

Summary records of the 4th meeting of the reconstituted Technical-cum-Financial Appraisal Committee (TFAC) on Environmental Research and Development Programme (ERDP) held on 18th -19th June, 2024 under the Chairmanship of Dr. Rup Lal, Prof., (Retired), Acharya Narendra Dev College, University of Delhi, New Delhi.

The 4th meeting of the reconstituted TFAC on ERDP was organized as per the schedule. Member-Secretary, TFAC has welcomed all the participants and briefed that there are 26 new research proposals, 4 revised proposals would be considered by the TFAC. In addition, the Committee would also review the progress/findings of 12 ongoing/completed project. **List of participants is Annexed.**

Agenda Item No. 1.0. Introductory remarks by Chairman/ Member Secretary.

1.1: The Chairman welcomed the participants and after introductory session, requested the MS, TFAC to initiate the discussions on the listed Agenda items. The Committee also co-opted Dr. K. Kathiresan and Dr. P. Ananthraman, EX-Directors (both), CASMB, Annamalai University as special invitees. Accordingly, the meeting was initiated as per the listed agenda items.

Agenda Item No. 2.0.

2.1: Confirmation of Minutes of 3rd TFAC meeting held on 18-19 March, 2024. The TFAC was informed that the minutes of the 3rd meeting were circulated to the Members for their view /comments. No comments have been received from them on the Minutes.

Decision Taken: After detailed discussion, the TFAC agreed to confirm the minutes of its 3rd meeting held on 18th -19th March, 2024.

Agenda Item No.3: Consideration of the revised project proposals.

3.1 Revised proposal as recommended by TFAC earlier: (01)

3.1.1: 576/2023/RE- Impact of Urban Air quality and Heat stress on Urban Quality of Life by Dr. Arindam Biswas, IIT Roorkee.

Background: The proposal was presented by the PI before the TFAC in its 2nd Meeting held on 04-05th January, 2024. The TFAC observed that the proposed objectives are too many and suggested that the PI should reduce the objectives from 7 to 4 and accordingly revisit the methodology part. The PI should also focus on economic component and heat stress on pilot scale for implementation of the project in the NCR Delhi area. Dedicated work station may be established. Accordingly, the PI may submit the revised proposal to the Ministry. The Chairman, TFAC has been authorized by the Committee to take final decision on the revised proposal.

Recommendations: The PI has submitted the revised proposal on the portal and the revised proposal was placed before the Committee for consideration. It was observed by the Committee that the required/suggested revision has not been done by the PI and hence, the proposal **was not recommend** for funding from the Ministry.

3.2 Consideration of the project proposals along-with the referee's comments. (03)

3.2.1: F. No. 19-5/2023-RE -Assessment of ecosystem services for conservation of an endemic and endangered fruit bat, *Latidenssalimalii* in Kalakad Mundanthurai Tiger Reserve (KMTR), Tamil Nadu, India by Dr. Suthakar Isaac S, Assoc. Prof., Deptt of Zoology, St Johns College, Palaymkotti, Tirunelveli-627002.

Background: The proposal was considered by the TFAC in its 2nd meeting and it has suggested to refer the proposal to the experts (i.e. Director, FRI; Head, Zoology, AMU; Head, CAS in Botany, Madras University; Director, IIFM and Dr. C. G. Kushalappa, Former Dean (Forestry), College of Forestry, Ponnampet Kodagu, Karnataka) for their comments and the proposal along-with their comments may be placed before the TFAC for further consideration.

Recommendations: As suggested, the proposal has been sent to four experts for their comments. Since out of four experts, three of them did not recommend the proposal for funding, and only one expert recommended it for revision. After detail deliberations, the committee **did not recommend** the proposal for funding from the Ministry.

3.2.2: F. No.19-2/2023-RE - Extraction of mercury and rare- earth elements from discarded fluorescent lamps by Dr. Nikhil Dhawan Indian Institute of Technology, Roorkee.

Background: The proposal has been placed earlier before the TFAC for consideration. The TFAC after detailed deliberation suggested to refer the proposal to the experts (i.e. Director, NPL; Director, IICT; Head, Deptt of Env. Sc., Anna University; Head, Env. Sc., Andhra University) for their comments. The proposal along-with the expert's comments may be placed before the TFAC in its next meeting for further consideration.

