The Gulf of Mottama Project successfully conducted a video documentary launching event and press conference at Orchid Hotel, Yangon, on June 24, 2019. The event was attended by representatives from Bago Government, academia, NGOs, INGOs, Civil Society Organizations, erosion-affected communities, and the media.

The objective of organizing this event was to create a platform for the communities to voice the challenges they face due to their villages and farmland being destroyed by erosion along the Sittaung Riverbank.

The “Chased by the Tides” documentary was produced by Gulf of Mottama Project in collaboration with Mon News Agency.

Since 2013, coastal erosion in Kawa and Thanatpin townships in the Eastern part of Bago Region has claimed tens of thousands of acres of farmlands; more than twelve villages had to be relocated. Over 10,000 people were internationally displaced, without sufficient support from the government or internal aid.

The internally displaced populations face many hardships in the new resettlement areas. Drinking water, school buildings, the need for permanent resettlement areas, and lack of livelihood opportunities are their main concerns, as mentioned by U Hla Nagwe, Ma Mauk village administrator, during the press conference.

To understand the devastation, the Gulf of Mottama Project contracted Arcadis, renowned for expertise in coastal morphology, to research and document these natural changes.

Arcadis concluded that this erosion has nothing to do with climate changes or man-made disasters. This effect is caused by nature itself when the tidal channel shifts from the Bago Region or Mon State and results in the land shifting from one place and depositing in another place.

Dr. Min Aung Pan from Bago University and team leader of a GoMP-supported study on erosion-affected...
communities concluded that the majority of the communities living in the coastal area, experienced riverbank erosion in the past and were affected several times by internal migration.

He further explained, these communities are likely to resettle themselves not too far away from the coast as their major livelihood relies on fisheries and agriculture.

The documentary aims to raise awareness of the Government, INGOs, donor agencies, Civil Society Organizations, and the media, on the situation of these villages and their basic needs.

The Gulf of Mottama Project is a project of the Swiss Agency for Development and Cooperation (SDC) and is implemented by a consortium led by HELVETAS, Network Activity Group, International Union of Conservation of Nature (IUCN), and the Recreational and Marine Conservation Association (RMCMA). The project is part of HELVETAS’ Myanmar Program “Rural Livelihood in Myanmar”, under a Memorandum of Understanding with the Department of Rural Development, Ministry of Agriculture, Livestock and Irrigation.

MESSAGE FROM THE CHIEF TECHNICAL ADVISOR

I am pleased to present the second English Newsletter from Gulf of Mottama project. Since the first English newsletter, the project has made tremendous progress in many areas. This newsletter describes some of those activities.

One of the highlights is the launch of the documentary “Chased by the Tides” which we produced together with Mon News Agency. It shows the challenges communities face due to the continuous erosion in Bago Region. More than 12 villages have been eroded and it has displaced over 10,000 people. The video has a Myanmar and English version and has been watched over 350,000 times on our Facebook GoMP page: (https://www.facebook.com/pg/CLCMGoMP/videos/).

GoMP together with Point B Design + Training’s Myanmar Coastal Conservation Lab, at Mawlamyine University, have conducted regular marine mammals’ surveys to research the presence in the Gulf of Mottama and we can now confirm that three different species have been sighted in the area. The number of dolphins and porpoises is decreasing over the years, since they are sometimes accidentally caught in fishing gear. It is likely that these animals are facing threats throughout the country’s waters, so our work on the Gulf of Mottama’s marine mammals is important not only for the Gulf of Mottama, but also for the national conservation.

Earlier this year the project was actively involved in patrolling against illegal fishing activities in the Northern Part of the Gulf. Illegal nest with a value of over USD 50,000 were confiscated and publicly burnt, to highlight the severity of these activities. The affected fishermen were put into contact with micro-finance institutions to purchase new legal nets.

In the coming months GoMP hopes to complete the mapping of the coastal natural resources using digital mapping methodology in order to visually represent the area. The mapping exercise has been conducted in close collaboration with the local villagers, OneMap Myanmar and AGS, a local company. The result will be available online for all the 60 villages.

