

**Minutes of the 1st quarterly review meeting of the Inventorization of Biodiversity Resources of Tripura under the Tripura JICA Project held in the conference hall of the College of Fisheries, Central Agricultural University, Lembucherra, Agartala held on the 17<sup>th</sup> November,2009 at 10.30 A.M.**

The first quarterly review meeting to assess the progress made in execution of the job of inventorization of the biodiversity resources of Tripura was held in the conference hall of the College of Fisheries of the Central Agricultural University at Lembucherra, Agartala on the 17<sup>th</sup> November, 2009 at 10.30 A.M under the chairmanship of the Chief Wildlife Warden, Tripura who is also the chairman of the Core Committee. The list of the Members & participants present is appended at Annexure I. Leave of absence was granted to Dr. B K Agarwala, Professor & head of the Zoology Department of Tripura University and member of the Committee who could not attend the meeting.

2. Professor J.R Dhanze, Dean of College of Fisheries & Member of the Core Committee welcomed the Members, participants present and exhorted the Project Fellows and their associates who are carrying out the inventorization works in the field. He further expressed that the work assigned shall be carried out by every member in a comprehensible manner and with transparency. The Director (A&F) welcomed the Principal Investigators of the Member-Institutions, project fellows and participants from the media who were present in the review meeting. Dr. A. M. Dixit Biodiversity Specialist called upon the team members to follow proper methodology so that the approach to the work is meaningful. The results be arrived at after thorough interaction and each group shall keep records of the schedule followed for seasonal data collection and hotspots was his remarks.

3. The Research Associates, Project Fellows of the concerned discipline through power point presented the status of progress of their respective works, findings and critical areas requiring special focus for completing the task, which were reviewed in the meeting. The first presentation was by Ms. Soma Majumder, Project Fellow of the College of Fisheries. The following issues came up for elucidation and action during question and answer session which was held after completion of presentation,

- i) More focus required on describing methodology.
- ii) Frequency of attempts for catching the resources to be recorded.
- iii) Whether or not different kinds of gear make difference in the catches?
- iv) The relation between time devoted for work and yield.
- v) Was there relative abundance of some species?
- vi) Is different netting fetches different recordings?
- vii) Was there any interaction with the fishermen?
- viii) Have the group found any species in abundance out of 563 specimens?
- ix) Were all the species found during catches are common in all the spots?
- x) Whether or not the species found were common or rare?
- xi) In the column for recording the observations, disturbances likely to affect the growth, population viz. release/ presence of harmful chemicals, kitchen wastes and chemical effluent etc. are required to be entered.
- xii) The report shall include as to which fish is considered to be more palatable and/or in demand by people and/or not eaten by the people at all?
- xiii) Which fish has more value from conservation point of view, rankings of the fishes according to the value, if new records are found and whether fishes found are commercially important or not?
- xiv) List of ornamental fishes which are to be nurtured as they have commercial value.
- xv) The group may identify the locations where conservation efforts are to be initiated on priority basis from the view of pollution control and controlling disturbances out of the 5 spots covered.
- xvi) The relation between the quality of water and the species of fish are related?
- xvii) Attempts on percentage basis where/when no fish could be caught?

- xviii) What was the catch benefit effort like in one hour how many catches?
- xix) To work out the cost required for the over night fishing.
- xx) What may be cause for the depletion of fish?
- xxi) Was there any awareness work done during the survey?
- xxii) How many places are visited by P.I?

Prof. Dhanze elaborated the issues after presentation. They informed that the result would be different if different gears and different nettings are used. The team followed 30–40 catches per spot in the morning and in the evening. In 30–40 percent catches they did not find any fish. The P.I visited Rudrasagar, Howrah, Hurijala and Muhuri during field identification works. The P.I of the Fish team informed that the deterioration of the quality of water resources, reduction in depth of waterbody due to siltation, fragmentation & reduction in size of the water bodies are the causes of depletion of the fish resources. Enhancement of awareness was attempted by way of telling people not to contaminate the water source, not to throw kitchen wastes, not to release chemical effluents etc. Over fishing is also another reason of depletion of resources and people are made aware of the predicament.

4. The second presentation was by Ms. Swapna, Research Associate of Mammal team and the Project Coordinator. It is found after her presentation that,

- i) Intensity of disturbances along with the data was found to have been recorded.
- ii) Despite disturbances, 61 individuals could be seen out of 7 sightings and Indian Muntjac was sighted once in Killa.
- iii) Conflicts within the animals are frequently reported.
- iv) Out of 118 encounters 67 were from primary habitat and mature forest.
- v) High potential areas came out to be Garjee, Harbatali, Kalasi, Malambari, Hurijala and Killa. Killa and Malambari could be considered from conservation point of view.

