



Participatory conservation of the Indian Pangolin (*Manis crassicaudata*) in coastal Maharashtra, India".

SNM activities (Dec 2015 to October 2018)



Introduction

Sahyadri Nisarga Mitra (SNM) was established in 1992 in the Konkan region of Maharashtra, India. Since then we have been working in the field of biodiversity conservation. Over the last 26 years, we have conducted projects on environmental education, biodiversity research, and conservation action Projects. Please check our website <http://snmcpn.org>

Trigger of Pangolin conservation

We are aware that Pangolin is the most trafficked mammal in the world. It is an endangered species as per the IUCN red data book. The illegal trafficking of its scales, meat and even juveniles runs into millions of dollars and hundreds of ton by volume. In 2015, we realized that the roots of the illegal trade of Pangolins have spread to our area as well. In July 2015, 44-kilogram Pangolin scales were seized. An average adult Indian Pangolin yields 1.5-kilogram scales. That means, at least 30 Pangolins were hunted. There were three more incidents that followed the July 2015 incident. We realized the gravity of the situation and decided to take up the challenging task of protection and conservation of Indian Pangolin in our area – coastal Maharashtra.



Threats to Pangolin in Konkan, India

Coastal Maharashtra is commonly referred to as Konkan region. The major threat to Indian Pangolin in the Konkan region is illegal hunting. In the past, it was limited to local consumption. However, in the last few years, hunting has increased manifold due to the global demand and the enormous money involved in it. In our area, it seems that, persons involved in national and international trade contact the local persons who kill the Pangolin for the money. Other significant threats to Indian Pangolin are habitat loss and the lack of awareness in the local communities, about its decreasing population.



Fig: illegal hunting of Indian Pangolin in Konkan region

SNM activities

SNM has started its Pangolin conservation efforts in January 2016. From that day it has been working for pangolin conservation till today. Our efforts are on two lines. One is a determination of the status of Pangolin and the other is intensive awareness generation on saving Pangolin in the Konkan region.

At first, due to limited resources, we have focused on conservation of Indian Pangolin in Chiplun block, an area of about 1100 sq. km. It has 165 revenue villages. Then we covered Guhagar, Khed, Dapoli, Mandangad & many more to go. We have started to spread our work in the entire Konkan region.

Status Assessment

To know the status of Pangolin in Konkan, as a start-up activity, an extensive qualitative survey was conducted in Chiplun & Khed. A few questions were asked to individuals from each village.

1) A questionnaire survey in Chiplun Block

We have interviewed 800 individuals from 165 villages to document the latest reported presence of Pangolin in these villages.



Fig: interview of local person.

2) Distribution map

Based on the survey information, a qualitative distribution map of Pangolin in Chiplun block has been prepared. Interaction with the villagers helped also to identify who would help us in the long-term conservation of Indian Pangolin.

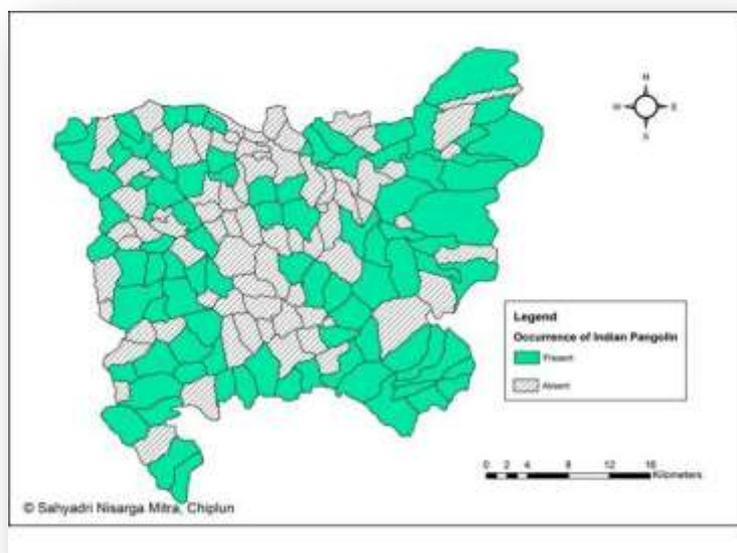


Fig: Qualitative distribution map of Pangolin in Chiplun block.