I hope you enjoy reading this latest GoMP Newsletter!

Jos van der Zanden
Chief Technical Advisor.
Marine Mammals in the Gulf of Mottama

By: Tara Sayuri Whitty, Ph.D.

Biodiversity conservation is one of the core goals of the Gulf of Mottama Project. In the Gulf of Mottama, the most famous species of conservation concern is the Critically Endangered Spoon-billed Sandpiper which migrates vast distances to overwinter on the rich mud flats here. It is an important symbol for the Gulf of Mottama and its mud flats.

Well, now we know that there are also exciting animals who can symbolize the importance of the gulf’s coastal waters! Since late 2018, researchers have confirmed the presence of three species of marine mammals in the Gulf of Mottama’s coastal waters: Indo-Pacific finless porpoise (Neophocaena phocaenoides), Irrawaddy dolphin (Orcaella brevirostris), and the Indo-Pacific humpback dolphin (Sousa chinensis). This research is ongoing, advised by me (thanks to my experience studying Irrawaddy dolphins in three other countries for my Ph.D.) as well as colleagues from different countries in Southeast Asia. The Myanmar Coastal Conservation Lab (MCCL), at Point B Design + Training at Mawlamyine University, is the main research team for the marine mammal research program, joined by students from Mawlamyine and Bago Universities.

Local fishers have known that dolphins and porpoises live in the Gulf, and the Department of Fisheries has responded to strandings of these animals. But, there had never been research surveys to scientifically document these animals in this area. In fact, it was the knowledge of local fishers that led to the beginning of this research program! While on a learning exchange trip in Chilika Lake, India, several Gulf of Mottama fishers and I were lucky enough to see the Irrawaddy dolphins that live there. These fishers were clearly accustomed to seeing animals like those dolphins – when asked, they confirmed: “Yes, we see these animals when we’re fishing in the Gulf of Mottama!”

This led to our research team interviewing people in coastal communities in Thaton, Paung, and Chaungzon, to learn from their “Local Ecological Knowledge” about the marine mammals that might be living in the Gulf of Mottama. From these people, we learned about the different types of marine mammals that they see. Several people told us that the number of these animals has decreased, and that they are sometimes accidentally caught in fishing gear. This accidental capture is called “bycatch” and is a global threat to marine mammals. It is a very difficult problem to solve, because the fishers are usually not trying to catch the marine mammals – but they will need to change the way that they fish in order to avoid bycatch. Some communities consume the dead dolphins and porpoises, or use their oil because they believe it has medicinal properties. While it is possible that some people actively try to catch these animals, I believe that most of the capture is accidental – if fishers were trying to catch these animals, they would use different methods, and consumption of these animals would be much more common.

When dry season started in October 2018, we conducted our first boat-based surveys, working with a very skilled fisher and boatman from the village of Zee Gone, Chaungzon. In October, we had our first sightings of Indo-Pacific finless porpoises. In November, we had our first sightings of Irrawaddy dolphins. And, in February, our team was surprised to see Indo-Pacific humpback dolphins!

These three species can be found together in other parts of South and Southeast Asia. One of their preferred habitats is mixed fresh- and saltwater, so the Gulf of Mottama is a good habitat for them. Finless porpoises and Irrawaddy dolphins can live in freshwater or in the ocean.

Both the finless porpoise and Irrawaddy dolphin have flat faces, while the humpback dolphin has a long beak. In this region, humpback dolphins turn partially pink as they get older. The finless porpoise is the smallest and darkest of the three species; it also has no fin on its back, hence its name. It can be difficult to see in the water, we haven’t been able to get a photo of them yet! The Irrawaddy dolphin is Endangered on
the IUCN Red List of Endangered Species, while the other two species are Vulnerable. For all three species, bycatch is a major threat.

