used the islands as a jumping point to Sabah. By the year 2000, the population of the islands had reached 3,600. Even today, the population swells when there is open conflict in Mindanao, and shrinks when immigration polices allow economic migrants to find greener pastures in Sabah.

The primary source of income in the Turtle Islands is fishing, and 85% of household income comes from marine resource extraction. The people of the Turtle Islands, therefore, are highly vulnerable to changes in the ecosystem, because their livelihoods depend directly on the sea.

KEY LESSONS FROM CONSERVATION WORK

Volunteer teachers from the University of the Philippines' Pahinungod Program were part of the program to improve educational services in the area.



This case study analyses some of the key lessons learned during the implementation of the WWF-Philippines Integrated Conservation and Development Project (ICDP) in the Turtle Islands. While there were many more activities and experiences before and during the project period, this study focuses on three major issues.

Finding the right 'entry point'

Many conservation organisations working on broader conservation and development agendas using participatory approaches have difficulties in finding the 'balance' between conservation and development. In particular, knowing how to respond to community needs, which are usually based around socio-economic development, while still focusing on conservation outcomes has proven problematic. Often, such initiatives begin with a 'substitution' approach such as attempting to replace resource dependent livelihoods with 'alternatives'. As a part of this strategy, external organisations often undertake so-called 'entry-point' activities. These can involve responding to community needs related to health care or education but usually only as a short term measure aimed at meeting people's immediate

needs and gaining trust, assuming that the community will then be more amenable to supporting a conservation agenda.

WWF-Philippines' interventions in the Turtle Islands also started along these lines. However, with experience and understanding, there has been a change in the approach to working with communities on conservation. This section describes the learning process that WWF went through and lessons that emerged from a conservation and development partnership.

Pushing 'alternative livelihoods'

The Turtle Islands have always been of special interest to WWF-Philippines, locally known as Kabang Kalikasan ng Pilipinas or KKP, because of the nesting population of sea turtles in the area. WWF-Philippines was brought to the Turtle Islands by its close organisational ties to the



PCP staff and volunteers conduct research and monitoring of turtle egg production in their hatcheries.



Pawikan Conservation Project (PCP), which has been present in the island for almost 30 years, conducting regulatory activities and research and information campaigns. The PCP realised the need for alternative livelihoods in the area, but had neither the capacity nor the resources to provide them. In 1997, the Department of Environment and Natural Resources (DENR) signed a Memorandum of Agreement with WWF-Philippines for the latter to conduct research and develop alternative means of livelihood in the Turtle Islands.

The strong alliance between WWF-Philippines and the PCP was founded on the premise that no single agency could handle all the problems alone. PCP/DENR has the mandate to protect the country's natural resources, while WWF's mission is conservation at the genetic, species and ecosystem levels. These agencies recognise that such conservation can only be possible if people's basic needs are met, and the people do their part in conservation.

WWF-Philippines began working in the area through a research project on the ecology of the Turtle Islands leading to a conservation program for sea turtles. WWF also delved into the social, political and economic sources of the threats to the islands' marine resources. They concluded that the nine islands are not independent of each other, and that the conditions of the coral and turtle populations on one island affect the fisheries in the surrounding area. The islands' interdependence confirms that the Turtle Islands should be managed as a single unit,

and that Baguan's pristine ecosystem will not survive for long if the other islands' marine ecosystems are decimated. Therefore, joint management of both the Malaysian and Philippine sides of the Turtle Islands is the logical solution.

The ecological study and the prevailing poverty in the Turtle Islands led WWF, PCP and the local government to believe that providing alternative income would address the local threats to marine resources. This idea of alternative livelihoods led to the development of a follow-up WWF project, 'A Demonstration Project to Address the Use of Cyanide in the Collection of Live Fish in the Philippines.' Implemented in 1997 to 1998, the project aimed to dissuade fishermen from using cyanide by offering a more lucrative form of livelihood, selling live fish in Sandakan, Sabah. About 15 fishermen were organised into a co-operative group, trained in hook-and-line fishing, and assisted financially in purchasing a motor launch boat to transport their catch to Sabah.



A fisherman sets off early in the day in his gulong-gulong boat and returns home with the day's catch caught using the hook-and-line method of fishing. A trawler can be seen in the distance.



These jungkong or small fishing boats cross the border illegally at great risk to sell fish in Malaysia (above).

Twenty years ago, a fisherman could catch 100 kgs of fish a night using hook and line. Nowadays, it is possible to be out catching fish the whole night and return with only a few kilos (below).



Learning from mistakes

The Live Food Fish Project immediately ran into organisational and technical trouble. First, the fishermen preferred to work in groups based on kinship and political alliances. Second, the members of the co-operative did not have the skills to engage in the live food fish industry. A new technology was involved, the market channels were different, and the illegality of ‘smuggling’ fish to Sabah was not properly dealt with. The project trained the fishermen in hook-and-line fishing, but could offer no practical guidance when it came to market and trade problems. The co-operative did not even get as far as selling their catch, because the motor launch they bought was unusable. There were allegations that the members tasked by the co-operative to buy the boat made a profit from the purchase. The boat was never used, and is still sitting in a repair shop.

The project had deeper underlying weaknesses. Joel Palma, former project leader and now Assistant Vice President of WWF-Philippines, believes that the main reason the Live Food Fish Project did not work was because it was a blueprint project based on relatively simplistic assumptions. The concept, design and strategy were developed by the WWF staff and brought to the Turtle Islands as a packaged project. The local community was simply ‘consulted’ as to whether they wanted to be part of the project or not.

By WWF-Philippines’ own admission, the Live Food Fish Project was a failure. The politicians and the people in the Turtle Islands were angry with WWF for creating false expectations. The staff members were asked to leave by the municipal mayor, and for several months, WWF’s continued

presence in the area hung by a thread. In July 1999, after a meeting with municipal officials, the Mayor gave WWF a second chance, on the condition that livelihoods remain a component of any new project. Despite strained relations at the time, local officials were cognisant of the need to address poverty and WWF’s ability to bring additional resources to the municipality.

The Live Food Fish Project had a dramatic impact on WWF-Philippines’ organisational strategy. The lessons learned led to a re-orientation of WWF-Philippines’ approach to implementing projects, from simple community organising to an approach based on a deeper understanding of social structures and stakeholder rights and responsibilities.

Setting new directions

WWF staff realised that a more incisive grasp of the social, cultural and economic fabric of the area was needed for the next phase to fare better and be easily woven into existing social and economic patterns. An in-depth social analysis was carried out, resulting in a detailed socio-economic profile identifying people’s priority needs and gathering baseline data which could later be used for monitoring change.