3) Khed Taluka

We have started survey in Khed Block & were completed 45 villages in it.

Day and night patrolling

Taking lead from the survey, we have been conducting day and night patrolling in selected villages which had reported to have an occurrence of Indian Pangolin. During the patrolling, the local informants helped us in locating Pangolin burrows.



Fig: Day and night patrolling for pangolin survey.

Trap cameras Survey

Locating the burrows led to setting up trap cameras to monitor them. So far this has proved to be an effective means in the status assessment of Pangolin. We have 10 Cuddeback and Spy point trail cameras. In the last 2 years, we have deployed 30 trap cameras in different locations of different villages. Cameras were deployed for 3217 days. Out of which, only 52 times have captured live Pangolin activity. Thus, the success rate is just 1.62%.

It is said that, and now when we have the first-hand experience, we can say that it is very difficult to observe Pangolin in its natural set up. It is the main challenge in status assessment and consequently determining characteristics of its habitat, feeding habits, and food base. All these are important to chalk out conservation strategy. We are continuously doing the trail camera documentation.



Fig: Setting up the trap cameras for monitor the Pangolin activity and burrows.

Trap cameras in action



Fig: indian pangolin trapped in cameras.

Results of Trap Cameras

1.	Total camera days	3217 Days
2.	No. of time pangolin sighted	52 Times
3.	No. of active nests	13 Active nests
4.	Total board displayed	90 boards

Scat analysis

In order to understand the diet of the Pangolins in our area, Pangolin scat samples were collected. These samples were dried and stored as they should be for the identification. We got the samples identified from an Ant expert namely Dr. Himender Bharti Member of IUCN (Species Survival Commission South Asian Invertebrate Specialist Group and CEM - Commission on Ecosystem Management)(2017-2020). The samples had five ant species.



Fig: Scat analysis for understand the diet of the Pangolins in our area

Awareness Generation

World pangolin Day

We are not leaving any stone unturned to create awareness generation on Pangolin. We have tried to harness all possible means for it. We have celebrated International Pangolin day in 2016, 2017 & 2018 as well. The Pangolin Day is celebrated every year on the third Saturday of the February month. Sarpanch, Police Patil, were invited from all villages as well as officers from forest department & police department also attended the workshop. Forest officers gave the information about laws related to pangolin poaching & trafficking. Various competitions were organized for school students in those villages. Bags having a message of 'Save Pangolin' were distributed in workshops. Rally of school students was organized on that day. People from Villages like Each Villages Sarpanch (Village head), Police Patil (Representative of Police in the Village) and President Tanta Mukti Committee (committee for dispute-free village), police team, Forest Department team, and Sahyadri Nisarg Mitra had taken Oath to protect Indian pangolin and habitat of pangolin.

- 1) 5th World Pangolin Day - On 20th February, 2016, 5th world pangolin day was celebrated in Chiplun. A district level sensitization workshop was organized. More than 200 participants from 164 villages attended this workshop.



- 2) 6th World Pangolin Day - 6th world pangolin day was celebrated in a village named Dugave on 19th February 2017. A workshop was organized & 250 people from 122 villages attended the workshop.



- 3) 7th World Pangolin Day - 7th world pangolin day was celebrated at 'Omkar Mangal Karyalay' in Chikhali, Guhagar. The workshop was conducted on February 17th, the third Saturday of February 2018 .



Workshops

We have also conducted workshops for pangolin conservation other than world pangolin day. Different workshops were organized in different places. All workshops were supported by Forest department & Police. All the programs in the workshops were just like world pangolin day.

- 1) Khed - On 7th March 2017 workshop was organized in Aniket Shopping Center Hall, Khed. Officers from the forest department & police department were present & 200 people from 215 villages in khed taluka were present in this workshop.



- 2) Dapoli - Workshop and awareness program was conducted on 2nd of May 2018 at Shinde Guruji Hall, Lal Katta, Dapoli town in Ratnagiri district, Mandangad, Maharashtra. Police Patil, Sarpanch, Tantamukti Adhyksh from 120 villages were present for the workshop.



3) Mandangad - A workshop was conducted on 6th October 2018 on the occasion of Wildlife week (1st October to 7th October). The workshop was organized in Savitribai Paranjape Hall, Dhutroli. 101 people were present from 109 villages. School & College students were also present.