Recommended for revision: As recommended by TFAC, the proposal was referred to four identified experts and out of them, 03 have furnished their comments. Since, all three experts have suggested modifications in the proposal, hence the committee recommend to send the comments of the experts to the PI for the revision. The PI was advised to submit the revised proposal to the Ministry. The revised proposal will be considered by the TFAC in its next meeting.

3.2.3: F.No.19-3/2023-RE -Climate Change and Surface Waters Security on Wetland Ecosystems over Punjab Region Based on Remote Sensing Models and Techniques for Sustainable Management by Mohit, Scientist 'C', Geology, Water Resource and Geoinformatics, Punjab Remote Sensing Centre, Ludhiana-141004.

Background: The proposal was earlier placed before the TFAC for consideration. The TFAC after detailed deliberation has suggested to refer the proposal to the experts namely Director, IIRS; Director, WISA; Head, Director, Atmosphere Division, IIT, Delhi and Director, SAC for their comments.

Recommendations: As recommended by the TFAC, the proposal was referred to the identified four experts for their views and out of them, 03 have furnished their comments. Since, all 3 experts have suggested modifications of the proposal, hence the committee agreed to send the comments of the experts to the PI for the revision. The PI has advised to submit the revised proposal to the Ministry. The revised proposal will be considered by the TFAC in its next meeting.

3.3 New project proposals received through online mode. (22)

3.3.1: 724/2024/RE - Cataloging of potential microbial communities and development of nano-sensor for ecosystem across Himalayan sulfur springs Sahastradhara, Uttarakhand by Prof. Nabeel Ahmad, Dev Bhoomi Uttarakhand University.

Recommendations: PI although present in the meeting, was unable to present the proposal due to he being ill, Thus Co-PI requested the chairman to allow her to presented the proposal. The Chairman permitted the Co-PI to present the proposal. Co-PI presented the proposal before the TFAC. The Committee observed that the proposal is important and well written. Objectives are clear and the methodology is appropriate. After detailed deliberations, the Committee recommended the proposal for funding for a period of three years with the followings budgetary provisions:

- JRF-1;
- Equipment - ₹13.00 lakh (high end server);
- Consumable- ₹6.00 lakh @₹2.0 lakh per year;
- Travel-₹1.0 lakh @₹0.4, 0.3 and 0.3 lakh per year;
- Contingency (5%) and Institutional Charges (15%) of the total cost (As per the existing norms/rules of the Ministry).

3.3.2: 704/2024/RE - Studies on diversity, biomedical applications and conservation of lichens from Narpuh Wildlife Sanctuary, Meghalaya by Dr. Rajesh Bajpai, North Eastern Hill University, Shillong.

Recommendations: The proposal was presented by the PI before the TFAC. The Committee observed that the proposed objectives are scattered and not focused. The Methodology proposed is also not appropriate. After detailed discussions, the Committee **did not recommend** the project proposals for financial support from the Ministry.

3.3.3: 697/2024/RE - Impact of Forest Fires on Biological diversity of the Mandakini Catchment Area, Rudraprayag: A Multi-Taxa Approach by Dr. V.P. Uniyal, Graphic Era University, Dehradun.

Recommendations: Dr. V.P. Uniyal, the PI could not attend the meeting. The Committee advised the PI to present his proposal before the TFAC in its next meeting. In case PI fails to present the proposal in the next meeting, the project proposal will be closed and no further opportunity for presentation will be provided

3.3.4: 712/2024/RE - Evaluation of Ecosystem functioning using Herpetofauna as a model system in Goa and adjoining areas of Maharashtra and Karnataka by Dr. Nitin S. Sawant, Deptt. of Zoology, Goa University, Goa.

Recommended for revision: The PI presented the proposal before the TFAC. Based on the presentation, the Committee observed that the proposal is good and well written. Objectives are clear and the methodology is appropriate. After detailed deliberations, the Committee suggest the PI should focus only one defined ecosystem i.e. Plateau, Coastal Wetland only and the budget may be revised accordingly. The revised proposal be submitted to the Ministry for further consideration.

3.3.5: 715/2024/RE - Long-term exposure of Bisphenol A on fish reproduction: A comparative study on field and laboratory by Dr. C. Amutha, Madurai Kamaraj University, Madurai.

Recommendations: The proposal was presented by the PI before the TFAC. The Committee observed that the objectives are diffused and not focused. The Methodology proposed was also not appropriate. After detailed discussions, the Committee **did not recommend** the project proposals for financial support from the Ministry.