The results of the study indicated that the top priority of the island’s inhabitants was health, followed by livelihood security, education and law enforcement for controlling illegal fisheries. Health and sanitation conditions in the community were critical. Drinking water came from wells and springs open to contaminants. There was no garbage collection system. Only 10% of the

households had toilet facilities, and garbage and human waste were dumped directly into the sea. It was not surprising that the existing health problems were directly linked to this situation; the incidence of diarrhoea, for example, was 12 times higher than the national average.

Poor health was cited as a major hindrance to productivity, resulting in lost income, and consequently, malnutrition, further affecting their health. There was no doctor in the entire municipality. The average educational attainment of island residents was Grade 3, barely enough to attain a functional level of literacy. Twenty-eight percent of the inhabitants never went to school, as opposed to the national average of 5%.

Given this scenario, it was difficult for WWF-Philippines to push a conservation agenda. Among the community's perceived needs, the one most closely linked to conservation was the need for law enforcement against the encroachment of commercial fishing boats on municipal fishing grounds. This was identified as a fifth priority, coming only after livelihoods, health, sanitation and education, even though the livelihoods of the community were intricately linked with fisheries.

The ICD approach and the bigger picture

At the heart of the Integrated Conservation and Development (ICD) concept is the idea that conservation and development are not diametrically opposed, but should, in fact, complement each other. Having rights to a resource and benefiting from it could serve as an incentive to conserve an area, and the wise use of resources could lead to improved socio-economic conditions. ICD also embraces the principle of multiple stakeholdership where the conservation, social and economic interests of players on the local, regional, national and international levels come into play.

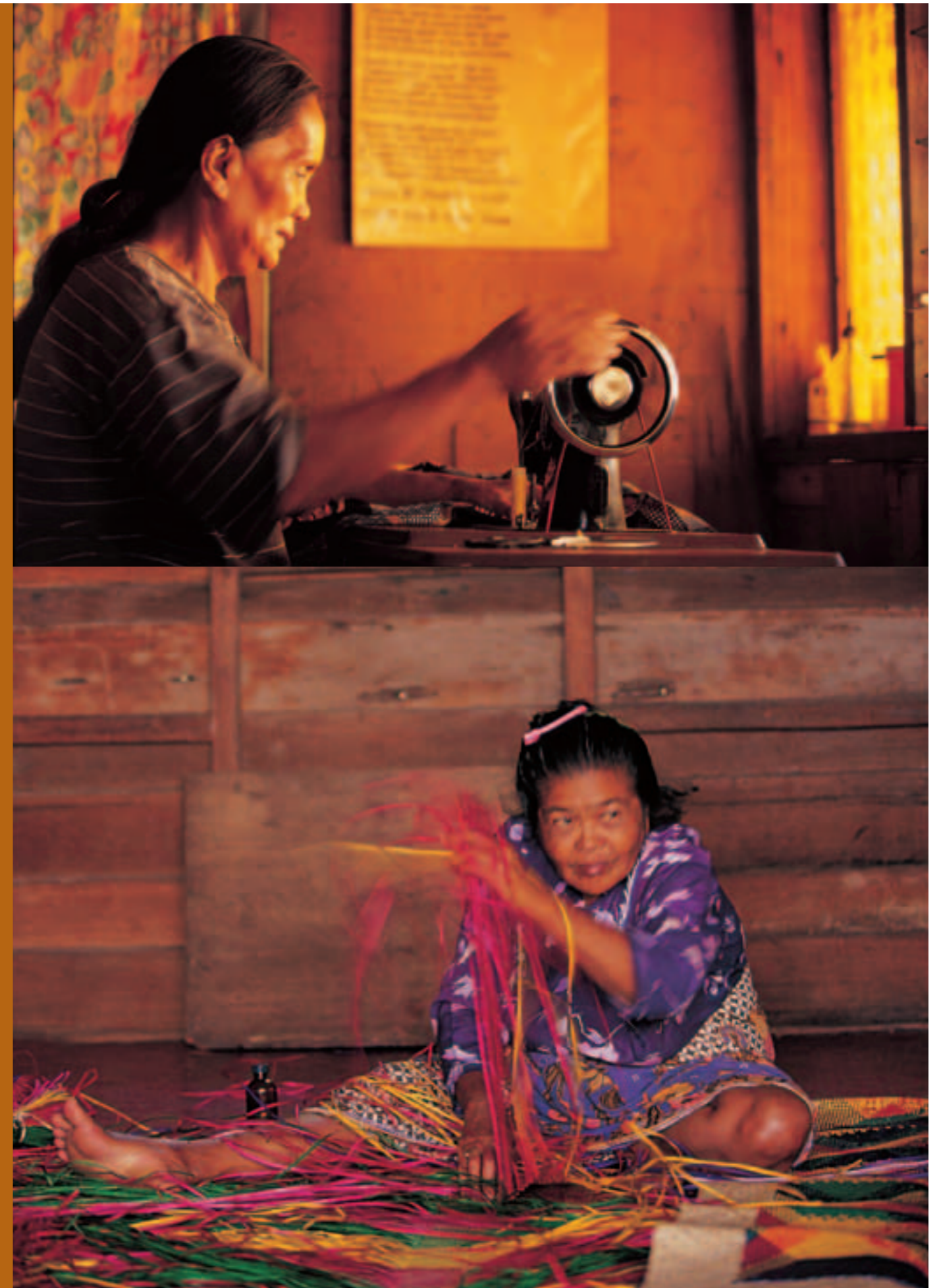
Aya Ahmad took a loan for a sewing machine from WWF's livelihood program. Sewing provides the only source of income for this widow who is mother to five children (right).

Mat weaving provides an additional source of income for the women in Turtle Islands (below).

Based on this concept and learning from the past mistakes, the ICD Phase in the Turtle Islands was marked by efforts rather uncharacteristic of WWF—with a focus on health, education, livelihoods, capacity-building, and an Information and Education Campaign (IEC). The ICD phase was also marked by many capacity-building activities: gender sensitivity, technical skills training for micro-enterprise, cross visits to other project sites and waste management.

A key lesson learned from such social development initiatives was that, as a conservation organisation, WWF-Philippines did not attempt to do everything by itself. Rather, its strategy was to facilitate access and build the capacity of the local social service providers.

Funded by the British Embassy in Manila, the health component aimed to provide safe drinking water and improve waste disposal in the area. Over a period of two years, toilet facilities became part of 87% of households, from a miserable 10%. The municipal government issued an ordinance in 2001 prohibiting littering and dumping garbage into the sea. Almost 200 households gave bio-intensive vegetable gardening a try, which helped in both nutrition and sanitation, as people began to make garbage pits. Forty-three drinking wells are now being treated and monitored regularly, with voluntary service from those who live closest to the wells, and using chlorine provided by WWF. The most dramatic result of the health activities was the decline in the incidence of diarrhoea, from about 500 cases per year to only 14 reported cases in 2003.



