We would like to express our sincere gratitude to the following offices for their support, patience and active participation in the marine turtle programme global coordination that made the turtle programme report possible through the submission of their project TPRs and additional information:

Mark Hoekstra, Gianna Minton, Bas Verhage, Mike Olendo, Lilian Mulupi, Sware Semesi, Haji Machano, Ufo Adonikamu, Christine Hoff, Darren Grover, Laitia Tamata, Mere Laveti, Veda Santiadji, Rusli Andar, Tetha Hitipeu, Sally Bailey, Sheila Oconnor, Lida Pet Soede, Paolo Mangahas, Carol Phua, Mariska Bottema, Carel Drijver, Reinier Hille Ris Lambers, Robin Davies, Sandra Andraka, Michael Osmond, Diego Amorocho, Martin Hall, Troy Hartley, Roldan Valverde, Mariana Fuentes, Bryan Wallace, Alice Costa, Rahayu Zulkifli, Gangaram Pursumal, Lau Min Min, Sharifah Ruqaiya, Gavin Jolis, Ooi Ying Cheing, James Compton, Nick Pilcher, Jianbin Shi, Karin Bilo, Adrian Level, Laurent Kelle, Rebecca Jumin, Monique Sumampouw, Paolo Casale, Marco Costantini, Andreas Lehnhoff, Angela Mojica, Jose (Pepe) Gerhartz, Nadia Bood, Marina Antonopoulou, Lissa Perry, Rab Nawaz, Vinod Malayilethu, Cowa Gratuito, Joel Palma, Kemi Ratsimbazafy, Mamadou Diallo, Samantha Peterson, John Duncan, Leigh Henry, Karen Southwile, Cassie Oconnor, Anaud Lyet, Ulla Erhardt, Lesley Davies, Mariana Panuncio, Seth Sykora, Shanon Seeto, Samuel Amoros, Giorgos Paximadis, Ayse Oruc, Nadiah Rosli.
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At the risk of stating the obvious, marine turtle conservation is truly global. Not only are projects in the works all over the planet, next to and in the ocean, throughout the tropics and even beyond, but the work being conducted is itself extremely diverse, ranging from beach monitoring to community outreach to observing interactions between turtles and fishing gear to tracking trade in turtle products. Because turtles themselves are distributed globally, but vary significantly on regional and local scales, it is a necessity that our conservation efforts reflect this variation as well.

During the past six months, I’ve had the opportunity to review the WWF global marine turtle programme from every angle, with the primary aims to recommend ways in which the programme can strengthen data collection and reporting, and to harmonize collective efforts to achieve programmatic conservation goals. In my own work, I’ve been involved in multiple initiatives to describe and assess the status of marine turtle populations at regional and global scales, so I am familiar with the challenges of getting disparate projects to point in a similar direction. Based on this experience and what I learned in my review, it is clear that the WWF global marine turtle programme reflects the diversity—in geographical representation, project objectives, and technical expertise—that is vital to successful marine turtle conservation.

After years of cultivating a network of projects and practitioners around the world, WWF is now well positioned to do something that so few—if any—conservation organizations are doing: advance a truly global, integrated marine turtle conservation programme. The foundation is already in place, with dedicated project staff in the field working together with local partners, and a solid team lead at WWF International in Aimeé Leslie. The programme is now ready to take the next steps to become a real global leader in marine turtle conservation; one that—owing to the broad reach of an international organization with several partners around the world—can influence how work is done in many parts of the world.

This role seems fitting for the organization that supported the newly formed IUCN Marine Turtle Specialist Group’s first efforts to assess marine turtle status and develop recovery strategies in the late 1960s. Without WWF’s initial investments nearly 50 years ago, it is unclear what the present-day state of the world’s marine turtles would be. WWF should be proud of this legacy, and of the excellent opportunities it has today to continue its fulfilment by promoting the persistence of marine turtle populations and human communities that depend on them for future generations.
OVERVIEW

Let’s be honest, 2013 was not an easy year for the Global Marine Turtle Strategy. Firstly, the eastern Pacific bycatch programme was closed after eight years of work in nine different countries, leaving a significant gap in our bycatch reduction efforts, but most importantly leaving an unfinished task in terms of achieving the desired goal of having circle hooks available in the local markets. To resume this work will be difficult at the intended scale, as working with fishers requires time and trust-building.

Secondly, as a network we face a challenge in our duty to attend to marine turtle populations found outside of WWF priority areas.

And most importantly, the loss of a dear colleague and friend, Tetha Hitipeuw, who dedicated her life to marine turtle conservation in Indonesia and beyond, leaves us the responsibility of continuing her legacy. Inspired by Tetha, this is something I am sure the team has the capacity and will to take on.