- vi) Hurijala is not suitable for conservation of mammals as there is ANR forest of Sal and also Jatropha cultivation seen.
- vii) Collection of data through Sound trapping, Camera trapping etc for the survey of rodents shall be put in place.
- viii) The survey work will be narrowed down for the rodents' survey in phase II of the Project.
- ix) Hoary bellied Squirrel was encountered in primary and mature forest of Killa. The species was found in other places also.
- x) The common species found among all the sites was Phariery's Langur.
- xi) For aquatic mammals special effort is required and it is to be done in small river system, small streams and in small ponds.
- xii) Mapping exercises shall be carried out in two places which are considered to be best for conservation.
- xiii) 9 spots were targeted but 6 are achieved due to indisposition of the Research fellows.
- xiv) Inventorization work upto third spot i.e Harbatali full team worked but after that upto Killa R.A, one P.F, 2 F.As worked. And in Killa only single effort by the R.A.
- xv) P.I visited 3 spots viz. Malambari, Killa and Garjee.
- xvi) Secondary data collected was found to be good. Out of secondary data 11 species, 1 order, 3 families were found.
- xvii) Jackals, foxes and wild pigs are apprehended to be wiped out due to reckless hunting for extraction of fat which is considered to have medicinal (?) properties.
- xviii) Interesting findings: Hunting of Muntjack, Civets, porcupine for spines are recorded. Sambar horns were found in a house however hunted long back.
- xix) Training of the Forest Department staff was considered necessary.
- xx) Plants and Mammal teams worked together during survey in Malambari, Harbatali and Killa.

5. The next was Butterfly team to present their findings,

It was found that the Simple transect method was not helping to catch the butterflies, Methodology applied was line transect, 2 transects were set in each spot.

- i) Selection of transect was set by asking the Beat officers according to the appearance of the butterfly in each place and based on local forestry.
  - ii) Uncommon and new, hitherto not reported species were found during the survey in deep forest.
  - iii) The team was advised to cover different gradient and data should support the findings.
  - iv) To encounter the species richness, abundance, relative abundance vis-a-vis the habitat plan is to be made.
  - v) In case of shrubs and herbs transect length was 1 km.
  - vi) All the information is to be recorded in a presentable way and it should be displayed quarterly. Otherwise after one year it will be difficult to handle such huge data.
  - vii) Unique features or distinguishing features of butterfly to be focused.
  - viii) Conservation activities may be taken up in Betlangchip, Harbatali and in Baramura.
  - ix) The team was informed to submit the soft and hard copy of the work.
6. The fourth presentation was given by Sh. Deepak. P.F of Bird team.
- i) The bird count method is suitable for large area but in case of small area transect method is preferable.
  - ii) Shannon Wiener Index is suitable for measuring density as well as quality.
  - iii) In case of terrestrial birds 20 meter radius in a constant manner was followed.
  - iv) In case of Ratiabil Lake at Sepahijala depth and height of the lake was found to be good and also have good growth of aquatic plants

but birds are unable to prey and so come less in no. in the waterbody.

- v) The eggs of Malard duck were collected and hatched by local community.
- vi) Malambari is excellent as it is less disturbed; less people and good habitat still persist.
- vii) In Baishnabpur birds were seen to move towards Bangladesh during evening and coming back to India again for feeding and roosting.
- viii) B.S.F also goes to the forest for fire wood collection and also for hunting.
- ix) Any extra findings like any fish collected during wetland survey.
- x) In Malambari, Harbatali and Baishnabpur no species could be found.
- xi) In winter repeated studies shall be taken up.
- xii) Video clippings, photographs to be taken .
- xiii) The target was 10 spots to be completed and only 5 spots were covered.
- xiv) One P.F left the Bird team and also one F.A is left.
- xv) No work could be carried out between 22<sup>nd</sup> September,09 and 3<sup>rd</sup> October,09.
- xvi) Presentation carries half of the photographs taken.
- xvii) 47 new records were found this time.
- xviii) Awareness to be carried out targetting the people who are involved in hunting by spending a bit more time with the communities ,also by showing them the photographs.

7. The fifth presentation was given by Sh. Himanshu Das ,R.A of botany Team.

- i) The team has to explain how the teams carried out the survey to consider abundance, occasional in terms of presence.
- ii) Analysis part is found to be very weak, spatial comparison is missing.
- iii) In case of plants "Associate" was not found to be used & described.

- iv) Link of the anthropogenic factor with the plants and link between the plants and the mammals was not established. Vegetation mentioning local name, abundance are to be recorded.
- v) Data should be scientifically thought and derived.
- vi) Places rich in diversity are to be mentioned.
- vii) Link the plants which are liked by the mammals and the birds.
- viii) The team was advised to retry two spots for analyzing the data, to increase sample frequency for coming to definite conclusion.
- ix) The team was advised to re-orient the findings within next 10 days' time for further showing the findings.

8. The sixth or last presentation was given by Sh. Pradip Barman ,P.F of Socio-economic survey group.

- i) No generalized information is needed. Community and their efforts towards conservation is to be correlated.
- ii) In case of Uttarmura the team was requested to revise the data.
- iii) Revised data from the 3 spots are to be submitted.
- iv) The data was not finalized & so the work has to be done again.
- v) Statistical data recorded was considered to be erroneous.

Chairman of the Core Committee thanked Dean of College of Fisheries and his faculty members for sparing the facility and for hosting the review meeting of the Project. He further requested all survey team members to strive for enhancing the quality of the task assigned so that it reflects the true state of the biodiversity resources. The groups should explain whether or not the scientific methodology is difficult to be practiced in the field. The group should collect enough samples, increase the transect number, increase the plots and geo-reference the data and also to gather the findings from the community around the hotspots and from the front line staff of the Forest Department. The key locations and key habitat are to be mentioned in each case by each group. Monitoring and reporting schedules should be submitted along with the findings. Concern was also expressed due to slow progress of the Socio-economic group whose functioning needs to be reviewed separately.

Vote of thanks for success of the review meeting was conveyed by Dr. R K Saha Associate Professor of the College of Fisheries before the meeting was concluded.