Ayang Sarahadil is a Community Health Worker (CHW) who confirms the success of the health component. A mother of six, she used to make regular trips to the Malaysian city of Sandakan for medical services and supplies. This meant crossing the border illegally, hiring a boat and paying doctors' fees of at least US\$30, for which she had to sell her jewellery. She attended a training program conducted by WWF with the Rural Health Unit, and now conducts family classes on health and sanitation. 'Before, I did not know about childcare and proper nutrition,' Ayang says proudly. 'Now I already know how to prevent illnesses.'

Equally well received was the education and scholarship component. Twelve girls were supported through two years of formal education, during which time the scholars became student leaders, leading environmental activities in their schools and communities. As of 2004, four of the 12 girls were pursuing tertiary education under the scholarship programme, which will require them to render service to the Turtle Islands after graduation.



Immunizations are part of the health program's services in the area. However, health services and facilities still need a lot of improvement.

More and more high school students are now expressing the desire to attend university.

Four teachers also came to Taganak from Pahinungod (meaning 'offering'), a volunteer program of the University of the Philippines, to show the local teachers how to prepare lesson plans and explore innovative approaches to teaching. 'Before, our teaching methods were traditional,' says Annabelle Pascubello, a grade school teacher. 'Now we get ideas from the children. There are activities, and teachers are no longer as bookish.' The project staff members are currently exploring future sources of financial support for the education programme.

Interestingly, the livelihoods component proved to be the most challenging part of the ICD phase. Having learned from the Live Food Fish Project, the project now offered loans to individuals to invest in options already available. The money was used for boat engines to give fishermen greater access to fishing areas, kerosene lamps for fishing and household use, farm tools and sewing machines. The credit scheme was even designed to suit the islanders' aversion to interest charges, which, when explained to them, they agreed to call a 'service charge.'

The livelihood component had positive and negative impacts. After buying two speedboats with the money he borrowed, Imam Jamil Tanjilul became a *tauke* (buyer) of other fishermen's catch, and began transporting goods regularly to Sandakan. On the other hand, Liyas Andih got a loan for a kerosene lamp, but had difficulty repaying his loan because he was imprisoned and fined after getting caught trying to sell fish in Sandakan. He eventually lost his boat. Aya Ahmad, a mother of four, took a loan for a sewing machine, but has had similar difficulties repaying her loan because the demand for her main product, school uniforms, is seasonal.



The youth comprise more than 50% of the population in Turtle Islands (above).

Imam Jamil, a success story in the livelihood program (below, left).

Ayang Sarahadil is happy about the info drive on child care and sanitation (below, center).

Liyas Andih, one of many who experienced being caught crossing the international border illegally to sell his catch (below, right).



The low return of investment of about 50% reflects the credit programme's mixed results. On the positive side, the income of livelihood beneficiaries increased significantly. Those who took a loan for boat engines reported an increase in income of 260%, from P3,544 (about US\$70) to P9,429 (about US\$190) a month.

Many of the loan beneficiaries have been unable to pay. Reasons given were a low sense of community ownership, since WWF-Philippines controlled the administration of loans; more pressing needs such as family crises; an unfamiliarity with the concept of loans, as the local credit system involved a barter exchange system; the perception of the loan as 'help' that did not need to be repaid; and the declining fish catch and threat to their livelihood. The administration of the loans was also a heavy burden on the WWF staff, with some 60-70% of human resources concentrated on the work.

The loans were used as a vehicle by WWF-Philippines to further its conservation agenda by requiring the beneficiaries to pledge that they will refrain from destructive and illegal means of fishing, and participate in various conservation activities. However, there is little evidence to suggest that the loan beneficiaries have become environmentalists and conservation advocates. This is one of the major challenges and drawbacks of attempting to link livelihoods to conservation, and very few initiatives have been able to make this direct link. Therefore, the question WWF-Philippines must answer is whether or not it should continue to engage in livelihood and credit programmes. Based on its experience, the results were not commensurate to the time and resources devoted to the program. The dilemma is that the need for a livelihood program in the area is dire, but there are no institutions on the island with the capacity or resources to implement one

Most of the products from the Turtle Islands find their way to Sandakan market but access is limited and difficult.

Conservation and awakening

So if enhanced livelihoods do not by themselves lead to a change in behaviour in favour of conservation, what can achieve this? The answer to this question has started to emerge from the recent social assessment that WWF-Philippines carried out after eight years of operation in the Turtle Islands. Here, it has emerged that the need for effective law enforcement for protecting fisheries, natural resources and local livelihoods has become much more important to the community.

The organisation's experience in the islands therefore confirms one of the tenets of an ICD project: that it would take 10 to 20 years before behavioural change and concrete impacts can be seen. In this case, it was the response to people's needs, development of their capacity, building awareness and empowering them to take control of the process of social and economic change that brought about an 'internal' awareness of the importance of natural resource conservation. This is markedly different from the common approach taken by conservation organisations of either putting the conservation agenda 'up front' or 'buying' people's interest by engaging in short-term social development initiatives.

WWF earned the people's trust by 'genuinely wanting to help,' says teacher Annabelle Pascubello. And through the small steps taken to improve the quality of life in the area, with the help of information and education, people are now better able to grasp and articulate the link between resource protection and their livelihoods. This change in consciousness is not a conservation outcome, but it is the only condition on which the seeds of conservation could be sown.



Learning to collaboratively manage a resource

Collaborative resource management is increasingly being promoted as an approach to conservation and development. Models of collaborative resource management, however, range from the 'token' involvement of communities in resource management to giving them an active role in decision-making. The Turtle Islands' experience with the collaborative management of turtle eggs lies somewhere in between, and an analysis of this experience provides an insight into the complexities and dynamic nature of collaborative resource management. In particular, this example demonstrates that collaborative resource agreements can be affected by external changes as well as internal ones, and there needs to be a system in place that can anticipate these changes and allow for the timely re-negotiation and modification of management agreements.

Turtle eggs as nature's gifts

The Turtle Islands owe their name to their marine inhabitants. The islands are still populated by these creatures, in larger numbers than anywhere else in the country, and the people who live there have a lot to lose if the turtles disappear. 'If there are no more turtles, there will be no more fishes,' says Pah Minoh, a community elder and a member of the WWF staff. 'If there are no more marine resources, there will be none of us left.'

Long before the Turtle Islands became inhabited, the Jama Mapun already had long-held beliefs on interacting with nature. No one imposed rules against the harming of turtles in particular, but accountability rested with each person.