Despite these challenges, the marine turtle conservation team, located in all corners of the world, has continued to work diligently to protect these species. We’ve worked together in the development of monitoring guidelines, indicators and a centralized information system that will allow us to better track our efforts and impact is in the process of being developed.

The marine turtle team is stronger than ever. As I proudly said at the last International Sea Turtle Symposium, I have the privilege of working with a dedicated and committed group of people that is passionate about conservation. As time goes by we continue to learn and grow, and in doing so have realized the importance and potential of using a collaborative approach to working with fishers, governments and industries.

I trust we will find a way to overcome the challenges that inevitably will come our way, and at the same time we learn from sharing with our colleagues, making us better conservationists and better individuals from the relationships we build.
PROGRAMME HIGHLIGHTS
**PROGRAMME HIGHLIGHTS: WWF-INDONESIA**

**PROGRESS:**
For the past five years, in an effort to achieve sustainable fisheries management, WWF-Indonesia has been pushing the Ministry of Marine Affairs and Fisheries (MMAF) to implement an on board observer programme. In 2013, MMAF finally agreed to this plan, and the minister of marine affairs and fisheries issued a regulation requiring on board observers on fishing and fish transport vessels. This regulation fully adopts the “Endangered, Threatened, Protected Species” format developed by WWF as part of data collection and monitoring of fishing vessels in Indonesia.

The announcement of this regulation was due – at least in part – to WWF’s bycatch programme, which had conducted intensive, on board bycatch mitigation trainings for over 1,000 crew members between 2007 and 2012. During the same time period, about 500 fishers and non-fishers attended eight land-based trainings. The bycatch programme’s successful on board observer programme promoted the use of circle-hooks and provided training on turtle handling which resulting in an up to 80 per cent reduction in sea turtle bycatch and increased sea turtle bycatch survival rate.

WWF-Indonesia continues to push for the completion of the Shark Fisheries National Plan Of Action. As a part of this work, WWF collaborated with MMAF in the publication of the White Book on Shark Fisheries Status in Indonesia in June 2013. This book, which was launched together with the MMAF’s marine protected area (MPA) management effectiveness indicator guidelines, provides baseline data for developing a shark fisheries management plan.

**MPA DECLARATION HALTING THE TRANS-WEST PAPUA ROAD**

**Abun**

The construction of the trans-West Papua road has been halted as it violates an agreement to avoid construction in leatherback turtle nesting habitat. This case has been investigated and a hearing took place in late June 2013. Findings indicate that those that constructed the road committed a forestry crime by intentionally and illegally converting forest areas. The investigation will continue, and the case files will be handed over to the courthouse in August 2013.

In an effort to conserve turtle nesting habitat, a district government has agreed to improve leatherback turtle nesting beach management. To do this, it will upgrade the conservation area. The decision to create this park is based on the predator control research conducted by the University of Papua that calls for increased protection of the area. The plan to create the park has been endorsed.
Assisting the district government and other stakeholders in the development of a position paper for the establishment of the Abun Coastal Park will be a challenge. Defining an incentive model and mechanism will require a great deal of thought and consultation.

**Kei**

A 150,000-hectare MPA proposal was declared during the summer of 2012. WWF worked with the local government to conduct communication, outreach, and consultancy activities that included 30 villages in the western part of the area and worked with a university to complete a report on customary institutions of the Kei Islands. This report represents an important information source that can be used in designing a zoning scheme within the MPA management plan. They will detail regulations for controlling turtle harvesting and strategies based on leatherback turtle use data collected by WWF. We will continue to advocate for the protection of turtle populations and their habitat into the plans. The entire community will have the opportunity to review the zoning scheme, and the MPA management body will carry out its implementation.

**Obituary**

Sadly, Tetha, or Creusa Hitipeuw, or @Neneruga as some people know her, passed away at the end of 2013.

Tetha in her role as WWF-Indonesia’s Marine Programme Development and Partnership Leader returned from the Leatherback Turtle Summit in October and entered a hospital in Jakarta where she fought a courageous battle against cancer.

Tetha was one of the few Indonesian senior female marine conservation practitioners and she was an expert on marine species conservation.

In her 17 years with WWF-Indonesia she gave the plight of marine species conservation the best of her passion, knowledge and time. She was known for her extraordinary
dedication to the cause and to building partnerships for lasting impacts. Her work was well acknowledged in the global conservation community and among the marine species experts worldwide.