3.3.6: 716/2024/RE - Exploring the ecological and human health aspects of micro-plastics: A pervasive emerging environmental contaminant of concern (MPEECH) by Dr. Surya Singh, ICMR - NIREH Bhopal.

Recommendations: The proposal was presented by the PI before the TFAC. The Committee observed that the proposed study is of routine nature and there is no novelty in the study. The Committee also observed that the objectives are not specific and ambiguous. After detailed discussions, the Committee **did not recommend** the project proposals for financial support.

3.3.7: 739/2024/RE - Nano particles enabled catalytic pyrolysis of Prosopis juliflora and steam assisted gasification of bio char for enhanced hydrogen gas recovery by Dr. R Saravana Sathiya Prabhakar, Mepco Schlenk Engineering College, Sivakasi.

Recommendations: The PI presented the proposal before the TFAC in detailed. The TFAC has suggest to refer the proposal to the following experts for their comments:

- Head, Department of Environmental, IIT, New Delhi
- Head, Department of Environmental, IIT, Kanpur
- Head, Deptt of Botany, BHU
- Head. Env. Sc, JNU, New Delhi
- Director, NBRI, Lucknow

Along-with the comments of the experts, the proposal may be placed before the TFAC in its next meeting for further consideration.

3.3.8: 691/2024/RE - Evaluate the efficacy of Homeopathic and Microbial compounds for development of residue free new formulation to manage the Fall Armyworm on maize by Dr. Sumedha Jayprakash Shejulpatil, Agricultural Development Trust, Baramati, Pune.

Recommended for revision: The proposal has been presented by the PI before the TFAC. The Committee has observed that the proposed study is good. However, the PI should use the term plant extract instead of homeopathy and correlate the title with proposed objectives and title should be revised accordingly. The revised proposal may be submitted to be Ministry for the further consideration.

3.3.9: 772/2024/RE - Biochar-Mediated Management of Invasive Weed (Lantana camara L.) and its Impact on Agronomic Performance and Soil Fertility in the Sub-Mountainous Zone of Punjab by Dr. Balkrishna Sopan Bhopale, Soil Scientist, Regional Research Station, Ballawal Saunkhri Tehsil, Punjab Agricultural University, Ludhiana.

Recommended for revision: The proposal was presented by the PI before the TFAC. The Committee suggested the PI to study the economics of the biochar of the Invasive Weed (Lantana camara L.) and the methodology should be revised accordingly. The revised proposal may be submitted to be Ministry for the further consideration.

3.3.10: 719/2024/RE - Unlocking Genetic Diversity: Molecular Taxonomy of Freshwater Fish species in the Satluj River, H.P. by Prof. Ram Krishan Negi, University of Delhi, Delhi.

Recommendations: Prof. Ram Krishan Negi, the PI could not attend the meeting. The Committee advised the PI to present his proposal before the TFAC in its next meeting. In case PI fails to present the proposal in the next meeting, the project proposal will be closed and no further opportunity for presentation will be provided.

3.3.11: 737/2024/RE - Integrative taxonomy and phylogeny of non-biting midges (Diptera: Chironomidae) from Western Ghats with an emphasis on their ecological and molecular aspects by Dr. Atanu Naskar, ZSI Kolkata.

Recommendations: Dr. Atanu Naskar, the PI could not attend the meeting. The Committee advised the PI to present his proposal before the TFAC in its next meeting. In case PI fails to present the proposal in the next meeting, the project proposal will be closed and no further opportunity for presentation will be provided.

3.3.12: 649/2024/RE - Unravelling Taxonomic Complexity: Phylogeographic Patterns and Cryptic Diversity in the Pethia ticto Complex (Cypriniformes: Cyprinidae) of Indian Rivers by Dr. Bheem Dutt Joshi, Scientist 'C', Wildlife Section, Zoological Survey of India, Prani Vigyan Bhawan, New Alipore, Kolkata.

Recommendations: The PI presented the proposal before the TFAC in detailed. The TFAC has suggest to refer the proposal to the following experts for their comments:

- Dr. J. A. Johnson, Scientist 'F' and Head, Habitat Ecology, WII, Dehradun
- Dr. A. Gopalkrishna, Assoc. Prof., CASMB, Annamalai University
- Director, CMFRI, Cochin
- Director, Central Inland Fisheries Research Institute, Barrackpore.
- Head, Department of Zoology, University of Lucknow, Lucknow.