To evaluate the status of these animals in the Gulf of Mottama, we will need to estimate how many individuals of each species live in this area. We also will need to estimate how many are killed by bycatch. This will allow us to assess whether bycatch is a serious threat to the Gulf of Mottama’s marine mammals. If it is, then work will need to be done with communities as well as the Department of Fisheries to develop ways to reduce this bycatch. Moving forward with conservation requires working closely with local communities to make sure that dolphin and porpoise conservation does not harm the livelihoods of local fishers. If the local communities are not included in this process, it is very unlikely that conservation efforts will succeed.

We will work to answer these and other research questions about these animals through 2019, and we hope into 2020 and beyond as well. We also know of a finless porpoise that was captured and released in a tributary of the Sittaung River about one year ago, so it is possible that there is at least one population of finless porpoises living in the Sittaung River. Dr. San Tha Tun, head of Marine Science at Mawlamyine University, and Dr. Tint Tun, one of Myanmar’s marine mammal experts with Marine Science Association of Myanmar, have told us about an accidentally captured finless porpoise on the edge of Mawlamyine, near the Attran River, several years ago. There is much more to explore and learn about marine mammals in the coastal and river waters of the Gulf of Mottama.

This is one of the few projects that have ever studied marine mammals on Myanmar’s coastline. It is likely that these animals are facing threats throughout the country’s waters, so our work on the Gulf of Mottama’s dolphins and porpoises is important not only for the Gulf of Mottama, but also for the national conservation.

The most famous dolphins in Myanmar are of course the Irrawaddy dolphins in the Ayeyarwady River, but maybe our work can help make the Gulf of Mottama dolphins and porpoises famous, as well!

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**A success story against illegal fishing in the Gulf of Mottama**

A major problem for the local fishers in the Gulf of Mottama has been illegal fishing with long, fine-mesh stake nets. These nets have been identified as a cause of local fisheries stocks declining, as they indiscriminately catch juvenile fishes. However, previously there were not enough coordination or resources to combat this illegal fishing – thought to be run by businessmen in the town of Kyaikhto.

Through the efforts of local fishers, government departments, and the GoMP, patrolling and enforcement efforts are now more coordinated and effective. These efforts are linked to more broad work to strengthen fisheries management in the Gulf of Mottama.

The Gulf of Mottama Project (GoMP) has been facilitating the review and revision of the current local fishery laws of Mon state and Bago region, working with State and Regional Governments, Department of Fisheries (DoF), General Administration Department (GAD), and Fishery Development Associations (FDAs) made up of representatives from local fishers. Under the new fisheries law, the local fishermen have the right to organize and manage co-management zones, including patrolling for illegal fishing. However, for patrols to have enforcement power, government departments must also be involved.

The FDAs in the project area were officially registered in 2018 after the new amended state and regional fisheries laws were approved. The FDAs are now officially recognized by the state government. With GoMP assistance, the FDAs prepared action

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**Cooperation, collaboration and understanding make better future World**
plans, included patrolling against illegal fishing. At first, these plans were not approved upon submission to the DoF due to lack of familiarity with the new fisheries law and the lack of available resources from the DoF to cover patrol costs (between 300 to 800 USD for each trip).

Fortunately, the leaders of the FDA didn’t give up! They were able to collect some funding within their own groups and requested the GoMP for additional support and collaboration for joint patrolling. The GoMP team facilitated a joint meeting and a capacity building training on the SMART patrolling technique in the GoM area. After this, the FDAs together with the DoF started developing a patrolling plan with all relevant departments involved and a budget estimate. This paved the way for successful collaboration.

During the first joint trip in Mon State, the patrolling team observed illegal fishing nets along the mudflats in Bilin area. They informed the fishers operating these nets that this kind of fishing was illegal and detrimental for the fish stock for the all the fishermen in the GoM area. In response, some illegal fishing activity moved instead to Bago Region.