Tetha was the pioneer of every turtle conservation project in WWF-Indonesia. She started the protection of the significant green turtle rookeries of the Derawan Islands in Borneo and was part of the Sulu-Sulawesi Marine Ecoregion founders that has a strong focus on supporting collaboration for turtle conservation. She moved during her career to work at the very significant leatherback nesting areas at Jamursbamedi in Papua and initiated the partnership with community, scientists and government, to bring the area to a bigger scope of Bismarck-Solomon Seas Ecoregion. Then she started the work in the Moluccas at the island of Kei where leatherbacks were hunted for their meat, and persuaded the community to stop and start respecting leatherback as a precious tourism asset.

Spending so many nights on so many turtle beaches throughout remote areas of Indonesia over the years, she realized how building the capacity and interest of local scientists in support of conservation of these animals is so important, and how conservation strategies in remote areas must go hand-in-hand with social and economic development opportunities for communities. Hence she initiated and developed significant partnerships with Indonesian universities and championed the social development work in the marine programme for WWF-Indonesia. This is now a very significant part of how we work.

She has initiated partnerships for research on migrating whale sharks in Papua, and on migratory patterns and inter-nesting behaviour of leatherback turtles in Papua and the Western Pacific. Using remote sensing tools, the research conducted in collaboration with the US National Oceanic and Atmospheric Administration revealed the mystery of migratory paths of the species. This work provides the first record of trans-Pacific migration by leatherback turtles.

Tetha got her masters degree in marine biology from the Vrije Universiteit in Belgium. With WWF-Indonesia, she initiated and implemented various marine conservation projects in the Aru and Kei islands in the Moluccas, in the Derawan island group in East Kalimantan, and in the Bird’s Head Seascape and Cenderawash Bay of Papua.

Your work is not finished yet, but your legacy means so much for Indonesia’s turtle conservation, thank you @Neneruga.
PROGRAMME HIGHLIGHTS: WWF-MALAYSIA

TURTLE POACHERS TURNED TURTLE PROTECTORS
TERENGGANU, MALAYSIA

In the east coast state of Terengganu, Malaysia, records show that the number of green turtle eggs incubated in 2012 was more than double the amount recorded in 2003. Over 321,000 incubated eggs were documented in 2012 compared to just over 142,000 in 2003, an increase of 126 per cent.

The result is partly due to WWF-Malaysia’s egg buy-back scheme whereby considerable numbers of turtle eggs have been successfully protected as these clutches are purchased from licensed egg collectors. Licensed egg collectors now send them to Department of Fisheries (DoF) hatcheries, ensuring that more turtle eggs are incubated. Previously most eggs went to markets for consumption.

WWF-Malaysia works closely with DoF to engage with local community-members who are employed as rangers to patrol beaches during the nesting season. While there are some beaches designated as reserve beaches, WWF-Malaysia also engaged rangers to monitor and patrol non-reserve beaches. Furthermore, DoF has given us support in our work especially in facilitating best hatchery management practice workshops with licensed egg collectors, rangers and hatchery workers. Workshops have been conducted every year since 2009 to provide technical advice and to ensure licensing conditions and protocols are followed.

Moreover, rangers who were trained at these workshops contributed to an increase in the amount of nests incubated, namely in Geliga, Terengganu where there were 1,300 nests were recorded in 2012 compared to an average of 300-400 nests prior to 2009.

Turtle conservation also has to go beyond the beach and take a holistic approach by involving the local communities, especially in areas where turtle nesting is important. Our close partnerships with local community groups and education and awareness programmes have resulted in more meaningful participation by local communities in turtle conservation. Those who have engaged continuously with WWF-Malaysia have ceased eating turtle eggs and have also advocated to their friends and family members to do likewise. Local community-members are also helping with WWF’s monitoring work by becoming rangers and hatchery workers, as well as by disseminating the conservation knowledge they have learned to their family and friends.

Although the egg buy-back scheme has been very successful in saving more eggs from sale and consumption, it is not financially viable in the long-term and still puts a commercial value on turtle eggs instead of a conservation value. WWF-Malaysia is working toward empowering local communities to undertake effective turtle conservation over the long term by engaging, training and supporting these groups to enable them to run sustainably financed turtle guardian programmes.
Trainer, Mr. Abd Halim Mat Noor of the Terengganu Turtle Information Centre showing participants methods of egg handling.

Furthermore, WWF-Malaysia will continue to advocate for federal laws to ban the consumption and trade of turtle eggs, which started in 2008 with community support and public campaigns such as World Sea Turtle Day.