The Jama Mapun believed that certain parts of the islands were considered sacred because spirits dwelt there. In these sacred areas, egg collection was allowed only after the performance of a ritual. They had superstitions on the ill effects of consuming too many turtle eggs, such as skin diseases. Eggs could not be eaten by anyone with allergies and sexually transmitted diseases, and pregnant women risked giving birth to babies with scales. There were stories of misfortunes and death that befell those who harmed sea turtles, and how the creatures were also saviours, such as in the tale of a Mapun man whose boat was hijacked by pirates, but who was carried to safety on the back of a turtle.

Today, the idea of sea turtles as food providers remains very strong among Mapun elders. Their tales speak of gratitude towards these sea creatures that swim long distances and return to the shore to bring them food. The eggs are also now convertible to cash, which the people have learned to rely on for investments and emergencies.

A model of collaborative resource use

From the colonial period (1561-1945) until 1979, the Philippine government considered the sea turtle an economic commodity. Its shells and derivative products were exported in great volume, ranking among the country's primary foreign exchange-earners. The settlement of people intensified egg harvesting.

The first legislation on sea turtles was passed in 1932, suggesting that the depletion of the sea turtle population was alarming enough even then to push the government to regulate extraction.



Sea turtles lay around 100 eggs per nest. In the Turtle Islands, an average of 1.2 million eggs have been monitored over the past 15 years

Legislation Highlights on the Management of Marine Turtles in the Philippines

Year of Issuance	Title	Main Provision
1948	Fisheries Administrative Order No. 23: Regulation Establishing 'Closed Season' for the Conservation of Turtle Eggs and Shells in the Turtle Islands	Closure of the Turtle Islands four months a year to turtle and egg harvesting
1952	Fisheries Administrative Order No. 29-1: Amending Sections 8 and 9 of Fisheries Administrative Order No 29	Granting of concessions for gathering turtle eggs in the Turtle Islands for P10,000
1967	Fisheries Administrative Order No. 88: Regulations for the Conservation of Turtles, Eggs and Shells in the Philippines	Ban on the collection of marine turtles and eggs for five years
1972	General Administrative Order No. 68: Transferring Administration of Turtles to the Parks and Wildlife Office	Philippine Fisheries Commission loses control of marine turtles, signaling the shift in government view of sea turtles and eggs from economic to ecological resource
1979	Executive Order No 542: Creating Task Force Pawikan and Appropriating Funds Thereof	Provides a council under the Office of the President, and financial support to turtle conservation
1980	Special Order No 201: Creation of an implementing organization of the Pawikan Task Force to implement Pawikan Conservation Program	Provision for the recruitment of personnel and setting up of a separate office for Task Force Pawikan
1982	Administrative Order No 8: Establishment of certain Islands in Tawi-Tawi, Palawan and Antique as Turtle Sanctuaries	Seven islands in the country, including Baguan in the Turtle Islands, are set aside as sanctuaries
1982	Administrative Order No 10: Deputizing the Governor, Vice-Governor of Tawi-Tawi and Mayor and Barangay Captains of Taganak as Conservation Officers	Use of local officials to enforce laws to support the Ministry of Natural Resources
1982	Administrative Order No 33: Regulations Governing the Collection of Marine Turtle Eggs in Tawi-Tawi and Reiterating the Duties and Responsibilities of Deputy Conservation Officers and Game Wardens	Establishment of arrangement wherein 30% of the turtle eggs are for conservation, 10% for a Foundation, and 60% for exploitation
1983	Administrative Order No. 1: Deputizing Provincial Governors and Municipal Mayors in Areas Critical for Protection of Marine Turtles as Conservation Officers	Expansion of conservation effort by involving local executives
1992	Republic Act No. 7586: An Act Providing for the Establishment and Management of National Integrated Protected Areas Systems (NIPAS)	Establishment of protected areas for biodiversity conservation and sustainable development
1999	Presidential Proclamation: Turtle Islands Wildlife Sanctuary	The six Philippine Turtle Islands are declared a wildlife sanctuary
2001	Republic Act 9147: The Wildlife Act	Prohibition of the collection of threatened wildlife and its derivatives for non-scientific and breeding purposes

Adapted from Social and Institutional Assessment of Turtle Islands ICDP (Cola, 1998); updated

Since then, there have been 25 laws governing the harvest of sea turtles and their by-products. The laws impose restrictions on harvesting based on seasonality, appearance, geographic location, species and size of the animal, and the harvester's qualification. But the enforcement of these laws generally failed because of limited government personnel and logistics. Most areas where sea turtles abound, such as the Turtle Islands, were remote from Manila, the national capital, where government resources were concentrated. It is not surprising, then, that until 1979, turtle eggs were considered the 'property' of the incumbent mayor, who dominated the local trade on turtle eggs.

Of the many government legislations, the one that had the most impact was the creation of the Task Force Pawikan in 1979, which transferred control of the eggs to the national government. Created as a special office under the DENR, the Task Force Pawikan was mandated to conserve the sea turtles through its Pawikan Conservation Project (PCP). The government saw the need to conserve sea turtles as an ecological rather than an economic resource, so the task force set up operations in the Turtle Islands, identifying Baguan Island as a nesting sanctuary. The task force set up a monitoring station, and the three families living in Baguan were relocated to the other islands. Egg collection was totally prohibited in Baguan, and remains so today.

However, the inhabitants of the five other islands continued to benefit from the turtle egg trade, which was still allowed under the law. The government was cognisant of the need to manage the eggs, while at the same time meeting the economic needs of the people. In 1982, after a series of community consultations, Administrative Order no. 33 instituted what is locally referred to as the 60/40 system. This meant that for every

100 eggs, 60 went to the collection permit holder and 40 went to conservation. Out of the 40, 30 eggs were planted in the PCP hatchery and 10 sold, with the proceeds going to the Marine Turtle Foundation. Under the 60/40 arrangement, permits to gather turtle eggs were raffled off to applicants every November. Qualifications included residency and being a registered voter of the municipality. A successful applicant could apply for a new permit every four years; unsuccessful applicants could reapply the following year.

A permit allowed the holder to gather eggs from either Taganak, Bakkungan, Langaan or Lihiman. The beaches of Boan are no longer a favourable nesting site, as there are too many houses and too much light. One permit is good for five days during the peak months of June to August, and for seven days during the lean season. January to March is closed season—no permits are issued when egg-laying is at its lowest.

The usual practice is for the permit holder to sell the permit to buyers. The price is negotiated between the permit holder and the buyer, but a permit in Lihiman fetches the highest price, around US\$350. The buyer shoulders the municipal fee of about US\$90, and his men harvest the eggs and deal with the PCP. The eggs are then brought to middlemen in Sandakan or sold directly in the market. Some middlemen finance the egg collection operation in the Turtle Islands to ensure supply. Because sea turtles are in the endangered species list of the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES), turtle eggs from the Philippines are surreptitiously traded; the distribution network is suspected to extend to Brunei Darussalam, Singapore and Hong Kong.