3.3.13: 688/2024/RE - Taxonomic study of freshwater fishes in goa using morphological and molecular approaches by Dr. Trupti Jadhav, Asstt. Prof., Zoology, DCTs Dhempe College of Arts and Science, Miramar, Goa.

Recommendations: The proposal was presented by the PI before the TFAC. The Committee observed that the proposed study is of routine nature and there is no novelty in the study. The Committee also observed that the objectives are not focused. Further, general work at ground level was not done and study sites were also not identified. After detailed discussions, the Committee **did not recommend** the project proposal for financial support from the Ministry.

3.3.14: 733/2024/RE - Bioprospecting of Endophytic fungi from Invaluable medicinal plants distributed in different agro-climatic zones of Uttarakhand, India by Dr. Vedpriya Arya, Patanjali Research Foundation Trust, Haridwar.

Recommendations: Dr. Vedpriya Arya, the PI could not attend the meeting. The Committee advised the PI to present his proposal before the TFAC in its next meeting. In case PI fails to present the proposal in the next meeting, the project proposal will be closed and no further opportunity for presentation will be provided.

3.3.15: 690/2024/RE - Design and Development of Perovskite Solar Cells (PSCs) by utilizing Quantum Dots Materials by Dr. Neetu Divya, Dr. B. R. Ambedkar National Institute of Technology, Jalandhar.

Recommendations: Dr. Neetu Divya, the PI could not attend the meeting. The Committee advised the PI to present his proposal before the TFAC in its next meeting. In case PI fails to present the proposal in the next meeting, the project proposal will be closed and no further opportunity for presentation will be provided.

3.3.16: 809/2024/RE - Analysis of actinomycetes from the diverse habitats of Arunachal Pradesh and study of their impact on nanoparticle synthesis by Dr. Munendra Kumar, Assistant Professor, Department of Zoology, Rajiv Gandhi University, Rono Hills, Doimukh, Arunachal Pradesh.

Recommendations: The proposal was presented by the PI before the TFAC. The Committee observed that the PI is not clear about the proposed objectives. Approach to achieve the objectives is also not up to the marks. After detailed discussions, the Committee **did not recommend** the research project proposal for funding from the Ministry.

3.3.17: 775/2024/RE - Developing high-value tree-based plantation systems for economic and ecological security in sodic water environments by Dr. Raj Kumar, ICAR-Central Soil Salinity Research Institute, Kach.

Recommendations: Dr. Raj Kumar, the PI could not attend the meeting. The Committee advised the PI to present his proposal before the TFAC in its next meeting. In case PI fails to present the proposal in the next meeting, the project proposal will be closed and no further opportunity for presentation will be provided.

3.3.18: 750/2024/RE - Lecture and Demonstration Programme on "Biodiversity Conservation in the Face of Climate Change by Mrs. Minati Bindhani, General Secretary, Women and Child Welfare Society, Gamhandia New Colony, Buxibazar, Cuttack.

Recommendations: Mrs. Minati Bindhani, the PI could not attend the meeting. The Committee advised the PI to present his proposal before the TFAC in its next meeting. In case PI fails to present the proposal in the next meeting, the project proposal will be closed and no further opportunity for presentation will be provided.

3.3.19: 759/2024/RE - An assessment of avifauna diversity, their migration and conservation status in Yadahalli Chinkara Wildlife Sanctuary, Bagalkot: Karnataka by Dr. Ningappa Changond Hiragond, Assoc. Prof., Zoology, Yashwantrao Chavan Mahavidyalaya Halkarni, Kolhapur.

Recommendations: Dr. Ningappa Changond Hiragond, the PI could not attend the meeting. The Committee advised the PI to present his proposal before the TFAC in its next meeting. In case PI fails to present the proposal in the next meeting, the project proposal will be closed and no further opportunity for presentation will be provided

3.3.20: 758/2024/RE - Navigating the Lantana Conundrum: Invasion to restoration through soil dynamics and native grass interactions by Prof. Vartika Mathur, Sri Venkateswara College, University of Delhi, Delhi.

Recommendations: Prof. Vartika Mathur, the PI could not attend the meeting. The Committee advised the PI to present his proposal before the TFAC in its next meeting. In case PI fails to present the proposal in the next meeting, the project proposal will be closed and no further opportunity for presentation will be provided.