Meeting with community leaders of a Tribble community

Meeting with community leaders of different villages was organized for Katkari Community. In these meetings community members took the oath to save pangolins. The community members have rich traditional knowledge about Pangolin. The need to conserve Pangolin was put forth in this meeting. It is likely that some members of this traditional hunting community are involved in poaching of Pangolin for the international trade. Therefore these meetings were important. As a follow up of this meeting, we continue the interaction with these important stakeholders in Pangolin conservation through one to one meetings with the community members.

1) Meeting at Ketki, Tal. Chiplun -

A meeting with Katkari community was organized in June 2016. Katkari belongs to tribal community. Around 50 community members attended this meeting.



2) Meeting at Chiplun -

A meeting was organized on 9th September 2018 with community members in Brahman Sahayyak Sabhagruh at Chiplun. This meeting was attended by all leaders & others member of community. Alternate livelihood options were discussed in the meeting, decided to start honey bee farming & collection of honey.



Awareness Lectures

A lecture was given on Indian Pangolin by Mr. Bhau Katdare on 5th May 2018 at Wildlife Conservation – Story and Soreness organized by Maharashtra Seva Sangh, Giritra Vibhag in Mulund (West), Mumbai, Maharashtra.

Awareness lectures held in Aamdus High school and United High school, Chiplun and giving the information about Indian Pangolin and their role in the environment as well as threats about Indian pangolin in their region. This session helps to create curiosity and Knowledge about wildlife in young mind and most important is spread awareness to protect nature throughout the region.

Sahyadri Nisarg Mitra has attended Gramsabha meetings and interaction with local communities to spread the importance of conservation of Indian Pangolin in Kasar Kolvan (sangmeshwar), Choravane (Khed), Bamnoli (Chiplun), Dugave (Guhagar), Anjarle (Dapoli)





Awareness through Pamphlets and Banners

To create awareness for the conservation of Indian pangolin among every village in konkan, the information about Indian pangolin printed on pamphlets and banners. The pamphlets are distributed each and every village to spread awareness in local villagers. The banners also displayed at important places like bus stand, village entrance etc.

Awareness letters were sent with a pamphlet to Sarpanch & Police Patil to make them aware about pangolin & asked them to inform the villagers about the same. These letters were sent to 785 villages from Chiplun, Khed, Guhagar, Mandangad & Dapoli Taluka in district Ratnagiri.



Fig: Awareness trough pamphlets and banners.

International Mammological Congress, Perth, Western Australia

The institution got a chance to make a presentation in front of the scientists.

The Sahyadri Nisarga Mitra presented their work about Indian pangolins and also other important projects through the video presentation in front of the scientists at this time.



Interview on AIR

All India Radio (AIR) Green Dream program, as an acknowledgement of nature conservation and Indian pangolin conservation-protection campaign.

President Mr. Bhau Katdare gives an interview at this time.



Rally, essay competition and Cricket tournament

In each world pangolin day we are conducting an awareness rally, essay competition in schools and Cricket competition. These activities were held in a cluster of villages in which Pangolin activity has recently been recorded in the trail camera.

School children and community members conducted a rally with banners and placards having messages in the village.

A middle school level essay competition on Indian Pangolin was conducted.

Cricket is the most popular sports in India. A village cluster level Cricket competition named 'Pangolin Trophy' was conducted. Total 11 teams had participated in the tournament. The winner team was presented a paper Mache trophy of Pangolin and some cash reward.



Fig: Awareness rally, essay competition and cricket tournament on occasion of world pangolin day.

Pangolin in the middle school curriculum

As mentioned earlier, we are leaving no stone unturned to create awareness on Pangolin and its protection. A unique opportunity had come our way. Our president Mr. Bhau Katdare was asked to contribute a chapter for a text book of middle school curriculum. This opportunity was immediately grabbed. As a result, now there is a chapter 'Baby Pangolin's Night out'. The text book has estimated outreach about 1.6 million students in Maharashtra. Each year it will reach to new 1.6 million students.



Rescue

We have rescued a Pangolin stuck in fishing net from Maldoli Tal Chiplun, Dist Ratnagiri, Maharashtra. A farmer put old fishing nets to protect his poultry birds in which pangolin was trapped. Our volunteers rushed and rescued it. Pangolin was fit as per vet hence released in near forest.



Thank You