

**MINUTES OF THE MEETING OF TWENTIETH MEETING OF TECHNICAL AND FINANCIAL APPRAISAL COMMITTEE (TFAC) OF THE R&D SCHEME FOR CONSERVATION & DEVELOPMENT OF THE MoEF&CC HELD ON 30<sup>TH</sup> MAY, 2022 AT INDIRA PARYAVARAN BHAWAN, MoEF&CC, NEW DELHI THROUGH VIDEO CONFERENCING.**

The 20<sup>th</sup> meeting (virtual) of the Technical and Financial Appraisal Committee (TFAC) for 'Research & Development (R&D) for Conservation and Development' Scheme of the MoEF&CC was held under Chairmanship of Prof C.R. Babu on 30<sup>th</sup> May, 2022. The Committee members and Project Investigators attended the meeting through Video Conference. A total number of 15 research projects were considered. The Member Secretary welcomed the Chairman of the Committee and other Committee members. List of the participants is at **Annexure-I**.

**Agenda Item No. 1.0: Confirmation of the Minutes of the 19<sup>th</sup> meeting of Technical and Financial Appraisal Committee (TFAC).**

The minutes of the 19<sup>th</sup> meeting (virtual) of the Technical and Financial Appraisal Committee (TFAC) for 'Research & Development (R&D) for Conservation and Development' Scheme of the MoEF&CC was held under chairmanship of Prof C.R. Babu on 01<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup> September, 2021 were circulated to all the concerned and as no comments were received, the minutes of the 19<sup>th</sup> meeting were confirmed.

**Agenda Item No. 2: Consideration of R&D projects for no cost extension:**

**2.1. 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 Himachal Pradesh”** sanctioned to Dr. Gautam Talukdar, Wildlife Institute of India, Chandrabani, Dehradun.

**Project Details:** This ongoing project was started on 6<sup>th</sup> November, 2019 for a period of 3 years at a total cost of ₹85,23,200/-. The tenure of the project is going to be over on 05<sup>th</sup> November, 2022. A total of ₹64,32,000/- (in 02 instalments) has been released so far, out of approved project cost of ₹85,23,200/-.

The progress of the project was reviewed by TFAC in its 19<sup>th</sup> meeting held on during 1<sup>st</sup> -3<sup>rd</sup> September, 2021. The Committee observed that the first objectives of the project could not be achieved because of the COVID pandemic lock down and restrictions. The necessary permission for capturing of the Vultures was obtained by the PI in June, 2021. However, the PI made progress on other objectives and captured two young vultures. The PI assured that the primary objective would be achieved soon. In view of this the committee, after deliberations recommended the project for one more year which may be extended for another one year after assessing the progress of work done in first and second years.

PI has submitted a letter and stated that project will require one year no cost extension to fulfil the objectives. The PI made a presentation on the future work i.e. as follows: -

- Tagged vultures have to be monitored for about one and a half years.
- Prevalence of Diclofenac to be assessed from the feeding stations.
- Nest surveys to be conducted in unexplored part of Kangra District.
- Potential for more capacity building workshops.
- Data analysis and report writing.

Based on the presentation, the Committee adjudged the progress of the project **as satisfactory**. The Committee, after deliberation recommended one-year extension i.e. upto 05<sup>th</sup> November, 2023 within the already sanctioned outlay. The appropriation of allocations of funds in the respective budget heads have to be revised by the PI accordingly.

**2.2 19-14/2018/RE – “Assessing fine scale distribution pattern, population and habitat status of northern Swamp Deer (*Rucervus duvauceli*) across upper Gangetic Plains of north India”** sanctioned to Dr. Samrat Mondol, Wildlife Institute of India, Chandrabani, Dehradun.