3.3.21: 801/2024/RE - Frogs are also Wildlife: Conservation of heavily harvested frogs of Sikkim by Dr. Abhijit Das, Scientist 'E', Wildlife Institute of India, Dehradun.

Recommendations: The proposal was presented by the PI before the TFAC. The Committee observed that the title of the project is not cleared and the proposed objectives are also not focused. Further, the molecular protocol is not done properly. After detailed discussions, the Committee **did not recommend** the research project proposal for funding from the Ministry.

3.3.22: 618/2023/RE - Biodiversity characterization and development of biodiversity conservation plan for unexplored sohagi barwa and suhelwa wildlife sanctuaries of Uttar Pradesh by Prof. Jamal A Khan, Deptt. of Wildlife Sciences, AMU, Aligarh.

Recommendations: The PI presented the proposal before the TFAC. The TFAC suggested to refer the proposal to the following experts for their comments:

- Dr. Gopi GV, Scientist 'F', WII, Dehradun
- Dr. Randeep Singh, Director, Amity Institute of Forestry & Wildlife, Amity University.
- Dr. Somita Mukharjee, SACON, Coimbatore.
- Prof. K. S. Rao, Department of Botany, Delhi University, Delhi.
- Director, NBA, Chennai

3.3.23: 814/2024/RE - Establishment of mangrove gene bank for germ-plasma conservation in south east coast of India for climate change mitigation by Dr. T Ramanathan, Prof., CASMB, Annamalai University, Parangipettai.

Recommendations: The PI presented the proposal before the TFAC. The Committee observed that the proposal is good and well written. Objectives are clear and the methodology is appropriate. After detailed deliberations, the Committee recommended the proposal for funding for a period of three years with the followings budgetary provisions:

- JRF-2, Field Assistant-1;
- Equipment - ₹13.00 lakh (Gene analyser, Electrophoresis unit and Thermal Cycler);
- Consumable- ₹8.00 lakh @₹3.0, 3.0 and 2.0 lakh per year;
- Travel-₹6.0 lakh @₹2.0 lakh per year;
- Contingency (5%) and Institutional Charges (15%) of the total cost (As per the existing norms/rules of the Ministry).

3.3.23: 814/2024/RE – Marine Mammals of the Andamans: eDNA Meta-barcoding for IUCN Red List Species and Climate Change Impacts by Dr. K. Sivakumar, Assoc. Prof., CASMB, Annamalai University, Parangipettai.

Recommendations: This proposal was not in the agenda, however Dr. Shivakumar requested the Chairman to allow him to present the proposal. PI thus presented the proposal before the TFAC. The Committee observed that in the absence of a detailed

proposal it will not be possible for the members to make any decision. It was also not clear if the PI has the expertise in the relevant area of the project. After detailed deliberations, the Committee deferred the proposal for next meeting and requested the PI to submit the proposal to the Ministry.

3.4 Proposals in which PI could not attend the earlier meeting of the TFAC. (04)

3.4.1: 578/2023/RE - Pre-processing approaches in Machine learning and Remote Sensing based on Groundwater Potential mapping in the drought prone area of North Eastern part of Tumkur District, Karnataka by Dr. H.K. Ramaraju, Prof., Civil Engg Deptt., Dayananda Sagar College of Engineering, Shavigemalleshwara Hills, Kumaraswamy Layout, Bangalore -560111.

Recommendations: Dr. H.K. Ramaraju, the PI could not attend the meeting. The Committee advised the PI to present his proposal before the TFAC in its next meeting. In case PI fails to present the proposal in the next meeting, the project proposal will be closed and no further opportunity for presentation will be provided.

3.4.2: 601/2023/RE - Waste Reutilization for Liquefaction Mitigation by Dr. Ramanathan Ayothiraman, Room No 319, Block-V, Deptt of Civil Engineering, IIT, Delhi.

Recommendations: The proposal has been presented by the PI before the TFAC. The Committee observed that the objectives of the proposal are more relevant to the Ministry of Earth Sciences and the proposed budget is also on higher side. After detailed discussions, the Committee **did not recommend** the research project proposal for funding from the Ministry.

3.4.3: 590/2023/RE - Development of novel biodegradable multifunctional mulching film for sustainable and environmentally friendly agriculture practices by Dr. Bhanu Prakash Vellanki, Department of Civil Engineering, IIT, Roorkee-247667.

