



Huge schools of jacks circle Sipadan's reefs, shimmering like thousands of mirrors over a sunny seascape.

he impacts of unchecked human development and carelessness are painfully noticeable all over our planet from pollution to deforestation to climate change, but in few places is it more obvious than on and around islands turned tourist destinations. The island of Sipadan, a haven for marine life off the eastern coast of Sabah, Malaysian Borneo, is a classic example of what only a couple decades of heavy popularity can do to a once-pristine ocean paradise. What is not so typical about this island is its story of recovery by way of bold and conservation-minded government action when it would have been much easier to ignore the problem and deal with the repercussions later, an apathetic response that is far too common an ending to other tales with a similar plot.

Not much is known of Sipadan's history prior to the 20th century, but it was controlled by the Sultanate of Sulu, a Muslim State that ruled many other southern Philippine islands, during the 1800s. The tribal leaders on Dinawan Island were granted exclusive rights to collect and trade sea turtle eggs by the Sulu Sultan and thus began the exploitation of Sipadan's natural resources. In the 1900s, it was discovered that this island was a crucial stopover



point for migratory birds such as sandpipers and plovers, and was consequently declared a bird sanctuary in 1933 by British colonists. Further steps were taken by the Sabah State of Malaysia in the '60s to protect the island's turtle eggs. Dive trips to Sipadan were available as early as 1983, but it was not until Jacques Cousteau exposed the world to this island's underwater beauty in his 1989 film "Borneo: Ghost of the Sea Turtle," that dive tourism truly took hold. Within one year after announcing Sipadan as an "untouched piece of art," this living marine art gallery had already begun its rapid trajectory of decline to join the long list of island paradises turned paradise lost. Five large resorts now crowded Sipadan's narrow northern beach, bringing in as many tourists as accommodations would allow, and putting out unsustainable levels of human pollution from this tiny island barely half a kilometre long and 200 metres wide.

Conservationists soon began to notice and actively monitor reef degradation around the island, and it was apparent that careless divers and snorkelers were seriously damaging reefs, and that the heavy boat traffic stirred up too much silt, choking and further harming the corals. The untreated waste coming from the overcrowded resorts oozed into the sea, releasing harmful



amounts of algae-promoting nutrients into the water and allowing the already compromised corals to be overgrown by aggressive nuisance algae. As if these factors were not bad enough, Sipadan was hit by tropical storm Greg in 1996, a typhoon that destroyed some of the shallow reef systems and stirred up even more silt that smothered the reefs. 1998 saw record high water temperatures that brought about a coral bleaching event and the area's stressed corals didn't rebound the way they would have if the ecosystem had been healthy. All of this bad news threatening the natural beauty of this huge tourist draw, prompted the Sabah government to set restrictions on the number of tourists allowed to visit Sipadan, but these limits were never observed or enforced, and the reefs continued to decline. Ongoing disputes between Indonesia and Malaysia over territorial ownership prevented either country from doing much to protect Sipadan, until it officially became part of Malaysia in 2002. Change was finally on the horizon.

2004 was the year everything turned around for Sipadan. At the recommendation of marine conservationists all over the world, the local government ordered every resort to leave Sipadan and relocate off the island by the end of that year. This time their declaration was not just an empty threat, and Sipadan was soon devoid of resorts. Mabul and Kapalai, being the land masses closest to Sipadan, became the new locations for resorts, and the dive business in Semporna, one of the eastern most districts of Malaysian Borneo, grew quickly. By 2005, Sipadan had become Sipadan Island Marine Park under the authority of the National Security Council, and only 120 visitors were allowed to purchase permits to visit and dive the island daily. In an unfortunate accident in 2006, a barge carrying thousands



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of tons of concrete and other building materials ran aground on Sipadan and destroyed about 370 square metres of reef. While this area only accounted for about one tenth of one percent of Sipadan's coral reefs, it happened to demolish an extremely popular dive site and drew much criticism from the global dive community. There have been no other reefassociated incidents then and all lodging and diving restrictions have been enforced, showing that Malaysia committed to protecting Sipadan and restoring its reefs, efforts that are certainly paying off. Reef health has drastically improved and divers continue flocking to Sipadan to view first hand the effective conservation measures and restored natural beauty of this priceless marine ecosystem.

While this story of conservation



Many different types of corals flourish in Sipadan's waters ranging from acroporas to sea fans.

hopefully be repeated in locations suffering from similar troubles all over the world, it must be mentioned that this success has not come without a cost. Sipadan's neighboring island of Mabul and the town of Semporna in the coastal district of Tawau (Sabah, Malaysian Borneo), have had to accommodate the region's growing tourist activities, and they certainly have not remained unaffected. Semporna is stiflingly hot and overcrowded, with a waterline that resembles a garbage dump. Huts on stilts along the shore cater to divers promising to take them to the sparkling seas surrounding Sipadan Island where they will be far away from the fouled water of Semporna's coastline covered in a film of human pollution and boat effluent. Mabul has been called the "sacrifice area" that was used to save Sipadan, and it does not require much imagination to see why. The small island of Mabul is only 15 kilometres away from Sipadan and is now home to seven large dive resorts punctuated by nine smaller dive lodges; the most expansive resort there covers

nearly 20 percent of the island. It is difficult to imagine a scenario

apparently prevailing over greed is an inspirational one that will

where waste management and pollution mitigation for this many resorts could possibly be managed negative ecosystem impacts even on islands far larger than Mabul, but at least the current situation underwater is better than it was on Sipadan.