**Project Details:** This ongoing project was started on 6<sup>th</sup> November, 2019 for a period of 3 years with a total cost of ₹52,91,240/-. The tenure of the project will be over in 05<sup>th</sup> November, 2022. A total of ₹39,91,040/- (in 03 instalments) has been released so far out of approved project cost of ₹52,91,240/-. PI has submitted a letter and stated that;

*“Due to ongoing Covid-19 pandemic and resulting lock down the progress in the project has been hampered. In 2021, we surveyed along Ganga from Garhmukteshwar to Kanpur and half of the total in Sharda basin area. Remaining part of the Sharda basin area haven’t been surveyed as this field sites were designated as containment zones and thus fieldwork was not possible during lockdown. Our radio-collaring plan was also hampered because the Covid-19 related restriction and lockdown. We request you to kindly extend the project tenure by a year without any additional budget in order to achieve the project objectives”.*

The PI made a presentation on the progress of the work done as per details given below: -

<b>Proposed objectives</b>	<b>Work status</b>
Assessing fine scale distribution of swamp deer across its habitat in Uttarakhand and Uttar Pradesh	Completed.
Mapping the distribution of grassland patches along upper Ganga and its tributaries, evaluation of extent of grassland usage by wildlife and identify suitable sites for grassland restoration	Ganga habitat block-completed Sharda habitat block-mostly completed.
Understanding swamp deer movement patterns by radio-collaring	Not achieved (due to Covid-19 lockdown).
Finally, integrating all these information to develop long term management plan for Barasingha population across North India	Partially achieved.

Chairman suggested that the PI may focus on changes in the composition of swamp grasslands and also record changes in the population size of Barasingha. He also mentioned about the identification of critical areas/patches for grasslands for sustenance of Barasingha.

Based on the presentation, the Committee adjudged the progress of the project **as satisfactory**. The Committee, after deliberation recommended 10 months’ extension i.e. upto 05.09.2023 within the already sanctioned outlay subject to that no further extension will be considered. The appropriation of allocations of funds in the respective budget heads have to be revised by the PI accordingly.

**2.3. 19-13/2018/RE– “Securing habitats for threatened mountain ungulates through robust population assessment and conservation planning”** sanctioned Dr. Vishnupriya Kolipakam, Wildlife Institute of India, Chandrabani, Dehradun.

**Project Details:** This ongoing project was started on 7<sup>th</sup> November, 2019 for a period of 2 years 6 Months with a total cost of ₹74,38,940/-. The tenure of the project completed in 06<sup>th</sup> May, 2022. A total of ₹66,95,046/- (in 03 instalments) has been released so far against a sanctioned outlay of ₹74,38,940/-.

The PI mentioned that *the initiation of all the procedures of the project could not be achieved due to COVID-19 pandemic lockdown, and hence the grant released for the first year could not be utilized. There was also delay in the sanction of second year grant. Consequently, the PI requested to extend the project tenure by one more year without any extra cost.*

Based on the presentation, the Committee adjudged the progress of the project is rather slow but **satisfactory** and suggested the PI to accelerate the same. The Committee, after deliberation recommended one-year extension i.e. upto 06.05.2023 within the already approved outlay subject to that no further extension will be considered. The appropriation of allocations of funds in the respective budget heads have to be revised by the PI accordingly.

**2.4. 19-4/2018/RE– “Assessment of Disease Prevalence in Ungulates in Protected Areas of North East India”** sanctioned to Dr. S. Sathyakumar, Wildlife Institute of India, Chandrabani, Dehradun.

**Project Details:** This project was started on 12<sup>th</sup> December, 2019 for a period of 2 years 6 months with a total cost of ₹75,87,485/-. The tenure of the project will be over on 11<sup>th</sup> June, 2022. A total of ₹68,28,737/- (in 03 instalments) has been released so far out of approved project cost of ₹75,87,485/-.

The PI has submitted a letter and stated that:

*“The task under taken for the year 2021-22 will be completed as per project document. As we have not undertaken any work in the year 2019-20. The end of the project will be in year 2023.”*

The PI was absent and Co-PI made a presentation on the progress of the project. The Committee has taken a serious view on it and suggested that the progress report should be presented by the PI except in unavoidable circumstances. Based on the presentation, the Committee adjudged the progress of the project as **satisfactory**. The Committee, after deliberation recommended one-year extension i.e. upto 11<sup>th</sup> June, 2023 within the already approved outlay subject to that no further extension will be considered. The appropriation of allocations of funds in the respective budget heads have to be revised by the PI accordingly.