Recommendations: Dr. Bhanu Prakash Vellanki, the PI could not attend the meeting. The Committee advised the PI to present his proposal before the TFAC in its next meeting. In case PI fails to present the proposal in the next meeting, the project proposal will be closed and no further opportunity for presentation will be provided.

3.4.4: 337/2020/RE - Plausible role of Bacteriophages present in the High Altitude Himalayan River waters by Dr. Angayarkanni J, Department of Microbial Biotechnology, Bharathiar University, Coimbatore.

Recommendations: Dr. Angayarkanni J, the PI could not attend the meeting. The Committee advised the PI to present his proposal before the TFAC in its next meeting. In case PI fails to present the proposal in the next meeting, the project proposal will be closed and no further opportunity for presentation will be provided.

Agenda Item No. 4: Review of the progress of the completed projects for acceptance of the Final Technical Report (FTR): (12)

4.1: F. No. 22018/30/2015-AICOPTAX - Diversity of Water-striders (Hemiptera: Gerridae) from Principal Estuaries of eastern coast of India by Dr. Swetapadma Dash, Scientist 'C' & O/C, Zoological Survey of India Gopalpur- Ganjam, Odisha.

Recommendations: The findings of the research project entitled “Diversity of Water-striders (Hemiptera: Gerridae) from Principal Estuaries of eastern coast of India” were presented by the PI before the TFAC. Based on the detailed presentations and discussions, the TFAC adjudged the findings of the project as **satisfactory** and agreed to accept the FTR of the project. The Committee has also agreed to release next instalment, if due for final settlement of the project account.

4.2: F. No. 22018/45/2010-CS(TAX) - Hymenoptera: Apoidea, Part-I Meliponinae (Stingless bees), Bombinae (Bumble bees) and Xylocopinae (Carpenter bees) from North-East and North-Western Himalaya by Dr. M. S. Saini, Asian Educational Institute, Patiala.

Recommendations: The PI could not attend the meeting. The Committee advised the PI to present the findings before the Committee in its next meeting which will enable the Ministry to settle the project account finally.

4.3: F. No. 19-38/2018/RE - Assessment of Changes for the Conservation and Management of Sathyamangalam Tiger Reserve by Prof. S. Jayakumar, Pondicherry University, Puducherry.

Recommendations: The findings of the research project entitled “Assessment of Changes for the Conservation and Management of Sathyamangalam Tiger Reserve” has been presented by the PI before the TFAC. Based on the detailed presentations and discussions, the TFAC has adjudged the findings of the project as **satisfactory** and agreed to accept the FTR of the project. The Committee has also agreed to release next instalment, if due for final settlement of the project account.

4.4: F. No. 19-30/2018-RE - Design, Development, and Evaluation of Indigenous sensors-based Air Quality Monitoring System and Data Analysis Using Deep Learning by Dr. R. Rani Hemamalini, Prof. and Head/EEE, St. Peter’s Institute of Higher Education and Research, Chennai.

Recommendations: The findings of the research project entitled “Design, Development, and Evaluation of Indigenous sensors-based Air Quality Monitoring System and Data Analysis Using Deep Learning” were already reviewed by the TFAC in its 1st meeting and agreed to accept the FTR. Since, the PI could not submit the relevant documents, hence final settlement was not done. Now, the Committee has agreed to release next instalment, if due for final settlement of the project account.

4.5: F. No. 22018/28/2015-CS(Tax) - Taxonomical investigation on Ostracodes and Branchiopods in the Southeast coast of India by Dr P.S. Lyla, Prof., CAS in Marine Biology, Annamalai University, Parangipettai.

Recommendations: The PI could not attend the said meeting. The Committee advised the PI to present the findings before the Committee in its next meeting which will enable the Ministry to settle the project account finally.

4.6: F. No. 22018/30/2019-CS(Tax) - Diversity, molecular taxonomy and phylogenetic assessment of snapping shrimps (Family: Alpheidae) in Palk Bay and Gulf of Mannar by Dr. M. Thangaraj, Asstt Prof, CASMB, Annamalai University, Parangipettai.

Recommendations: The findings of the research project entitled “Diversity, molecular taxonomy and phylogenetic assessment of snapping shrimps (Family: Alpheidae) in Palk Bay and Gulf of Mannar” have been presented by the PI before the TFAC. Based on the detailed presentations and discussions, the TFAC has adjudged the findings of the project as **satisfactory** and agreed to accept the FTR of the project. The Committee also agreed to release next instalment, if due for final settlement of the project account.

