



## SIXTH NATIONAL MISSION ON CONSERVATION OF SHARKS-INDIA NMCSI-6

17<sup>th</sup> June 2015, Veraval, Gujarat, India

### Proceedings

The Sixth National Mission Meeting on Shark Conservation, India was held at Veraval, Gujarat. The meeting was well attended by scientists, government representatives, NGOs and fishermen community.

#### I. INAUGURAL SESSION:

The meeting began by a welcome note by Dr. M. Koya, Scientist In-Charge, CMRFI, Veraval. The Chief Guest Shri. Shyamal Tikadar, IFS, Chief Conservator of Forests, Gujarat Marine National Park inaugurated the meeting. It was presided over by Dr.E. Vivekandan, Scientist Emeritus, CMFRI. This was followed by a brief introduction to the history, structure and functioning of the NMCSI as well as a brief about the deliberations made so far by C. Samyukta, Campaign Manager – Wildlife, HSI-India.

Dr. Koya then invited various dignitaries in the room to share a few thoughts at the inauguration of the session.

**Assistant Commissioner Sumit Rawat, Indian Coast Guard** expressed his pleasure at being a part of the meeting and said that he was keen to take the deliberations to his officers. He also said that earlier religion use to be based on conservation; but now we have come to such a state that we need to talk much more about conservation. He felt that India should have become a model state on conservation. He noted that shark is a sturdy species, but is still endangered and shark catches have gone down. This is not the fault of fishermen alone and it is a responsibility of society as a whole. Lastly, he noted that education of younger generation of fishermen community should be the focus and all action plans should be based on that.

**Mr. Debi Goenka, Conservation Action Trust (CAT)** expressed his pleasure at being at the meeting and mentioned that a lot of work had been done by this group. He noted that though CAT has worked on CRZ and mangrove protection, there is a need to focus on whale shark fishing and shark finning. He noted that fishermen communities' livelihoods are dependent on sustainable fisheries. Hence, if we put our heart and soul into this work, we can achieve a good set of management principles that will benefit everyone.

**Dr. E. Vivekanandan, Scientist Emeritus, CMFRI** said that the state of Gujarat is important for sharks by volume of landings; since Gujarat has been declared the 4<sup>th</sup> largest shark landing state in India. The outcomes from such meetings are important for NPOA considerations. He said that

CMFRI has released a guideline on the preparation of the NPOA (*Copies of these were made available to the chief dignitaries*). India is the 2<sup>nd</sup> largest shark catching nation and hence, India's stand on shark conservation and management has immense global impact. Focus should also be on sustaining fisheries. Women have a role to play in marketing of fishing resources.

Gopal Bhai, Head, Akhil Gujarati Fishermen Association said that shark fisheries have gone down; landings are not what they used to be 10-20 yrs ago. Fishermen are hopeful to learn what measures they can take forward to their own fishing practices and fishing villages for a shark friendly fishing.

**Shri Shyamal Tikadar, CCF, Gujarat Marine National Park** said that he was not aware of many shark issues, but hoped to learn. The Marine National Park's role is to safeguard the production/harvesting of products from the park. He noted that while shark fishing is an economical activity, we are trying to engage in legislation on sharks. Similar actions were taken for tigers and sharks are, after all, the tigers of the marine eco-system. He appealed to the participants to participate and requested that all attendees – whether a fisherman, a scientist, an exporter, an NGO or a social organization, should collaborate on legislation that is upheld even by the next generation.

The Inaugural session was followed by a short tea break, wherein guests interacted with one another and the technical sessions

## **II. TECHNICAL SESSIONS:**

The technical sessions covered a range of talks from scientists of CMFRI on shark populations in Gujarat. The participants were encouraged to ask questions to each speaker so that the sessions could be more interactive.