While locals are glad for the employment opportunities afforded them by the tourism industry, the overall lack of formal education on the island excludes almost the entire population from acquiring the higher paying jobs of dive instructors and resort managers. According to Alan Lew and Amran Hamzah in the book Scuba Diving Tourism, "Tourism has undoubtedly created jobs and increased the income of the local community, but the lack of opportunity for such a large number of young people in a time of unprecedented global change

is a potential 'time bomb' that could have long-term detrimental implications for the sustainability of dive tourism, both on Mabul and in the region overall." In addition to this social factor and the fear locals have of displacement at the hands of encroaching tourism, other concerns for Mabul's future in the face of a rapidly developing coastline include environmental conservation, loss of subsistence livelihoods, erosion from sea level rise, and a growing population.

Mabul has about 2,500 residents who live in one of the island's two villages, Kampung Mabul and Kampung Musu. The first and larger village is populated primarily by the Suluk, a word that translates to "people of the current," while the second village is mostly made up of Bajau Laut, a group of people often called "sea gypsies." The Sea Bajau are a nomadic boat people who live on, in, and around the water and make their livings through fishing and trading. They are known to be skilled free divers who hunt for fish, sea cucumbers, and pearls, and are reported to regularly



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# RETURN SIPADAN TO ITS ORIGINAL GRANDEUR as extolled by Jacques Cousteau in 1989.

descend unassisted to 30 metres or more in search of food. The vast majority of this fascinating ethnic group is considered to be stateless because the people do not have Malaysian citizenship, making them ineligible to work legally on the island. Despite their ancestors having inhabited these waters for centuries and their origins in the Philippines, no country wants to claim them as its official citizens, leaving the Bajau in a socially precarious position. Their children rarely attend school because Malaysian identity cards, which they do not have, are required to attend the government school. In addition to that technicality, they do not feel any need to go to school since they will grow up to be fisherman and boat builders anyway, a mentality that at once both alienates them but preserves their oceanic heritage. The presence of the sea gypsies and their transient housing consisting of houseboats and shacks on stilts, make for an obvious and even slightly uncomfortable juxtaposition of the privileged resort culture and daily Bajau life. This glimpse into island times past makes Mabul as interesting and unique a place to visit as Sipadan.

I had the privilege of diving Mabul and Sipadan in 2014, only 10 years after the official change from polluted island to marine protected area, and the results are promising. While it certainly still has its rough spots, it is obvious that corals have rebounded, fish have returned, and macro life is thriving. The difference in the reefs from a decade ago to now is probably drastic considering they were once broken and battered by algae, and they are now healthy, vibrant, and teaming with marine life.

The 40-minute boat ride from Semporna to Mabul grew increasingly more picturesque as the boat drew nearer to the island. The water got clearer and bluer, until it became difficult to distinguish the cloudless afternoon sky from the water's surface. We passed several sea gypsy boats on our way to Mabul and the children watched, some cautiously and others excitedly, as we rode by them. We soon arrived at one of several long docks that stuck out like spokes from the island, raised up on stilts over the turquoise waters surrounding Mabul. The rest of the day was



spent sorting and assembling camera and dive gear for the next day, while enjoying the view of the idyllic seascape I would soon be exploring under the azure waves.

Five days of diving were ahead of me, three around Mabul and Kapalai and two on the reefs of Sipadan, and I could not have been more excited to get in the water. While all three islands are known for top notch diving, it was Sipadan's restored reefs with their tumultuous environmental history that I wanted to see most of all, but I would have to wait a couple days to experience the underwater wonders this island ecosystem had to offer.

During these initial two days of exploration with Borneo Divers, the first establishment to offer Sipadan diving excursions in the '80s, I found countless macro photo opportunities in Mabul. Upon entering the water, it is immediately obvious that this is not the place for wide angle photography. With its ample muck diving and biodiverse reef rubble zones, it is the kind of diving that makes it humans, choked by pollution, and threatened by climate change, it is apparent that the last ten years of aggressive conservation and resource management have quickly begun to return Sipadan to its original grandeur as extolled by Jacques Cousteau in 1989.