The 60/40 system allowed the local people to be involved in turtle egg management for the first

time. The PCP employed local people as wardens, creating regular jobs. The arrangement generally worked, although poaching still occurred. Despite some flaws, overall, there was a working system of collaborative management which could be monitored and improved upon to meet the needs of the different stakeholders.

Turtle egg collection in the Turtle Islands is not a regular source of income, but an occasional bonus. In a place where people live a hand-to-mouth existence, a permit provides a much-needed windfall. It is the only means for people to buy their own boats, to construct their houses, and to send their children to school. It is also health insurance paid for by nature, because people perceive egg collection as a source of money for emergency cases, such as when children get ill. Turtle egg collection contributed 23% to the average total household income in 1998, but decreased to 16% in 2003. Some 11% of the households benefited from turtle egg collection in 1998, a figure that increased to 35% in 2003.

A chaotic reversal of fortunes

The 60/40 arrangement had been in place in the Turtle Islands for almost 20 years when things started going awry. In 2000, the Protected Area Management Board (PAMB) requested the PCP to transfer the issuance of permits to the Integrated Protected Areas System (IPAS), a branch of the DENR overseeing the management of Protected Areas nationally. The local PAMB and IPAS officials started processing permits, which proved to be problematic because there was never a formal directive or written proof of the transfer of authority. Also, to the consternation of qualified applicants who already passed the first screening of PCP, a new list of applicants was drawn up by IPAS and PAMB. The new list

of applicants was heavily biased in favour of residents of Taganak, to the disadvantage of applicants from other islands, and there was little transparency in the process of selection. Tension ran high when about 20 men from the other islands arrived in Taganak, armed with knives, demanding that the authority over the issuance of permits be returned to PCP. Under such volatile conditions, IPAS and PAMB verbally agreed to return the issuance of permits to PCP.

In the meantime, and ironically making matters worse, the Wildlife Act was enacted by the Philippine Congress in 2001. The Wildlife Act prohibited the harvest of wildlife and its by-products except for scientific study and breeding purposes. So, although there was agreement for the PCP to take over the issuing of permits again, the Wildlife Act had taken effect, and the PCP could no longer issue permits without violating the law. The hands of PCP, IPAS and PAMB were tied. By this time people were getting confused about where they should apply for permits. The municipal government then stepped in and declared that it would issue permits as an act of goodwill to the local people.

Subsequently, as of March 2002, the municipal government had de facto control over the turtle eggs on all the islands except Baguan, which retains its status as a sanctuary.

There are many problems associated with this takeover of egg harvesting by the municipal government. First, the municipal government does not have a legal mandate to regulate and issue permits for turtle egg collection, which the Wildlife Act has made illegal. Second, although the municipal government has declared that it would continue the 60/40 system, it did not have the capacity to manage the hatchery. The municipality offered the eggs to the PCP hatchery, but the

PCP could not accept them, because that meant condoning what has already been prohibited by the Wildlife Act. Therefore no eggs are now left to hatch, and all harvested eggs are sold in the market. Third, the awarding of permits has become politically motivated—an applicant gets a permit if he/she is politically allied with the incumbent mayor. Finally, although local citizens are under the impression that the closed season is still being enforced, in reality, local politicians are trading the eggs, reverting back to the system before the arrival of the PCP, when the eggs were the 'property' of the municipal government.

Re-negotiating for co-management

WWF-Philippines has been facilitating discussions among the different government sectors to come up with a manageable system. So far, there have been two stakeholder meetings and six community consultations, held in August-September 2003. The national government's stand is that turtle egg collection must eventually stop. However, the reality is that the residents and the local government cannot yet afford to lose the income from the eggs. The local government is pursuing strategies to make the current system legal in order to keep their constituents happy, and to continue benefiting from the turtle egg trade. WWF-Philippines is also lobbying with the national government to fast-track the resolution of the conflicts among the major stakeholders. However, the search for a compromise is still in its early stages, and WWF is providing information to all agencies to assist them in coming up with informed decisions.

The main lesson from this experience is that collaborative resource management is a never-ending process of negotiation, where parties must ultimately respond to change, whatever may have

caused it. The Turtle Islands experience shows that a working system is not guaranteed to last forever.

The history of the turtle egg trade in the Turtle Islands is a story of a people and their government struggling to develop systems that work. Ironically, only a couple of years ago, they had a working system, but one that went awry because of a legislation that was actually meant to protect the turtles. Although the intention of the Wildlife Act is to protect endangered species on the national scale, what it did on the ground was to undermine an established system that was within the government's means to implement. The Wildlife Act was a classic top-down management move, where the people of the Turtle Islands, the main stakeholders in the turtle egg trade, were not consulted. The law failed to provide windows for systems where a modicum of balance between use and protection already existed.



Despite CITES regulations, turtle eggs continue to be traded in black markets across the region.



Resource management and good governance

Resource management cannot be isolated from the issue of governance. Achieving good governance remains a challenge in a place like the Turtle Islands, where overlaps in leadership functions and political jurisdictions lead to ambiguity and confusion. The way forward necessitates that the government own up to the responsibility, not just the authority, of governing the islands and managing resources. At the same time, the issue is closely linked with the constituency's power to demand a better government.

Understanding good governance

The success of a system of resource management often depends primarily on good governance. 'Good governance' is a manner of exercising power that makes room for the elements of participation, transparency, accountability and predictability.

Participation means not only being part of making informed decisions, but also of implementing them and reaping their benefits. In the trade of turtle eggs, decision-making included the consultation process that led to the 60/40 system, and the way the benefits spread from the mayor to the permit holders.

Transparency is having access to the best available information to be able to choose from among many options. When the issuance of turtle eggs went to IPAS and PAMB, the residents of the other islands reacted violently to the lack of transparency in the selection of applicants.

Accountability is being responsible to other stakeholders for one's behaviour, particularly when it is an exercise of entrusted power, such

as government authority derived from the people. In the case of the PCP, it meant being unable to continue issuing permits because of the prohibition of the Wildlife Act, because the PCP is accountable to the national government.

Predictability occurs in a setting where rights and obligations are well defined and the mechanism for their enforcement, whether formal or informal, is functioning. Predictability was lost when the authority to issue turtle egg collection permits started its merry-go-round among the different government agencies.

In the case of the Turtle Islands, problems on policy and governance have had repercussions far beyond the matter of egg collection permits, affecting the very lives of the local community. Sali Muhammad is a fisherman who moved to Taganak 20 years ago. 'It used to be beautiful here,' he recalls wistfully. 'Just drop a hook and line, and you could catch a hundred kilos in one night'—a far cry indeed from his experience of the previous evening when he was out at sea all night but failed to catch a single fish. Sali and his fellow fishermen cite cyanide fishing, dynamite fishing and trawlers as the culprits. 'The fishes are disappearing,' Sali declares sadly, 'and they are not coming back.'