**2.5. 19-31/2018/RE – “Population Status, Ecology and Conservation of the Indian Swiftlet (*Aerodramus unicornis*) West Coast and Offshore Islands in the Western Ghats of Maharashtra”** sanctioned to Dr. Manchi Shirish, Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore.

**Project Details:** The project was started on 31<sup>st</sup> December, 2019 for a period of 3 years with a total cost of ₹49,77,000/-. The tenure of the project will be over in 30<sup>th</sup> December, 2022. A total of ₹34,48,000/- (in 02 instalments) has been released so far out of approved project cost of ₹49,77,000/-.

The PI has submitted a letter and stated that:

*“However, because of the global pandemic of COVID-19 and the National and State level lockdown and movement restrictions, during the peak fieldwork season, no field activity could be done between March 2020 and November 2020. Moreover, after the relaxation in the*

*movements, as Maharashtra was the worst hit State in the country, we could not do the fieldwork as desired.*

*Though we will try our best to complete as much work possible by the end of the project tenure i.e. 31.12.2022, in the given circumstances, we understand the project tenure may need to be extended until December 2023 to achieve the planned objectives of the project.”*

Based on the presentation, the Committee adjudged the progress of the project as **satisfactory**. The Committee, after deliberation recommended one-year extension i.e. upto 31.12.2023 within the already sanctioned outlay subject to that no further extension will be considered. The appropriation of allocations of funds in the respective budget heads have to be revised by the PI accordingly.

**2.6. 19-29/2018/RE– “Ecological assessment of endemic and threatened Laughing thrushes of the Western Ghats to develop conservation plan for securing their population and habitats”** sanctioned to Dr. S. Babu, Salim Ali Centre for Ornithology and Natural History (SACON), Coimbatore.

**Project Details:** The project was started on 31<sup>st</sup> December, 2019 for a period of 3 years with a total cost of ₹53,71,000/-. The tenure of the project will be completed on 30<sup>th</sup> December, 2022. A total of ₹30,01,000/- (in 02 instalments) has been released so far against the total agreed outlay ₹53,71,000/-.

PI has submitted a letter and stated that:

*“It is informed that the field work of the project has been badly affected by prevailing COVID pandemic for more than eight months. It will be difficult for us to complete the project work within the stipulated time frame as proposed in the project proposal. Therefore, we may require a minimum of eight months more to complete the proposed work in the project”.*

The Committee observed that the PI had done some work, some data has been collected but still a lot of work has to be done. Based on the presentation, the Committee adjudged the progress of the project as **satisfactory**. The Committee has also agreed to give an extension for one and half year instead of two years to justify the season limiting factor within the already sanctioned outlay i. e. 30<sup>th</sup> June, 2024 without any additional financial assistance.

**2.7. 19-112/2010-RE – “Sequential production of bio-diesel, hydrogen and methene as a Bio-refinery Concept using Leather Solid waste and effluent Treatment Sludge’s”** sanctioned to Dr. P Shanmugam, Central Leather Research Institute (CLRI), Chennai.

**Project Details:** This ongoing project was started on 31<sup>st</sup> December, 2015 with a total cost of ₹77,11,400/-. The tenure of the project was completed on 31<sup>st</sup> December, 2021. A total of ₹73,35,486/- (in 02 instalments) has been released so far out of approved project cost of ₹77,11,400/-.

The Audit Memo No: 1 received from Sr. Audit Officer of Environment & Scientific Department, O/o the Director General of Audit vide dated 04.05.2022. It was requested in the memo to provide the current status with relevant supporting documents of all the three plants vis a vis Bio-ethanol, Bio-Hydrogen and Bio-Methane.

Vide email dated 5<sup>th</sup> May 2022 received from Dr. P. Shanmugam, the status of the project are as follows:

The Bio-diesel plant was built in March 2018. The bio-hydrogen and Bio-methane plant has already been built on-site recently and it is now ready for commissioning and operation. We can demonstrate the operation of the plant, producing Biodiesel, Biohydrogen, and Biomethane using tannery solid waste. The bioethanol plant tender was given and ready with our CSIR-CLRI's purchase section for complete execution for which the unspent money is available with CSIR-CLRI to purchase and install it if the MoEF&CC issue a NO-Cost to Extension for six months to make our tender process active and install it within six months. Then it will fulfil 100% completion of our project.