### **A. An overview of Shark Fisheries of Gujarat - Swati Priyanka, Scientist, CMFRI**

The Main points of Dr. Priyanka's talk are as follows:

- In Gujarat, all parts of sharks are used. In 1992, 50-70 thousand tones of sharks were landed globally. Today, there is 64% reduction in the shark landings. This decrease in shark landings in today a global concern. Gujarat contributed 35.61% (avg) of shark landing to total shark landing of India.
- In Gujarat, 70 species of sharks are recorded; of which 12 are abundant.
- The presentation gave the clear cut idea on the species availability, catch and effort details, month wise and gear wise catch, season of abundance, biology of some selected species, their reproduction strategy, number of pups, and the fishing grounds of sharks in Gujarat. The presentation also found out the problems and research gaps and possible management measures to be followed for the shark conservation
- CMFRI conducts regular RSAs (Rapid Stock Assessments) of sharks and it shows the decline status of the stocks for sharks, skates and rays from Gujarat coast. It has found that pre- and post-monsoon, shark catch is good. Sharks seem to be caught highest in gill nets while rays are trapped best in trawls.
- Majority of shark catch consists of pregnant sharks. Hence, to resolve this, the government should promote studies on identification of breeding areas and the time of breeding and consider regulatory measures like area and seasonal closures for shark fishing, gear restrictions etc.

The questions/suggestions raised by the participants to this talk are as follows:

1. By the CCF:

a. If 70 species of sharks are seen in Gujarat, which are resident and which are deep sea? Do we know migratory patterns?

*CMFRI responded saying they have developed a pictorial guide of sharks landed in the region; but do not know the local names. Only fishermen know the local names and we need to work with them to develop this knowledge. Some fishermen also responded saying that they face problems with permissions for deep sea fishing. Fishermen offered to work with CMFRI if the scientists also helped them with information on where all sharks would be best found or which species would yield best commercial value.*

b. Where are the breeding grounds? What are the breeding seasons?

*CMFRI responded saying that the breeding seasons are coinciding the monsoon. They said that they have often tried to work with local fishermen to study the breeding grounds or get data from them, but this has not worked out so far as desired.*

c. All data points to reduction of landing. But, why this is not correlated to actual growth of fishing boats?

*CMFRI responded saying that Shark fishing is not targeted and it forms bycatch in gillnets or trawls in Gujarat. Targeted shark fishing is done by Thoothor fishermen. The number of fishing crafts is increasing every year and there is consequent reduction in catch per unit effort. .*

d. The CCF also said that the focus of the discussions have to be made more specific. He said that so far, sharks are only being looked at as a commodity with commercial value. There has to be a balanced view and approach should be on sustainable harvest; maintaining demand as well as shark populations. He suggested that scientists should help create these systems. Neither a total ban nor a fully permissible trawling system is the solution – a middle ground approach is required.

2. By Mr. Debi Goeka:

a. Why do the fishermen needed permission for deep sea fishing?

*Fishermen responded saying that they are often not given permission to go for deep sea fishing beyond 12 nautical miles. They are also asked to take an engineer which shoots up their costs tremendously. They are keen to give more power to foreign trawlers. Diesel rates are reduced in international waters, but not for Indian fishermen. They said that no separate fisheries ministry has been made and allocation at the centre is also not adequate. Recommendations made by various committees on fisheries have been biased and do not value traditional knowledge of fishermen.*

b. What is the control being exercised on foreign trawlers?

*Asstnt. Commissioner Rawat responded that no data so far has been given to the Coast Guard about illegal fishing by foreign trawlers. They are only provided a list of banned and permitted licenses. He also said that the fishermen need to be educated on the current level of population status of shark species so that they can make an effort to not catch these species.*

**Shark species identification: Potential role of CMFRI to support fishermen by K. Mohammedkoya, Scientist & SiC, CMFRI RC, Veraval.** The main points of Dr. Koya's talk are as follows:

- Taxonomy is a very important area in conservation as the conservation approaches vary with species.
- The CMFRI has adequate expertise in identification of marine organisms including the sharks and conventional and biotechnological tools are used in species identification/confirmation
- CMFRI has been working on preparation of species identification guides (which include confirmation of species from body parts like teeth, gills, fins, meat, oil etc Species identification guides on many fish groups like sharks are published from time to time. Publications like brochure, handouts, posters, text books etc are available even in vernacular languages.
- Fishery and area specific management advisories on sustainable fisheries for shark and other fishery are released by CMFRI regularly.
- The CMFRI has recently brought out the Guidelines for preparation of the National Plan of Action (NPOA) for sharks of India.
- The CMFRI has been asked by the Govt. of India to undertake work on the NDF (non-detrimental finding) for the shark species The CMFRI has taken up research projects on mapping of fishery resources including sharks of different regions on GIS platform which would indicate the breeding, nursery and feeding grounds and species density in various grounds etc