A problem of jurisdiction

'So small an island, so difficult to manage,' says Minda Bairulla, Protected Area staff, of Taganak. The Turtle Islands have overlapping areas of jurisdiction by different branches of the government. However, due to the geographic isolation and insufficient resources, the reality is that there is little government presence, be it in the delivery of social services or enforcement of laws.



Baguan Island is under the jurisdiction of the Pawikan Conservation Project of the DENR

The experience of the Philippine government for the last 500 years is that centralised management in poor countries not only paralyses services, but also excludes large numbers of people from democratic processes. This is why the 1991 Local Government Code (Republic Act No 7160) decentralised the government by transferring functions to local units—provinces, cities, municipalities and villages, referred to as *barangays*.

Environmental management was among the devolved functions, though on a limited scale. The municipal government was put in charge of the land that constitutes its territory. Even more progressively, the municipalities gained control of municipal waters, generally the area within 15 kilometres of the coastline. However, managing public forests and Protected Areas remained largely the responsibility of the national government and the DENR.

Having been proclaimed a Protected Area in 1999, the Turtle Islands are also governed by the National Integrated Protected Areas System (NIPAS) Act (Department Administrative Order No 25, Series of 1992). The Implementing Rules and Regulations of the NIPAS Act state that the autonomous government is just a member of the Protected Area Management Board (PAMB), a multi-sectoral body chaired by the DENR. Being a Protected Area, the entire municipality of the Turtle Islands is under the jurisdiction of the DENR. The NIPAS law further provides that the autonomous government will have a policy on local autonomy, and until a regional law is enacted, the Local Government Code will apply.

Despite government devolution, among the tasks retained by the DENR is the issuance of permits on

the use of natural resources. Being an endangered species, sea turtles and all their by-products, including eggs, remain under the jurisdiction of the DENR through its Pawikan Task Force.

The Philippine Constitution provides for the creation of an autonomous region composed of Muslim-dominated provinces in Mindanao, of which the Turtle Islands is part. The autonomous government is accountable not to the national government, but to its constituency. The mechanics of the Autonomous Region of Muslim Mindanao (ARMM) is set in its enabling law (Republic Act No 6734). The law gives the autonomous region jurisdiction over all matters given to it by the constitution, including natural resources (Article 5, Section 2). This provision suggests that the ARMM has control over Protected Areas, but in actual practice, this has remained a largely debated issue.

The obvious problem with these overlapping government jurisdictions is that it gets confusing as to who has the final say on a particular issue. A more delicate problem is that of accountability and transparency. The local government is a political unit, and is at least directly accountable to its constituency. If displeased, people could vote for someone else in the next elections. On the other hand, the DENR is an administrative unit, and is accountable to the national government, the seat of which is in the country's capital and quite removed from what is happening on the islands. Being an office of the DENR, the Pawikan Task Force follows the same structure. Its central office in the national capital, 1,000 kilometres away, makes key decisions that make little sense to the people of the islands.

A problem of function

A person visiting the Turtle Islands would never guess that there are problems of overlapping jurisdiction plaguing the municipality. Arriving in Taganak island means being greeted by the Philippine Marines, Coast Guard, Marina, National Police and the Regional Ports Authority to monitor the movements at the international border. Beyond this imposing initial display of government personnel at the pier, however, government presence in the islands is actually low.

The extent to which governance is carried out is seen through its performance. The municipal bureaucracy is barely functioning in the Turtle Islands. The municipal hall is normally closed when the mayor is not there, which is more than half the time. Asked how often the mayor is on the island, an official replies, 'The mayors stay here for around 15 days, then go away for three months,' in reference to the last two administrations.

Furthermore, because the voting population is only a couple of thousands, mayors win with a margin of barely a hundred votes. This translates into never-ending protests and election recounts. Due to election recounts, the current mayor was declared the winner 10 months prior to the next elections and two years after his political opponent assumed power. Of the six mayors the Turtle Islands has had, only one actually lived there during his term.

In addition, since the entire Turtle Islands are considered public land, no one except the government has any legal ownership of land. Without legal properties, the Turtle Islands are deprived of the main tax source of other

municipalities. The result is that, aside from the municipal fees on turtle egg permits, the municipality is wholly dependent on national government allocation for its operations. Being a sixth-class municipality, the Turtle Islands have a municipal budget of P1.1 million (about US\$22,000) a month. By law, a maximum of 55% of the municipal budget should be allotted for administration, such as the hiring of government personnel. However, no project has been funded by the municipal government in recent memory. The problem is not so much the lack of money, but the administration of the funds.

The teacher-student ratio in the grade school and high school in Taganak is roughly one teacher for every 100 students, and this statistic already includes volunteer teachers. When asked why, teachers Anabelle and Nor say that new teachers are not willing to be assigned in the islands. The municipal government's response to the lack of teachers is to employ volunteers. Volunteer teachers were promised a stipend of about \$60 a month, but rarely receive even a third of that stipend.

As a Protected Area, the Protected Area Management Board (PAMB) has legislative authority over the islands. However, about half of the members of the PAMB are from the regional and provincial branches of government, and therefore based in other parts of the country. Even convening a meeting is difficult and costly. As a consequence, the PAMB has met only thrice since it was organised in 2001, whereas the Implementing Rules and Regulations of the Protected Area law prescribes a monthly meeting. The DENR Protected Area





Commercial shrimp trawlers dock at Sandakan port. They compete with local fisherfolk for the resources in the area (above).



Separating the Philippines from Malaysia, marker buoys are few and far between, making them easy to overlook or ignore (left).

Superintendent (PASu) is tasked with administering day-to-day operations, but the PASu does not even stay there, and the office has only one personnel, no equipment and no funds. Aside from the military personnel monitoring of the border, the only branch of national government that has a regular presence in the islands is the Pawikan Task Force, which now maintains only three staffers on Baguan and five others scattered all over the other islands.

Trans-border impacts

Because they are more accessible from Sabah than from other parts of the Philippines, the Turtle Islands are also beset with trans-border issues. Fisheries are by far the first and biggest issue. Commercial fishing vessels from Malaysia encroach on the fishing grounds of local fishermen, who are not allowed by law to sell their catch in Sabah. Encroachment is often broached as a problem during community meetings and informal conversations with fishermen.