To deal with this, the FDAs and DoF decided to prepare a joint patrol between Mon State and Bago Region. This patrol was organized at the beginning of the fishing season, and involved active participation from over 30 local fishermen, four DoF officers, four GAD officers and six police officers. This time, the patrol team found over six kilometers of the illegal fishing nets along the mudflat areas, with two boats used for this illegal fishing. Government officials from both Bago and Mon decided to destroy all the nets to prevent further fishing with these nets in the GoM area, and to demonstrate a commitment to enforcement. The total value of the fishing nets was more than US$ 50,000.

The state and regional government ministers and DoF director made a media interview and gave official news to public that they will organize more similar actions if other illegal fishing is found along the GoM coast. The local and government official media published this news in both newspaper, journal, TV channels and other social media.

Because of this surprise joint patrolling action, most illegal fishing businesses now don’t dare to use these illegal nets in the GoM area, because they know if they are caught the nets will be burned and the loss is too high for them. Continued patrols will be needed to maintain effective enforcement; these are planned.

The major success of this joint activity is a better understanding and trust between local fisher families and government department officials. Therefore, the local fishers are willing to work with government officials and the department officials are more likely to work directly with the fishing communities on other issues as well.

The economic benefit is that, with reduced pressure from these illegal nets, the fish stock and income of fishers in the GoM area might be able to recover.

By: Than Htike Aung, HELVETAS Myanmar

References:
https://www.facebook.com/CLCMGoMP/videos/252304035480162/ the interview with business owner, local fishermen and department of fishery
Catching Plastic in the Gulf of Mottama

By: Tara Sayuri Whitty, PhD & Yin Yin Htay

The plastic waste problem is a major environmental issue around the world. In the Gulf of Mottama, it’s easy to see signs of this problem – piles of plastic and other waste on the beaches, riverbanks, even in unofficial “dump” locations in the city of Mawlamyine. Currently, the Gulf of Mottama Project (GoMP) is supporting work by the Myanmar Coastal Conservation Lab (MCCL) at Point B Design + Training to better understand the impacts of plastic waste on the environment and communities in the Gulf, as well as the drivers of waste production and possible solutions. Before we started this work, however, we learned about one impact of plastic that we hadn’t expected – during our field visits for another research project earlier this year.

On the west coast of Chaungzon Island is a small fishing village called Zee Gone. This is the base for our marine mammal research for the GoMP; our research team works with a local boatman to conduct boat-based surveys, and enjoys the village’s hospitality during its overnight stays. During her free time on these research trips, MCCL researcher Yin Htay often visits with the locals to learn more about their lives and to be a friendly and helpful neighbor. This is how we learned about the process for making dried shrimp products – and how plastics have made this process more difficult!

Fisheries are a major livelihood for this community, and processing the fisheries products is generally done by the women. Two major products include the fish Nga nhat and dried shrimp. Based on observations and conversations with villagers, we learned that plastics intrude on these fisheries: with each catch of Nga nhat or shrimp, the nets also bring in countless small pieces of plastics that are floating in the sea.

When the Nga nhat is brought back to shore, the fish is sorted on the beach. Plastic debris from the catch is then left on the beach. For the shrimp, it is too difficult to sort out the small plastic parts while the shrimp is still wet. So, the shrimp processing continues with the plastic pieces: the shrimp and plastic are boiled together, then spread out to dry in the sun (though for animal feed, it is just directly dried without being boiled). Walking around the shrimp drying area, you can easily see the high levels of plastic mixed into the shrimp.

Once the shrimp and plastic pieces are dried, then the women can separate them using a bamboo and mesh filter. The plastic pieces are either left on the ground where they fall, or brought to the riverbank for disposal. The plastic mixed with the shrimp seems to be mainly fragments from plastic sacks (such as those used for rice), clear plastic bags, sachets, pieces of fishing net, straws, and other fragments of plastics. With the pieces being so small, it is difficult to identify what exactly they are and where they come from.

Processing dried shrimp is already a demanding, difficult job – and now, plastics make it even more difficult. We were told that, even though there has been plastic in the catch for many years, it increased substantially about 6 years ago. The women said that the plastic makes them busier; they have to spend extra time and energy to sort the plastics from the shrimp.