The above status was accordingly communicated to the Audit Part by OM of even No dated 9<sup>th</sup> May, 2022. Furthermore, it is brought to notice that vide emails dated 11<sup>th</sup> May, 2022 and 12<sup>th</sup> May, 2022, the PI was requested to provide the supporting documents to be sent to the Audit Party. Vide email dated 18<sup>th</sup> May, 2022, the PI has sent supporting document along with the current status of the project which is as follows:

- i. The fleshing waste washing tank shed for the bio-refinery plant and bio-diesel plant have been built in 2018 and operated successfully;
- ii. The bio-hydrogen plant, Biomethane plant, two biogas holders, gas engine, shed for Biohydrogen and Biomethane plant, H<sub>2</sub>S purification system, and the fleshing waste mincing machine have been built and installed onsite recently as shown in the figure to be commissioned by next week as per the letter issued by M/s Ranitech Pvt. Ltd., Ranipet, the beneficiary and half-funding agency of the project; and
- iii. For purchasing the bioethanol plant and fat oil recovery system CLRI is waiting for the No-Cost to extension letter from MoEF&CC, New Delhi for releasing the tender to install these two systems from February, 2022.

It is also brought to notice that the project has already been provided extension 4 times vide letters dated 7<sup>th</sup> August, 2019, 16<sup>th</sup> June, 2020, 22<sup>nd</sup> February, 2021 and on 25<sup>th</sup> November, 2021. While providing the last extension, IFD specifically mentioned that there would be no more/future extension for this project would be considered. The PI was accordingly apprised of the extension vide letter dated 25<sup>th</sup> November 2021. The PI has requested for 3 months' extension without any additional financial support.

The PI made a presentation, wherein he stated that he had done 90% of the work including both laboratory as well as on site and 06 other activities. He has successfully demonstrated the biodiesel plant to produce biodiesel and it is in operation in the practise and generators. The PI had presented the following reasons for the delayed execution of the project:

- Non availability of contractors/executors as this is the first of its kind project in the world.
- Corona Pandemic (Covid-19)
- Exceptional/unusual Wardha and Khaja Cyclone/Flood in TN 2016 and in 2017.
- Revised budget approval received from MoEF&CC in 2019 February.
- Project staff resigned in between the project 2016 and 2017 (Non receipt of fellowship).

The Committee observed that the project includes development of the integrated plant on a pilot scale and it requires a site inspection to assess the ground reality. The Chairman suggested that **Dr. Dharmendra K. Gupta, Director; Ms. Rita Khanna, Advisor and 01 Committee Member** should visit the bio-refinery site for assessing the practical outcome of the project.

Based on the presentation, the Committee adjudged the progress of the project as **satisfactory**. In order to bring the project to a fruitful and logical conclusion, the Committee after detailed deliberations, recommended **last and final no cost extension** upto 31.12.2022 subject to no further extension would be considered in any condition/situation.

**2.8. 19-21/2018-RE– “Quantification of the Economic and Ecological Services of Ecotourism as a Livelihood Option for the Sustainability of the Rhino Population in Manas Tiger Reserve, Assam”** sanctioned to Dr. Ajay Kumar, Rain Forest Research Institute, Assam.

**Project Details:** This project was started on 09<sup>th</sup> January, 2020 for a period of 2 years with a total cost of ₹19,61,560/-. The tenure of the project was upto 08<sup>th</sup> April, 2022 (including 03-month extension granted by the 12<sup>th</sup> TFAC dated 15.07.2020). A total of ₹17,65,404/- (in 03 instalments) has been released so far out of approved project cost of ₹19,61,560/-.