After Dr. Koya's talk, Dr. E. Vivekanandan gave more inputs on the shark management /conservation work being done by CMFRI. These are as follows:

- CMFRI has some specialized information on sharks which includes the species that are available and the quantity of catch. But, the biological information is limited to few species. Breeding seasons, breeding grounds and feeding patterns need to be understood for all the species.
- Fishermen associations need to come together with CMFRI to facilitate collection of thorough data on such areas.
- Entire tie-up needs to be formalized. At every meeting of NMCSI held so far, this has been aired. But, now this needs to be discussed on actual grounds.
- CMFRI as of now has not been asked to work on NPOA. It can provide support to BOBP-IGO which has been given the mandate to work on this document. However, a guideline for the preparation of NPOA has been prepared by the CMFRI.

The questions/suggestions raised by the participants to this talk are as follows:

1. By fishermen:

a. What are the ways in which sharks are killed other than fishing?

*Dr. Koya responded saying that sharks die due to natural mortality including predation (especially at early stages of development). Coastal pollution adds to the natural mortality and causes the fishes to move far from the shore. Fishermen then said that some sharks migrate and some are native; if India does not catch them, some other nation will. Fishermen want a more managed approach. They are keen that ban on shark fishing be done only for a set period and thereafter, all species of sharks must be allowed to be fished. The CCF responded to this saying that regulations are already set against the fishing of certain shark species.*

*The fishermen feel that NGOs are over-stating conservation problems of sharks. Fishermen said they focus on all the species which can be harvested for maximum profit and do not want focus on only one species. The CCF then suggested that better than the government trying to manage them, the fishermen should practice self-governance (i.e. set standards for good fishing practices that support sustainable practices).*

- b. Fishermen then stated that if sharks are not at all caught, all lower species will be reduced by sharks. Hence, if fishermen are not allowed to fish, there will be an issue of over-population. Many of the attendees responded saying that there has to be a balanced approach to the matter. NGO representatives added that they are not focusing only on the animals, but also on concerns of humans.
- c. Fishermen further suggested that they do not know which species are banned. Hence, government agencies like MPEDA or the local CCFs should take up these activities with them. NGOs can also supply information and this can be taken to the grassroot level. The fishermen also spoke about the blanket ban on shark fin export and said that they had found out from various sources that shark fin export is still continuing. Mr. Vincent Jain from AD SGAF said that they had done some research to collate the local, scientific and English names of sharks commonly landed in their region. However, this needed to be developed more extensively with help from the government or NGOs.

## **B. Inputs by fishermen groups:**

- a. Gopal Bhai, Head, Akhil Gujarati Fishermen Association: He said that many policies have been issued on shark fishing. However, there is no clarity on actual species being caught and the banned species. There have been recent incidents of whale shark catch in the region. The Coast Guard must be educated on identification of the banned species. Fishermen incur huge costs to catch shark and get huge rewards from catching various sharks. Hence, fishermen are keen that NGOs consider removing the ban on catching of whale sharks as this has drastically affected the income of many fishermen. It has immense effect on the future of fishermen.
- b. Veljibhai Masani, President, Mangrol Fishermen Association: : He said that fishermen will always express their right to livelihood through fishing. But, they need to also respect scientific findings. It is the scientists' responsibility to help them understand which species can continue to be fished. Fishermen are not educated and want all of this information to be disseminated by the Government. Many years ago, sharks were huge in size and number. But, today sharks are decreasing in size as well as number. The Vedas also talk about our greed being a factor that affects later generations and this needs to be considered strongly. Hence, by overfishing, fishermen are going to affect our own sources of livelihood.