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JOINT MARINE TURTLE CONSERVATION STRATEGY FOR REGIONAL ACTION IN THE CARIBBEAN

The Caribbean is home to six of the seven marine turtle species. These animals are highly migratory moving between nesting and foraging sites, utilizing several marine and coastal ecosystems throughout a region shared by more than 30 countries. Some species go beyond the Caribbean crossing the Atlantic in search of nurseries and feeding areas. Protection of marine turtles requires a regional multilevel approach to reduce threats and create transformational conservation actions. The Caribbean Marine Alliance (CMA) is such an opportunity.

For the last three decades, WWF has been working through local country programme offices across the Caribbean to protect the region’s unique biodiversity. Motivated by the recognition that some threats require regional action can deliver results as well as the opportunity to find synergies, a group of WWF offices recently united to create the CMA. This project aims to build upon existing programs’ objectives amplifying their individual impact by capitalizing on a shared assessment of biodiversity contributions, threats, and strategic opportunities for action. The CMA strategic plan outlines three interconnected lines of action: MPAs; sustainable tourism; marine turtles and sharks, and presents climate change as a crosscutting axis.

Common threats impacting local populations across the region were independently assessed to better understand the relationship between species, locations and anthropogenic activities and highlight those conservation actions with the greatest potential for success. Results were validated with local experts from around CMA countries to include threat specificity on the various species and geographic locations.

The proposed conservation strategies were built upon specific opportunities of action that could only be achieved through regional collaboration enhancing the response to identified threats. For instance, the creation of a support system platform to analyze regional data acquired through standardized monitoring methodologies is a fundamental first step supporting a regional marine turtle conservation approach. However, it is the joint advocacy effort promoting government level action that will strengthen regional agreements on management and recovery of marine turtle populations in the Caribbean.

Current priority projects include: the creation of a support system platform to collect and analyze regional data acquired through standardized methodologies and the establishment of nesting habitat climatic baselines (sea level and storm inundation and erosion, sand temperature, water tables) to identify climate change adaptation interventions.

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Bycatch is one of the biggest immediate threats to the world’s marine turtles and one that impacts the rare animals worldwide. Satellite tracking studies of different marine turtle species have shown linkages between Mexican and Costa Rican nesting beaches and foraging grounds off Peru and northern Chile and Western Pacific waters. In Mexico, intense coastal fishing overlaps with high densities of loggerheads at their nursery hotspot in Baja California, producing among the highest bycatch rates reported worldwide. Additionally, there is evidence that following the movement of loggerhead turtle hatchlings from Eastern Australia rookeries to the open ocean, they make a trans-Pacific migration to the coasts off Peru and Chile where they are currently caught by longlines and gillnet fleets.

If marine turtle populations are going to escape extinction and recover to healthy levels, human-induced mortality such as incidental capture must be almost entirely eliminated and actions must be taken to ensure high levels of survival in all life-stages.

In the eastern Pacific ocean, fisheries activities have been poorly managed. WWF’s bycatch, fisheries and species programmes in Latin America and the Caribbean (LAC) have built bridges of trust between the fishing sector and governments, as an essential condition for progress toward improving fisheries and reducing their impact on ecosystems, including incidental mortality of marine turtles. Marine turtles were identified as a starting point for dialogue between these actors. Consequently, WWF took over regional implementation leadership in 2004 with a vision for encompassing initiatives with high impact due to their relevance in ecosystems.

Important successes have been accomplished, preparing the road to consolidate a new way of fishing in the eastern Pacific, which is securing marine turtle conservation. In Ecuador, the observer programme has been institutionalized, merging the programmes for sharks, mahi-mahi and marine turtles, and the government passed a decree reducing import tariffs on circle hooks. An entire port in Oaxaca, Mexico, has been transformed to the use of circle hooks and fishers have been trained on better marine turtle manipulation practices, under an innovative scheme of a local governance model.

To continue on this path, WWF’s LAC species programme and the Inter-American Convention for the protection of marine turtles are working together for the consolidation of the previous regional effort to create the enabling conditions to ensure that fisheries authorities of Chile and Peru internalize bycatch issues in their countries for an integrated marine turtle management.
HOW A COLLABORATIVE APPROACH TO FISHERIES CAN IMPROVE OUR MARINE TURTLE CONSERVATION IMPACT

Working collaboratively, fishers and scientists have been able to eliminate almost completely the accidental catch of sea turtles in shrimp fisheries from French Guiana to Gabon. In 2014, WWF along with Tony Nalovic and Troy Hartley are promoting similar initiatives throughout the world.

To realize this goal, WWF is teaming up with Nalovic and Hartley to train scientists in the collaborative fisheries research approach for evaluating and introducing new gear that will help reduce accidental catch of unwanted animals. It’s a process that could benefit marine resources, scientists, and fishers.

