

# Battery fishing rise threatens unique dolphin cooperation

## EXECUTIVE

with  
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THE unique practice of cooperative fishing between Irrawaddy dolphins and fishermen in Mandalay Region is under threat because of electric fishing, sources said last week.

Groups of electric fishing boats can be found in a 74-kilometre-long dolphin protected area, and conservation officials say they are unable to stop the practice because the fishermen are armed and travel in large groups.

Ko Wira, a filmmaker who is making a documentary film about Irrawaddy dolphins, said the number of boats rigged to use electricity to catch fish had "significantly increased" in the conservation area when he visited in May.

"There were 30-40 electric fishing boats even in the conservation area," he told *The Myanmar Times*. "It was like a festival at night with the light from the electric fishing boats. We heard the sound of generators from them ... we could even see the fishermen who were using electric fishing equipment during day time," he said.

The filmmaker said the behaviour of the dolphins had changed noticeably in the past two-and-a-half years, which he attributed to their fear of electric fishing boats.

"We saw Irrawaddy dolphins and also cooperative fishing during our first trip in January 2010, and on only two of our 27 days we didn't see a single dolphin. But on my May visit, which lasted 18 days, we didn't see a single dolphin for seven days. Although we saw the dolphins in other days, we only saw them from a distance. They didn't approach our boat - instead, they went away when they heard the sound of the engine," he said.

Ko Wira said this had effectively put an end to the custom of cooperative fishing, where the dolphins help herd fish into the nets of local fishermen.

"Dolphins don't approach the boats anymore and the fishermen have changed to other jobs they can no longer make a living from fishing. This unique habit of cooperative fishing is disappearing," he said.

### Patrols struggle to control armed groups

In December 2005, Ministry of Livestock and Fisheries named the section of the Ayeyarwady River between Mingun and Kyaukmyaung in Mandalay Region the "Irrawaddy Dolphin Protected Area".

The creation of this protected area was intended to rehabilitate the population of the Irrawaddy dolphin, which has been protected since

2004 under the Conservation on International Trade in Endangered Species of Wild Flora and Fauna agreement, and also maintain the practice of cooperative fishing.

Under Fisheries Notification No 11/2005, the use of gill nets, drift nets longer than 300 feet and "fishing implements and fishing methods that are prohibited by the Department of Fisheries", including electric fishing, are prohibited in the protected area.

U Aung Myo Chit, coordinator of Wildlife Conservation Society (WCS) Myanmar's dolphin project, said staff from his organisation and the Department of Fisheries had undertaken conservation work on the protected stretch of river since 2006. While initial progress had been promising, he said the situation had changed and other government departments need to work together to eliminate illegal fishing in the area.

Twice-monthly patrols had been unable to control illegal fishing, and particularly electric fishing, because the boats stayed in groups and their occupants were often armed, he said.

"In the past, we saw one or two boats that practiced electric fishing so the patrol team could confiscate them. Today, these illegal fishermen make groups of six or seven boats, with at least two men in each boat and they are carrying dangerous tools that they use for fishing, such as spears and knives. The maximum number of people on a night patrol boat is four, sometimes six. How they will face these groups with dangerous weapon? The collaboration of other groups, such as the administrative office and police force, is needed to control this problem," he said.

He said cooperation between conservation officers and residents in the area had been "excellent" from 2006 to 2011.

"They informed when they saw dead dolphins and helped chase away people who practised electric fishing. But these days, we have less information from

Conservation Unit.

He said illegal fishing was "booming" in the conservation area and the department was struggling to bring it under control.

"We have reached a critical time to stop this because number of electric fishing boats has dramatically increased - you can even see them during the day time.

"We need more efficient cooperation from the village and township administrators, police and judiciary to crack down on illegal fishermen.

"The [fishermen] can harm patrol teams because the teams are not armed. There have been cases where the fishermen quarrel and kill each other."

He also expressed concern that some people who should be working to tackle the problem were compromising policing efforts.