As sons of fishermen, the fishermen today must be allowed to their rights to livelihoods. But, at the same time they have to care about the species that have declined. They must engage in protection of species as recommended by scientists. Thoughts on bans must be aligned with actions already being taken by fishermen. For example, fishermen in this region took actions to stop juvenile ribbon fish catching during the pre-monsoon and monsoon and saw increase in the size of these fish on subsequent fishing trips.

c. Tulsi Bhai: He said that he agreed with Veljibhai. He said that fishermen were keen to increase the fishing ban themselves and took action to reduce fishing seasons. However, support from the Government is needed for continuing action. Whale shark has no export value and fishermen have fully supported the ban on whale sharks. Further, fishermen in Gujarat do not undertake targeted shark fishing. They have benefitted from self governance and increased ban period.

Breeding periods need to be respected and this does help increase size of the catch. Increase in size of the fish also benefits fishermen. Gujarat fishermen say that in the old days, the trawling also resulted in lots of shark catch; but that is no longer the case today.

d. Kamlesh Fofandi: Both gulfs around India need to be conserved and these are breeding grounds. Efforts need to be made to reduce industrial activity in these areas so that fish can breed actively. During drought, farmers are compensated. Similarly, fishermen need to be compensated for the fishing ban period properly.

e. Jose Bibin, President, Fishermen Cooperative Society, Thoothoor. He said that it is important to understand which species are banned and see their status in India. Catching sharks is often misunderstood as policemen and fisheries officers say all species are “banned”. Hunting and fishing are very different activities. Eg: Fish are hunted as part of sport fishing and even for finning. In India, we use all parts of sharks and not only the fins. There is a difference in cultural usage of the species in India.

Fin export is banned and this leads to indirect loss of value of shark catch. Only traders benefit from such things as they are able to buy the sharks at the lowest costs possible. Thoothoor fishermen use hook and long lines – this does not affect smaller sizes sharks. Indian fishermen are given trouble when moving between various ports and often the fins are disproportionate to catch value.

Policy makers are removed from the real problems of livelihoods of fishermen and conditions of fishing. Compensation of boats being lost to rains/floods is not done by Government for fishermen. Even families of fishermen who die at sea are not compensated; this is mainly because there is no unity among fishermen. These points need to be aired in proper forums.

In Tamil Nadu, all MPs are made from other communities and fishermen are giving full support for these politicians; but they do not give the fishermen any support afterwards. We fishermen want permissions for deep sea fishing.

### **C. Remarks by CCF:**

- Fishermen are not agriculturists. They are taking from nature – but nature is now being over-harvested.
- The new view is that fishermen can become “growers of sea-life”. Fish farming can be done and these fish can be owned by the fishermen and exploited in the way that they wish.

- If the profession of fishing has to continue, there needs to be a more forward thinking approach. The government must look at supporting development of skill to enable fishermen to farm fish. There is tremendous technology now available to do this.
- Nature can only give so much and policies are aimed at extending life of nature and natural resources. Hence, whatever policy is made, it should be made with a balanced view. Scientists must play the important role of keeping the middle ground in such activities.
- Countries such as Japan, Taiwan and China are already getting into marine aquaculture. CMFRI has the capability and the technological know-how to also do this in India. Our seas have been over-exhausted or will soon be totally exhausted. This point must be kept in mind and change must be brought about.
- The Gujarat government is keen to engage fishermen in captive / cage farming.

### **III. Group Discussions:**

Following the above discussions, the meeting was adjourned for lunch. Post the lunch break, the entire audience was divided into three groups. The members of each group were encouraged to come up with pertinent suggestions for conservation of sharks and betterment of fishermen.

The main points suggested by each group are as follows:

#### **1. Data-collection and research:**

- a. For data-collection: Focus on shark fisheries. Fishermen are ready to directly interact with scientists and scientific community. Surveys can be done using scientific pre-structured questionnaire so that the scientists can collect good data from fishermen. Community leaders should encourage and ensure cooperation with researchers.
- b. For Research: Methods can be worked out to provide satellite fish finding assistance to fishermen. Scientists should work on a 'shark-excluding device', similar to TEDs. Scientists should design the most suitable fishing gear for different species so that sharks, turtles etc can easily be avoided. Research should also focus on varied fish habitats such as mangroves. Further, research must be done to study effect of effluents and pollutants on shark populations.
- c. Overall: The middlemen should be excluded with the help of MPEDA as this will help fishermen sell their catch at more competitive rates. There must be proper utilization of money made by the fishing sector; it must be invested back for the fishermen themselves. Line fishing and purse-seine methods of fishing should be banned. Hence, ideology should be to ban harmful fishing methods and not fishing of specific species. Proper compensation must be given for fishermen during the ban period and all bans on fishing should be based on thorough scientific study.