The PI has submitted a letter and stated that:

*“One of the major components of the project is to estimate the economic and ecological services of ecotourism but due to Covid-19 pandemic, there was almost nil tourism activities in MTR from during first wave of Covid-19 pandemic field work could also not be resumed due to the restriction imposed by the State Government to control the spread of Covid-19 during from March, 2020 to August, 2020 due to the Covid-19 Prevention and Response Protocol of Govt. of Assam. Tourism activities started from October, 2020 but very few tourists were encountered for interview as still there were very less number of tourists coming to visit MTR till 31st March, 2021, which was also mentioned in the progress report of 2020-21. During this time, socioeconomic and forest dependency survey of twenty-three (23) forest fringe villages of MTR was conducted. Interviews of few tourists were conducted from April, 2021 onwards but it was again stopped due to the second wave of Covid-19 pandemic. Although this time, complete lockdown was not imposed but there were restrictions on inter-district travelling which were enough to restrict tourism activities from May, 2021 to August, 2021. Detail of the various restrictions/orders issued by Assam Government time to time is enclosed. Socioeconomic survey was continued during this period but group meetings/PRA could not be conducted. From September, 2021 onwards a total of 304 tourists were interviewed and a total of 40 forest fringe villages were surveyed till 9th April, 2022. More tourists are to be surveyed along with a number of PRA exercises in fringe villages to discuss about the alternative livelihood.*

Based on the presentation, the Committee adjudged the progress of the project as **satisfactory**. The Committee after detailed deliberations, recommended no cost extension for a period of one year i.e. upto 08.04.2023. The Committee suggested that the PI should explain how the Rhinos population has increased with increase in the number of tourist?

**2.9. 19-15/2018-RE– “An integrated approach for conservation of Takin (*Budorcas taxicolor*) in North East India: Linking species ecology and traditional ecological knowledge”** sanctioned to Dr. Gopi. G.V, Wildlife Institute of India, Chandrabani Dehradun.

**Project Details:** This project was started on 07<sup>th</sup> November, 2019 for a period of 3 years with a total cost of ₹68,23,960/-. The tenure of the project will be over in 06<sup>th</sup> November, 2022. A total of ₹48,60,520/- (in 03 instalment) has been released so far out of approved project cost of ₹68,23,960/-.

The PI has stated that:

*In continuation to the trailing mail, I would like to inform you that, I require a no cost extension to my project to achieve the project objectives. Due to the pandemic, the field work was affected and I require one-year extension to achieve the project objectives. Further, we plan to satellite collar three individuals in July/August 2022 to monitor the movement ecology. Acquiring permissions took time and hence collaring was also delayed. I humbly request you to consider*

*my request to present my case for No Cost Extension before TFAC as my project is coming to an end by November 2022. I would be grateful, if an opportunity to present the work progress on 30 May before TFAC is given.*

Based on the presentation, the Committee adjudged the progress of the project as **satisfactory**. The Committee after detailed deliberations, recommended no cost extension for a period of one year i.e. upto 06.11.2023.

### **Agenda Item No. 3: Consideration of Approved projects:**

**3.1. 19-26/2018-RE– “Tracking and assessment threats of highly critically endangered scaly giant Chinese Pangolin (*Manis pentadactyla*) with special reference to sensitization of local communities for its long-term conservation in north-eastern states of India”** sanctioned to Dr. Janmejy Sethy, Amity University, Gautam Budhh Nagar, Noida.

**Project Details:** This ongoing project was started on 28<sup>th</sup> May, 2020 for a period of 3 years with a total cost of ₹36,70,941/-. The tenure of the project will be over in 28<sup>th</sup> May, 2023. A total of ₹13,09,241/- (one instalment) has been released so far out of approved project cost of ₹36,70,941/-.