CHANGING GEAR, DECIDING FATE

“There were definitely trust issues,” Nalovic says about establishing relationships with fishers. Mistrust can arise in part from differences in the way the fishers and scientists work, says Hartley, Virginia Sea Grant Director and one of Nalovic’s advisors at the Virginia Institute of Marine Science.

“Fishers don’t fish like scientists: they hunt strategically instead of taking random samples. This means there’s sometimes a discrepancy between what the fishers see and what scientists and agencies report,” Hartley says. Differences between what a fisherman sees versus what a scientist sees can lead to suspicion and undercut credibility, especially when fisheries regulations are based on the science.

“Regulations can impact fishers’s jobs and communities,” Hartley says. “The stakes are high for fishers.”

GAINING TRUST THROUGH COLLABORATION

“Most marine science data sources can’t talk to you, but fishers certainly can,” Nalovic says. “It’s important to go in humbly and say, ‘all right, what’s your issues and what ideas do you have? here are my ideas, let’s work on this together, okay?’”

By working directly with local fishers, Nalovic showed that industry developed trash and turtle excluder device (TTED) could benefit the industry, while achieving conservation goals. The TTED, a recent refinement of the turtle excluder device, or TED, could reduce sorting time, lower the risk of injury from captured sharks and other animals, improve shrimp quality, increase production under certain conditions and potentially lead to a reduction in fuel consumption.

On average, TTEDs in French Guiana reduced total bycatch by 30 per cent, including 90 per cent of accidentally caught sharks, without reducing catches of shrimp.

Nalovic’s efforts paid off in 2009 when fishers represented by the French Guiana Regional Fisheries Committee (CRPM Guyane) voted unanimously, to make the TTED mandatory.
SPREADING COLLABORATION AND CONSERVATION

Fishers from Mississippi to Gabon are testing and adopting TTEDs and TEDs. In spring 2014, WWF will work with Nalovic and Hartley to conduct a workshop at the 34th Annual Symposium on Sea Turtle Biology and Conservation to help international researchers and non-governmental organizations learn how to overcome obstacles and work with fishers to realize similar positive results in their home countries and in a broad variety of fisheries.

“You don’t need to force this technology onto people. Once they see that they don’t lose productivity and get positive feedback right away,” Nalovic explains. “It gives them a sense of competence and success, that’s the best way to break down barriers and encourage further innovation and collaborations.” Hartley says, “Giving fishers a voice and harnessing their intellectual contribution to the development of a bycatch reduction technology enhances the likelihood of its adoption broadly across the industry.”

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Conservation work sometimes requires lengthy processes to be completed either because the change needs to happen at a large scale or because the development of the programs takes a lot of time, such as when inertia or conflicts of interest are well-entrenched and have to be overcome. Conservation organizations should prepare for the long term in their budgeting and staffing plans. The projects should be supported until they reach some desired objective unless it is determined that success is not possible. Projects should be started with continuity in mind, or perhaps not started at all. Work on some subjects, such as bycatch and community engagement, may take a lot of time, because sometimes the solution has to be developed and then implemented. High expectations of quick results are usually unrealistic, and planners should be patient to give the programs a chance to succeed.

In the choice of projects to support, the planners should understand that some conservation projects are very specific in their reach, while others may have impact across many Regional Management Units (RMUs). In general, the latter should have higher priority because of their higher potential impact.

The adaptation of concepts to the different regional realities should be analyzed prior to action and people who are knowledgeable of the local conditions should be consulted. Conservation programs should use all tools at their disposal, instead of trying to use the same, and fashionable, tool for every problem in every region.

Many of the changes needed to secure conservation goals need to be developed working with communities, in view of the limitations of the rigid top-down approaches in most of the world. This requires building trust between the organizations and the communities that are the main players in each case. This trust is very valuable, and there is a loss if the bond is broken. Instead, it should be used to expand conservation work to other subjects.

The other important component of conservation programs is the development of teams of conservation agents from WWF and associated organizations, working on similar problems, sharing experiences, and cooperating with each other in an effective way, across countries and regions. An objective of high priority should be to maintain the continuity, and the connectivity of those that have been trained and that are better agents of change because they have already accumulated the experience.

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WWF Marine Turtle SAP Advisor
Marine turtle strategy in numbers

5

WWF works on five of the world’s seven marine turtle species

20>

WWF offices contribute to the Global Marine Turtle Strategy

50>

WWF has been helping conserve marine turtles for over 50 years.

2 MILLION>

WWF invests over 2 million EUR in marine turtle conservation annually, but needs to increase that amount 3 fold to be able to meet its objectives satisfactorily