#### **2. Policy making:**

- a. Adequate steps must be taken to compensate fishermen for net destruction.
- b. Research should be done to find out if the ban on Whale shark has benefitted the species and accordingly, this ban should be reviewed.
- c. Pollution Control Board must focus on pollution and hot water effluents in marine waters.

- d. Mangroves must be protected.
- e. Ban on shark fishing should be convergent with fishing bans in other countries.
- f. Coast Guard must be made more responsible for monitoring illegal fishing activities.
- g. NPOA must be completed at the earliest possible.
- h. The Government should consider declaring some regions as marine protected areas.

### 3. Coordination activities

- a. Coordination for fisheries sector has to be done among various entities. These include government agencies (such as Department of Fisheries, MPEDA etc.), registered NGOs and other key stakeholders such as fishermen groups, fishermen cooperatives etc.
- b. The key issues are that data on fisheries and fish is inadequate. More research has to be done; better rules and regulations need to be formulated. Fishermen must be given insurance and fishermen cooperatives must be given more power. There must be proper committees to coordinate all of these activities.
- c. Proper training/ awareness programs need to be undertaken. Radio, TV and other media channels need to be engaged in spreading awareness. Exhibitions, talks in schools, melas and other awareness rallies can also be used for this.
- d. All organizations can come forward to form nodal bodies to coordinate awareness in vernacular languages in all states. Also, state level fishermen cooperatives should be formed.
- e. All information on protected species should be given out in vernacular language. Whale shark is already declared as state fish of Gujarat.
- f. Fishermen in Gujarat can be trained on long-line fishing by fishermen from Thoothor.
- g. Government must enable training of fishermen on seamanship and navigation which will enable them to qualify for deep-sea fishing permits.

### IV. Concluding session

**Final Remarks** were delivered by Dr. Vivekanandan. Taking note of all the deliberations that had happened so far, Dr. Vivekanandan listed a quick summary of the most pertinent points that needed attention going forward. These are as follows:

- a. Data on all biological aspects of sharks must be focused on. This most importantly includes breeding seasons and breeding grounds.
- b. All data must be reported species /group wise.



- c. Data must be collected on the various shark-based products and their trade value.
- d. CMFRI should focus much more on sharks as a species
- e. There should be efforts made to provide real-time data on status of protected species.
- f. Single shark management plan is not useful. There needs to be a more multi-pronged approach for different species.
- g. All measures must be reviewed for practicality and acceptability by stakeholders and it must be ensured that it benefits the community as a whole.
- h. AD SGAF is in an ideal place to implement its own model of shark conservation. Instead of depending on the Government, they should come out with their own plan for oceanic shark management. They should develop a catch quota system. Such measures of self management if implemented would be a good example for others to follow.
- i. The finalization of the NPOA needs to be prioritized at all costs.
- j. Climate change issues need to be also factored into shark population management and focused research needs to be done. Oceanic temperature and its effect on marine fisheries is of concern and must be studied. Existing climate change adaptation plans need to be adopted for marine resource management. All of these actions need to be mainstreamed.

**Vote of thanks and closing remarks** were delivered by Mr. Vincent Jain, AD SGAF. Mr. Jain made a due note of all the discussions that took place during this 6<sup>th</sup> meeting of the NMCSI. He thanked everyone for taking the activity seriously and coming up with good suggestions. He said that climate change concerns can be added to the next meeting's agenda. He thanked all the supporters and core team members of the NMCSI. He also said the people of Gujarat is dedicating a day as 'Whale Shark Day' and why cant we also celebrate the Day in other states. It may be the Gujarat Declaration. He once again reminded everyone that the idea of these meetings was to arrive at a thoroughly implementable plan for the conservation of sharks.