Sipadan's reefs are not just about quantity, of which there is plenty to be seen, but are just as much about quality. There are not just fields of hard corals, there are perfect fields of hard corals. Huge heads of spotless staghorn corals in varying hues look like giant steps down the reef, providing shelter at every level for countless thousands of reef fish and easily as many invertebrates. Friendly sea turtles can be seen heartily munching on sponges in the safety of these coral gardens, while a massive tornado of barracuda is becoming visible in the distance. I will not even begin to estimate how many fish made up this particular school, but suffice to say they had no trouble completely blocking out the sun with their incredible mass. It immediately reminded me of a famous shot taken by world-renowned underwater

### This story of conservation apparently PREVAILING OVER GREED

#### is an inspirational one that will hopefully be repeated in locations all over the world.

easy to get lost for hours in the minutia of exploring every crack and crevice in search of the next subject. There is even an artificial reef along the eastern side of the island with sunken dive boats, pyramids, and crates that has attracted impressive amounts of marine life. Crinoid squat lobsters, pipefish, nudibranchs, bobtail squids, leaf scorpion fish, mantis shrimp, and clownfish, were just a few of the many lovely creatures to commonly grace Mabul's sloping, sandy seascapes.

After a couple days of having my port buried in the substrate looking for the strange and minute, Sipadan quickly yanked my head out of the sand and up into the blue. I am not sure what Sipadan looked like underwater a decade ago, but in 2014, it was magnificent. Sipadan's expanses of tabletop acroporas and huge schools of pelagics were a sharp contrast to Mabul's reef rubble and macro life. These vastly different dive locations complement each other well, and provide the yin to the other's yang in this cluster of Malaysian islands.

The island of Sipadan is quite beautiful from the topside perspective as well. White sand, lush green foliage, and the bluest of water, make this island look like a postcard advertisement for paradise. Despite being battered by tropical storms, mistreated by

photographer David Doubilet in Papua New Guinea almost thirty years ago, so I proceeded to centre my apparently telepathic dive buddy in the middle of this mass of fish in an effort to replicate this favourite image of mine. While the resulting composition is certainly not perfect, I look at it at least once a week, and each time it reminds me of the seemingly endless bounty our oceans are capable of producing when we protect it. Being in the presence of this unfathomable amount of life composed of an uncountable number of units that all move together in harmony almost as a single organism, is an ethereal experience never to be forgotten. As an awe-inspired participant in this daily movement of marine creatures, I cannot help but think how important it is for the human race to stop viewing our world ocean as an infinite supermarket, and start seeing it as an invaluable sanctuary.

As amazing and surreal as the barracuda tornado was, the one sight that surprised me even more was the presence of a school of at least fifty adult bumphead parrotfish in extremely shallow water that posed for photos for almost half an hour. These amazing animals have been fished into peril in many of Malaysia's neighbouring countries, but due to the protection of Sipadan Island and the waters around it, this place has become a safe haven for large numbers of these big, docile herbivores. Of all the beautiful



sea creatures I saw in Mabul and Sipadan, I would return there just to see these fish again. They were both aloof yet responsive, and were one of my favourite photography subjects in many years.

My last day at Mabul was spent exploring the shallow waters of the house reef, and while many wonderful marine creatures were seen, my favourite memory from that day was actually on land. While wandering around on Mabul with my camera after rinsing my gear and setting everything out to dry, I noticed that the landscape of the near shore waters had drastically changed since we arrived. I had been underwater every day during low tide and until then had not realized just how far the tide went out. Corals were completely sticking out of the water and were exposed to the wind and sun, forming little micro-islands where fish and invertebrates were temporarily trapped until the water returned with the rising tide. The newest addition to the shoreline though, was children. About ten sea gypsy kids had begun roaming around the temporary living coral landscape collecting all manner of small fish and invertebrates. The most popular animals to find were sea urchins and one little girl in particular seemed to be especially good at finding them. She spent the afternoon carefully cracking open her hard-earned stash of urchins and kept their soft inner meat in a pot that she later carried home. Some of the kids were extremely friendly and curious and wanted their pictures taken doing all manner of activities, while others maintained their distance and did not seem interested in interacting at all. This time on the beach provided me with a fleeting glimpse into the lives of the nomadic Bajau of Mabul, a memorable encounter that deepened and enhanced my understanding of this unique place.

From the people to the land to the sea, visiting this part of the world is an adventure I am extremely glad to have had. It is encouraging to see firsthand the efficacy of marine protected areas and the ability of strong governance to restore a declining habitat. With this knowledge, we must continue advocating for the protection of key marine areas all over the world. When using this area as an example, it is also critical to remember that while Sipadan is thriving, the places around it that have had to bear the brunt of Sipadan's tourist draw may be suffering environmentally under this burden. We cannot forsake one place just to save another, and conservation efforts must be supported all over this region in order to maintain a healthy ecosystem both above and below the water line.

If you visit Sipadan, you will not be disappointed. The corals will invite you in, the barracudas will gently hug you, and the bumpheads will make you wish you could grow gills and just move in with them. Education and conservation saved Sipadan, and it is our job to promote that message so that aquatic ecosystems the world over have the same chance at life. O