Because of the complicity of local officials and government personnel in the encroachment by Malaysian commercial fishers, the need for enforcement was never openly discussed. On its own, the municipal government has no capability to confront this problem, neither does it seem willing to do so. 'If you leave it to the mayor, the mayor will say, "Just leave them be because we earn from them,"' says an elder. The military has no equipment, and is allegedly on the take, as well. The provincial and ARMM officials and the congressman are now exploring options to enforce the law, but no concrete plan, much less the means to implement it, is in sight.

The other side of the fishery issue is that, in selling their catch in Sabah, the fishermen actually become guilty of illegal smuggling. They risk arrest,

but they have nowhere else to sell their catch.

The second trans-border issue is the high cost of living in the Turtle Islands. The only cheap commodity in the area is fish. The islands do not have any manufacturing industry, so everything else, even staples such as rice, must be transported.

The third issue is that, because of its proximity to Sabah, the economy of the Turtle Islands is more affected by changes in policy in Malaysia than in the Philippines. Migration to Malaysia increases when the Malaysian economic and political situation is good, or when there are peace and order problems in Mindanao. Migrants crowd Taganak, resulting in an increased crime rate, illegal trade, drugs, and economic dependence of the refugees on the already meagre resources of the islands.

The challenge of empowerment

The situation in the Turtle Islands shows how limitations in policy of the Protected Areas System and the Wildlife Act can undermine conservation efforts with a focus on community participation and local governance. But while such a framework must be amended, the conservation issues in the islands call for an immediate response. Within the policy limitations, WWF-Philippines chose to invest in the municipal government as the main institutional vehicle for conservation. The local government may be weak, but it is the most viable option because of its mandate and proximity.

WWF-Philippines is using two strategies to activate the municipal bureaucracy. One is to intensify the demand for services, and the other is to upgrade the municipal government's capacity to respond to the demand. Various groups that WWF trained as partners in service delivery expressed the demand. Village health

workers and mothers attending classes asked for vaccination, clean drinking water, solid waste services and health information. To enable the municipal government to meet these needs, WWF-Philippines demonstrated water treatment, coastal cleaning and composting methods, and assisted in promulgating the solid waste management ordinance. WWF also activated the municipal government's link with the provincial health office that provides vaccines and medical personnel.

In the light of the policy and governance situation in the Turtle Islands, the reality is that conservation and development cannot be sustained without good governance. Although services such as health and education can be initiated or jump-started by other agencies, it is only the local government that has the potential to continue those efforts in the long run. The experience with the turtle egg collection system shows that effective management cannot be sustained in a centralised set-up. And when systems break down, it is the local government that is in the best position to institute order once again.

Residents of Taganak have different things to say about governance challenges in the Turtle Islands. 'There is nothing we can do about illegal fishing,' says Daluh Satal, a fisherman. 'The government should take action against it.' For Rodolfo Velasquez, a municipal councillor, what the islands need is 'a good leader who is sincere and dedicated.' But Minda Bairulla of IPAS and Pah Minoh of WWF are more circumspect of the experience in the Turtle Islands. They put their hopes on the people, though

Minda is a bit more sceptical. 'The people lack involvement. In other places, community presence is strong. Here, people don't seem to care. If people react, they could pressure the government.' Pah Minoh is convinced that the approach needs to be two-pronged. 'If people don't act on their rights, nothing will happen. But they need a leader who is courageous and wise.'

Whether it is good leadership or an enlightened constituency that takes precedence remains debatable. The trouble seems to be that the people have never seen any other kind of administration other than what they are experiencing. Kinship rules in politics; 'You won't win an election unless you have many relatives' is a common view. Without pressure, the politicians have no reason to improve the governance system on the islands.

The Turtle Islands are a classic illustration of the need to educate and mobilise the constituency to effect change in governance. The residents cannot sit and wait for the government to meet their needs. They have been doing that for years, and it has gotten them nowhere. Teachers and rural health workers need to go the extra mile to get their needs met, and to take the initiative. Turtle egg collectors, together with the local government, could come up with a permitting system that is truly community-based, and they could lobby for it. Fishermen could organise and become deputies and law enforcers against illegal fishing. But first, the attitudes of helplessness and resignation need to be changed. The possibilities are endless, but it will require courage and imagination to begin.



THE WAY FORWARD



Sitio Limao-limao on the eastern side of Taganak Island

Towards the end of the implementation of the ICDP, WWF-Philippines finds that all paths taken lead back to the issue of governance.

1. WWF has facilitated the improvement of social services through networking, and the system is at that point where it is now ready to be turned over to the local community. Local communities are already carrying out the treatment of wells for potable water, even if WWF still provides the chlorine. An initial attempt has been made to upgrade the teaching techniques and give access to higher education, and the Department of Education must maintain that momentum. It is in WWF's interest that social services be sustained through local efforts.
2. More than social services, however, the most pressing issue on governance is that of fisheries. First, the need to address the breakdown of the turtle egg collection system

is urgent. The current practice of harvesting all the eggs is self-destructive for livelihoods in the long run. The fact that access to turtle eggs has become dependent on one's political affiliation goes against the principle of equitable access to resources. Second, the issue of encroachment by commercial fishing vessels is equally pressing, and ignoring the problem will not make it go away. Third, the issue of jurisdiction needs attention. The authority to administer the Turtle Islands is under several branches of government, but only the Pawikan Task Force in Baguan and the military have taken up residency, and even that is in flux.

3. The need for improved governance needs a multilevel approach. The capacity of the municipal government must be built for it to perform its legislative, administrative and policing functions. Local organisations must be mobilised because the municipal government cannot do everything by itself. On the provincial

and regional levels, resources must be tapped and channelled to the islands. Medical, educational and livelihood support programmes are available in the autonomous regional and provincial governments, but these do not reach the islands because of inaccessibility.