4.7: F. No. 22018/05/2019-CS (Tax) - Taxonomy and epidemiology of pathogenic viruses and fungi of commercially important fin and shellfishes of Coromandel Coast by Dr. A. Gopalakrishnan, CASMB, Annamalai University, Parangipettai.

Recommendations: The progress of the research project entitled “Taxonomy and epidemiology of pathogenic viruses and fungi of commercially important fin and shellfishes of Coromandel Coast” was presented by the PI before the TFAC. Based on the detailed presentations and discussions, the TFAC has adjudged the progress of the project as **satisfactory**. The Committee has also agreed to release next instalment, if due for smooth functioning of the project activities.

4.8: F. No. 22018/18/2019-CS(Tax) - Taxonomy and mass scale production of selected species of polychaetes for augmenting aquaculture and natural stock by Dr. P. Murugesan, Asst. Professor, CAS in Marine Biology, Annamalai University, Parangipettai.

Recommendations: The progress of the research project entitled “Taxonomy and mass scale production of selected species of polychaetes for augmenting aquaculture and natural stock” was presented by the PI before the TFAC. Further, the culture facility developed by the PI under the project for mass scale production of selected species of polychaetes has been visited by the TFAC on 19.06.2024. The mechanism, benefits etc. of the said facility has been discussed with the PI, research staff and other concerned and the Committee appraised them for the establishment of the culture facility. Based on the detailed presentations and discussions, the TFAC adjudged the progress of the project as **satisfactory**. The Committee has also agreed to release next instalment for a logical and fruitful conclusion of the study initiated.

4.9: F. No. 22018/15(iv)//2015-CS(Tax) - Distribution and Identification of Phylum Kinorhyncha, Gastrotricha and Tardigrada in the Island Environments of India by Dr. A. Sarvankumar, Asstt. Prof., CAS Marine Biology, Annamalai University, Parangipetti.

Recommendations: The progress of the research project entitled “Distribution and Identification of Phylum Kinorhyncha, Gastrotricha and Tardigrada in the Island Environments of India” was presented by the PI before the TFAC. Based on the detailed presentations and discussions, the TFAC has adjudged the progress of the project as **satisfactory**. The Committee has also agreed to release next instalment, if due for smooth functioning of the project activities.

4.10: F. No. 22018/04/2019-CS (Tax) - Preparation of Checklist of Mangroves by Prof. K. Kathiresan, Emeritus Prof., CASMB Annamalai University, Annamalainagar.

Recommendations: The findings of the research project entitled “Preparation of Checklist of Mangroves” has been circulated to the TFAC. The Committee observed that the tenure of the proposal was for one year and the study assigned to the PI has been completed within the stipulated time and there is no pendency with the Ministry, the TFAC has adjudged the progress of the project as **satisfactory** and agreed to accept the FTR.

4.11: F. No. 19-7/2018-RE - Ecology and Recovery of critically endangered Vulture species in Pong Dam Protected Area (PA) and its Eco Sensitive Zone (ESZ) in district Kangra, Himachal Pradesh by Dr. Gautam Talukdar, Wildlife Institute of India, Dehradun.

Recommendations: The findings of the research project entitled “Ecology and Recovery of critically endangered Vulture species in Pong Dam Protected Area (PA) and its Eco Sensitive Zone (ESZ) in district Kangra, Himachal Pradesh” was presented by the PI before the TFAC. Based on the detailed presentations and discussions, the TFAC has adjudged the findings of the project as **satisfactory** and agreed to accept the FTR. The Committee has also agreed to release next instalment, if due for final settlement of the project account.

4.12: F. No. 19-31/2018-RE - Population, Ecology, Status and Conservation of Indian Swiftlet (*Aerodramus Unicolor*) west coast and offshore islands in the Western Ghats of Maharashtra by Dr. Manchi Shirish S., Principal Scientist, SACON-WII, Coimbatore.

Recommendations: The findings of the research project entitled “Population, Ecology, Status and Conservation of Indian Swiftlet (*Aerodramus Unicolor*) west coast and offshore islands in the Western Ghats of Maharashtra” was presented by the PI before the TFAC. Based on the detailed presentations and discussions, the TFAC has adjudged the findings of the project as **satisfactory** and agreed to accept the FTR. The Committee has also agreed to release next instalment, if due for final settlement of the project account.

Agenda Item No.5: Any other item(s) with permission of Chair.