"Sometimes - especially when we inform other departments about our patrols - the illegal fishermen have information about when we will patrol so they hide that day. Punishments are also ineffective; they continue electric fishing after they have been imprisoned for a few months."

While the fisheries law states that illegal fishing can be punished with a sentence of up to three years, most receive jail terms of four to six months. "All people in the area need to understand the huge consequences of illegal fishing and participate in the conservation work," he said.

### Electric fishing: a growing problem

A regular visitor to the area since 1979, freelance photographer U Sein Myo Myint said he had noticed a change in dolphin behaviour on his most recent trip to the conservation area, in February.

While the dolphins normally swim in groups of two to four, this time they were in groups as large as 10.

"It was hard for the fishermen to call the dolphins to do the cooperative fishing because the dolphins were afraid of the sound of the boat's engine," he said.

"Cooperative fishermen

**'Dolphins don't approach the boats anymore and the fishermen can no longer make a living.'**

the villagers. Some of the fishermen who collaborated in our conservation project were threatened by fishers who use electric fishing," U Aung Myo Chit said.

Fishermen who used to work with Irrawaddy dolphins are now too afraid to even wear t-shirts handed out by conservation groups, said U Mya Than Tun, assistant director of the Department of Fisheries' Environment and Endangered Aquatic Animal

use rowing boats, whereas the electric fishing boats use powerful engines because they need to be able to run fast when they are chased by the authorities. It seems the dolphins now associate the engine sound with danger. For visitors, it means there are now few opportunities to see Irrawaddy dolphins."

He also called for improved law enforcement to tackle the problem, which first began to appear in 2006.



Illegal fishermen on a protected stretch of the Ayeyarwady River near Mandalay. The use of batteries (left) in fishing has changed the habits of the region's Irrawaddy dolphins. Pic: Supplied/Wira

"Electric fishing started with people using a bicycle dynamo ... then car batteries were used and now we hear some use generators. Electric fishing can damage the river's biodiversity, including fish and turtles. It is used for commercial fishing and the impact is wide-ranging, including depletion of fish stocks.

"These illegal fishing techniques need to be controlled through effective law enforcement. The fisheries law already exists but implementation is quite weak everywhere and the practice of electric fishing is growing. We can see people using these techniques wherever we go along the Ayeyarwady River. There are electric fishing boats even in the conservation area."

### Cooperative fishing: a century-old tradition

The cooperative fishing technique sees dolphins and fisherman work together through a number of different signals. When fishermen are ready to work, they call the dolphins by tapping the side of their boats with a wooden stick.

The dolphins then signal to the fishermen to follow by slapping their fin horizontally on the surface of the water and lead them to the area where they can catch many fish. Dolphins indicate when to cast the net by a flick of their tail, and then eat fish around the nets, as well as those discarded on the riverbank.

"Dolphins and fishermen know well how to signal each other and work together in harmony. The fishermen can catch more fish because it is very efficient," U Sein Myo Myint said.

But without effective action, it appears likely the practice of cooperative fishing will disappear. This will represent not only a financial blow to the local fishing industry and the nation's cultural heritage, but also the nascent eco-tourism industry.

"The 74-kilometre segment of protected area on the Ayeyarwady river is the only place in the world where we can see cooperative fishing between humans and dolphins. According to our research, the practice has existed for more than 100 years."

According to a survey in 2010, 77 Irrawaddy dolphins were counted in the conservation area, while 90 dolphins were estimated to live along the Ayeyarwady River between Mandalay and Bhamo in Kachin State.

U Aung Myo Chit said that while there are a number of threats to the river's Irrawaddy dolphin population, the growing prevalence of electric fishing was his greatest concern.

"It directly threatens the food source of the dolphin. The Irrawaddy dolphin population in the Ayeyarwady River is fewer than 100 individuals and they breed only once every three years," he said.

Ko Wira said he was also concerned about the future of the dolphins and cooperative fishing.

"I worry that we will lose an important part of our culture because we aren't looking after it properly. If we can't manage illegal fishing and ecosystem degradation now, in the future we will only be able to talk about what it was like when cooperative fishing used to take place. And that will be a sad story," he said.