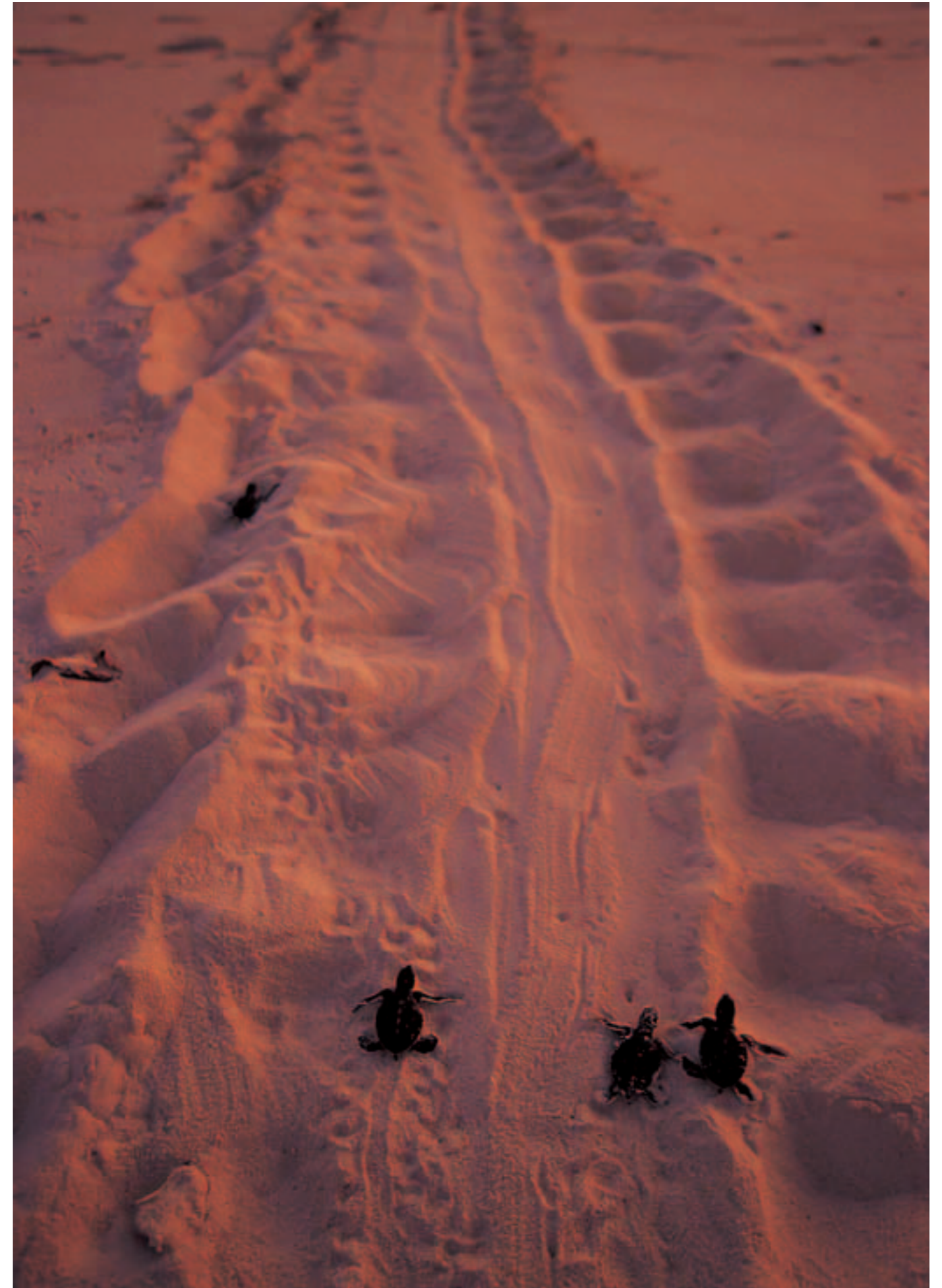
On the national level, the battle must be fought in the arena of policy. The Turtle Islands Heritage Protected Area and the Wildlife Act must consider the economics in the island, and what the government can realistically manage. The negative effects of driving the turtle egg collection further underground have already been manifested—all eggs are now sold, with a select group benefiting from the trade. With no government capacity to enforce laws and no adequate source of income for the people, the poaching of eggs cannot be stopped.

The key in this multilevel approach to improved governance lies in the four elements of participation, transparency, accountability

and predictability. Without these, no matter how many activities are undertaken at every level, not much will change in the way of governance.

4. WWF-Philippines should carefully consider its role in the need for improved governance in the Turtle Islands. It is neither a social service organisation nor an expert on governance, but it obviously plays a key role in this area, where there are no other NGOs and minimal government services. The ICD project was a step in the right direction, and played a facilitative role in accessing government resources and services. With improved health and greater familiarity with WWF, the local people are also becoming more vocal about the problems of illegal fishing. WWF's work could now proceed to the issue of fisheries management, which is the real forte of the organisation. But it cannot move forward without confronting the issue of governance.

The Turtle Islands still have enough resources to share with outsiders, as evidenced by the presence of commercial fishers. The problem is not the threat of unsustainable practices per se; rather, it is whether this challenge can galvanise government officials and the local people into action while the resources are still available. In the case of the Turtle Islands, there is still much to take care of. It is time for action on all levels, from the government to the people of the islands. The seeds of transformation have been sown, and it is time for them to grow and hopefully bear fruit.



Hatchlings making their way to sea on the tracks of a nester.

Updates From The Field, January 2005: The Seeds of Hope

Recent positive developments in the Turtle Islands are once again proving that conservation can only progress if there is cooperation amongst stakeholders.

The preceding case study was written in February 2004. In the intervening time between the writing and publication of the case, significant new developments have taken place. Since the breakdown of management of the turtle egg collection, the municipal government signified openness to co-management. On November 2004, the national government, through the Protected Areas and Wildlife Bureau (PAWB), held meetings with the provincial government, the municipal governments and the local government agencies. The most important point of agreement that emerged from these meetings is the local communities' need for turtle eggs and the PAWB's concurrence to a moratorium on the Wildlife Act. Related to this development, the following actions have been taken:

- As an outcome of the stakeholder discussions, a Memorandum of Agreement for the joint management of the Turtle Islands has been drafted by the national and local governments. The joint management plan covers the permit system for turtle egg collection, the management of hatcheries, and monitoring and enforcement. This time around, the local communities, through the activation of the Protected Area Management Board (PAMB), will have direct roles in decision-making processes and conservation management.
- The mechanism for the phase-out of turtle egg collection is being collaboratively drafted among stakeholders through the development of alternative livelihoods, while slowly building up the enforcement program of the Wildlife Act.
- On November 22, 2004, the municipal government turned over the management of egg collection back to the PAWB through the Pawikan Conservation Project and the Protected Area Superintendent. Since then, PAWB reinstated the 60/40 system, whereby the turtle egg collectors are able to maintain their operations while turning over 40% of the collection for conservation purposes. Also, for the first time since the legislation of the Wildlife Act in 2001, the closed season of egg collection is being enforced.
- Due to the pressure exerted by the national and provincial governments and select members of the community on the municipal government, the municipal officials have taken initiatives to reduce the number of Malaysian trawlers encroaching on the Turtle Islands. Unofficial sources estimate that the number of shrimp trawlers with access to the area has been reduced from 200 to 18.

These developments are a major step forward towards effective and participatory conservation management in the area. Involvement of the local stakeholders in decision making processes and openness by both national and local governments to share responsibility has been important in resolving conflicts in the area. The dialogues, consultations and re-negotiations conducted in the spirit of openness, cooperation, goodwill and trust, backed by a clear understanding of the dynamics on the field, have proven effective in bringing about this change. These recent developments offer hope of seeds bearing fruit, but many challenges and much work still lie on the path ahead.

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