5.1: With permission of the Chair, it has been decided by the Committee that the proposals wherein the PIs could not attend the subsequent two these proposals may be treated as not recommended.

5.2: The Committee also opined that the members who could not attend the three consequent meeting of TFAC, may be replaced with a suitable expert.

5.3: Matter related to identification of critical areas/gap has been placed before the Committee for consideration. The Committee, after detailed deliberations, has agreed to circulate the existing thematic areas to all members for their views/comments. The views/comments of all individual will be considered by the TFAC in its next meeting.

5.4: All projects of the 1st, 2nd, and 3rd TAFC meetings that were deferred or sent to reviewers be placed before the next TAFC and suitable decisions be taken after appropriate deliberations.

The meeting ended with a vote of thank to the Chair.

List of Participants.

Sl.	Members/ Experts	Remarks
1.	Dr. Rup Lal	Chairman
2.	Dr. I. P. Pandey	Member
3.	Shri Sushil Gupta (Online)	Member
4.	Dr. R. Vasudeva (Online)	Member
5.	Dr. T. Ramanathan	Member
6.	Dr. K. A. Subramanian, Representative of ZSI	Member
7.	Dr. K. Kathiresan, Annamalai University	Special invitee
8.	Dr. P. Anantharaman, Annamalai University	Special invitee
9.	Dr. Rajendra Kumar, Deputy Director(S), MoEF&CC	Member-Secretary

Sl.	Name of PI and Address
1.	Dr. P. Murugesan, Asst. Professor, CASMB, Annamalai University, Parangipettai
2.	Dr. A. Gopalakrishnan, CASMB, Annamalai University, Parangipettai.
3.	Dr. A. Sarvankumar, Asstt. Prof., CASMB, Annamalai University, Parangipetti.
4.	Dr. Manchi Shirish S., Principal Scientist, SACON-WII, Coimbatore.
5.	Dr. Gautam Talukdar, Wildlife Institute of India, Chandrabani, Dehradun.
6.	Prof. Nabeel Ahmad, Dev Bhoomi Uttarakhand University, Dehradun.
7.	Dr. Nirjae Singhvi, Dev Bhoomi Uttarakhand University, Dehradun.
8.	Dr. M. Thangaraj, Asstt Prof, CASMB, Annamalai University, Parangipettai
9.	Dr. Swetapadma Dash, Scientist C & O/C, ZSI, Gopalpur- Ganjam, Odisha
10.	Dr. Nitin S. Sawant, Deptt of Zoology, Goa University, Goa.
11.	Dr. Munendra Kumar, Assistant Professor, Department of Zoology, Rajiv Gandhi University, Rono Hills, Doimukh, Arunachal Pradesh
12.	Dr. Trupti Jadhav, DCTs Dhempe College of Arts and Science, Miramar, Goa.
13.	Dr. Abhijit Das, Wildlife Institute of India, Chandrabani, Dehradun
14.	Dr. Ramanathan Ayothiraman, Room No 319, Block-Vdepartment of Civil Engineering, Indian Institute of Technology Delhi, Hauz Khas, New Delhi.
15.	Dr. Surya Singh, ICMR NIREH, Bhopal.
16.	Dr. Balkrishna Sopan Bhole, Punjab Agricultural University, Ludhiana.
17.	Dr. R Saravana Sathiya Prabhakar, Mepco Schlenk Engineering College, Sivakasi
18.	Prof. Jamal A. Khan, Deptt. of Zoology, Aligarh Muslim University, Aligarh
19.	Dr. Bheem Dutt Joshi, Scientist 'C', Wildlife Section, ZSI, New Alipore, Kolkata
20.	Dr. C. Amutha, Deptt of Animal Behaviour and Physiology, Madurai Kamaraj University, Madurai.
21.	Dr. Rajesh Bajpai, Env. Studies, North Eastern Hill University, Shillong.
22.	Dr. Sumedha Jayprakash Shejulpatil, Agricultural Development Trust, Baramati, Pune.
23.	Prof. Sharad K. Dalave, Agricultural Development Trust, Baramati, Pune.
24.	Dr. Atul D. Gonde, Agricultural Development Trust, Baramati, Pune
25.	Prof. S. Jaya Kumar, Pondicherry University, Pudducherry
26.	Dr. K. Sivakumar, Assoc Prof., CASMB, Annamalai University, Annamalai Nagar