For sorting the Nga nhat, plastics also make things more difficult for processing. The women said that sometimes, they need to work late at night because the fishing boats return then. Having to spend extra time sorting plastic when it is already midnight or later is harmful for their health and well-being.

It will be extremely difficult to remove all of these small pieces of plastics from the ocean. However, learning about this problem of plastics in fish catch does highlight some important steps to be taken:

- Improving waste disposal systems so that the processors can dispose of the plastic fragments...
in a way that won’t return to the sea

- Improving waste disposal systems in Mon State to reduce the plastic waste along the local coastline (though plastic can still float here from other parts of the world)
- Raising awareness among the general public of the ways that plastic waste can negatively impact not only the environment, but people, too – including their health and well-being, both for fisheries processors but also for consumers, who might be eating seafood products contaminated with plastics

We at MCCL are in the middle of our intensive research on plastic use and disposal in Mon State, and will start in Bago Region in June. This will inform our future stakeholder workshops to design possible solutions to plastic waste in the Gulf of Mottama. This is part of a larger campaign by the GoMP. Though the plastics problem is huge, we hope that these efforts can be a strong first step in reducing the many negative impacts of plastics for our local environment and communities.

**Resource Mapping**

*By: Min Nyan Seik, KMCO*

Why do we need maps to conserve natural resources in the Gulf of Mottama? Who are the main users of these maps? What types of information are we expecting to receive from the mapping process? Many questions and discussion points were raised during the Stakeholders Consultation Meeting on Natural Resources Mapping.

The meeting was organized by Gulf of Mottama Project and brought dozens of representatives from key departments of the Mon State Government, such as the Forest Department, Department of Fishery, Environmental Conservation Department and academia from Mawlamyine University. Some Geographic Information System (GIS) specialists from partner organizations such as One Map Myanmar, Worldview International Foundation and Network Activities Group also joined the meeting.

**Current Government Practices on Resource Allocation**

U Tun Htay, Minister of Agriculture, Livestock and Transportation, briefly stated in his keynote speech that Gulf of Mottama is a vast area and full of challenges around natural resource management. The mudflats ecosystems are always changing. Every year, land is being eroded and new sandbars are being developed. In its current stage, no comprehensive maps are available, which makes it difficult for the government to make decision on allocating resources.

Now, the Mon State Government is having challenges with virgin fallow land in the GoM, which creates conflicts among the farmers, fishers, and environment conservation groups. He further explained that some villages requested the state government to grant permission for a community-based crab protected area and mangrove plantation in the Thaton co-management zone. At the same time, local farmers would like to use these lands for agriculture. Due to insufficient information validation on these lands, the government is facing difficulties in solving these challenges.

**Coastal Natural Resource Management Plan**

In 2016, GoMP in collaboration with Mon State and Bago Regional Government initiated the process of developing the Coastal Natural Resource Management Plan. Since the Management Plan was already endorsed by both governments, it became a reference document in coastal natural resource management of the GoM.
However, the management plan cannot be operational without useful resource maps. To further develop action plans for state or regional-based coastal resource management, both the Management Plan and Resource Maps have to be used together. Availability of resource maps at the community level will also help communities manage their own resources for sustainable use.

What type of Maps will be produced?

The Gulf of Mottama Project aims to produce different types of maps on the following topics.

- Map of Natural resource co-management zones
- Conservation Hot Spots Map
- Proposed Zoning Map by community for mangrove and crab conservation
- Project activities map

These maps will assist further development not only for coastal natural resource management but also for natural disaster protection and environment conservation in the Gulf.

Who are the main users?

In 2016, the Myanmar government formed the Union-Level Coastal Resource Management Committee, chaired by Vice President U Myint Shwe. As part of this formation process, Chief Ministers of States and Regional Governments have been instructed to form their own State- and Regional-based CRMC and assigned Ministry of Natural Resource and Environment Conservation Committee (MoNREC) as the key ministry.

The current mapping process aims to assist the CRMC of Mon State and Bago Region to obtain information to assist their decision making and future plans for rural development in the coastal communities.