*This case was recommended by the Steering Committee held on 02.12.2019 and “The Committee desired that the conservation strategy and alternative livelihood options should be developed as the outcome of the project. Eco-tourism could be an option. Moreover, those households that will directly benefit from the eco-tourism industry should have better knowledge of local natural resources and greater general awareness of conservation issues. One of the basic objectives of ecotourism is to engage local communities so that they benefit from conservation, economic development and environmental education. Locals serve mostly as tourist guides, food providers, or souvenir vendors in the locality. GIS, GPS data should be prepared and movement of animals should be recorded. Activity and movement patterns can be estimated using data collected by direct observations and capture-recapture collected using live traps, camera trapping or using radio tracking devices. It was observed by the Committee that the area of study is large and the PI may find it difficult to work in such large and inaccessible areas.*

The TFAC in its 9<sup>th</sup> meeting held on 18.11.2019 had recommended **the project for funding initially for one year and extendable for another two years after assessing the progress of one-year work by TFAC”**.

The PI made the presentation and stated that he achieved a total of 116 numbers of burrows and 4 termite mounds were recorded. A distribution map of Chinese pangolin was prepared based on indirect evidences (burrows) using QGIS.

#### **Expected Outcome of the Project: -**

- Develop a baseline database on their distribution, relative abundance, activity pattern and habitat preference.
- Development of maps of trading hotspots zones in the state to strengthen patrolling activities to curb pangolin trade in North East India.
- Reduction of poaching cases due to education awareness programs.
- People’s perception towards conservation of pangolin will be changed.
- Students and school children will develop a better mindset towards conservation of wildlife in this region.

- Gaps between plans of forest management and their implementation by local communities will be reduced.
- Proper trained and knowledge forest guards will be established through capacity building.
- A collaborative approach will be formed between conversationalist and local communities.
- Training and workshops on alternative livelihood sources can augment the income of local people and thus reduce dependency on forest.
- The conservation strategies will be suggested to the state government.
- Research reports and publications will be made from the data obtained in reputed journals.

Based on the presentation, the Committee adjudged the progress of the project as **Good**. The Committee suggested the PI to move faster to achieve the objectives of the research project. Right now, the PI has achieved only 03 objectives only. The PI should carry out the relationship between termite mounds and the Burrows and the number of burrows between open and closed forest. Based on the presentation and request of the PI, the Committee agreed to extend the project tenure **for another two years (from 28.05.2021 to 28.05.2023) as already agreed to**. The Committee also agreed to release the next instalment on receipt of the required documents from the Institute/PI through proper channel.

**3.2. 14-13/2012-RE– “Systematics and Life History Strategies of Strepshipteran Parasitoids (Insecta: Strepsiptera) with Special Emphasis on Stylopisation of Pests of Rice Agro-Ecosystem in West Bengal”** sanctioned to Prof. Niladri Hazra, Department of Zoology, University of Burdwan, P.O. Rajbati, Burdwan, Purba Bardhaman, West Bengal.

**Project Details:** This project was started on 23<sup>rd</sup> January, 2014 for a period of 3 years with a total cost of ₹32,03,751/-. The tenure of the project was expired on 22<sup>nd</sup> January, 2017. A total of ₹29,80,280/- (in 03 instalments) has been released so far against the approved project cost of ₹32,03,751/-.

**The TFAC accepted the FTR** and the findings of the study presented in the FTR in its 13<sup>th</sup> TFAC meeting held on 16.07.2020. The Committee has noted that the consolidated UC, ES submitted by PI are not in the format. The email dated 20.08.2020 were sent to the PI to submit the requisite documents like UC, ES, accrued bank interest and unspent amount lying with the PI; for closure of the Project, but no response was received from the PI.

For this project, an Audit Memo No. MoEF&CC/Compliance Audit/2021-22/24 Dated 30.12.2021 received from Office of Director General of Audit (Environment & Scientific Departments). The Ministry sent the reply to the CAG on 11.02.2022.

The Ministry again sent reminders to the PI, vide email dated 18.02.2022, 23.02.2022 and 08.03.2022, for refunding unspent balance with accrued bank interest. Now, the PI vide letter dated 16.03.2022 submitted Audited Consolidated Utilization Certificate, Expenditure Statement from 23.01.2014 to 22.01.2017 and a Demand draft of ₹70,467/- (₹Seventy Thousand Four Hundred Sixty-Seven Only) for unspent balance with accrued bank interest (₹61476/- as unspent balance and ₹8,991/- as accrued bank interest) in the favour of Pay and Account Officer MoEF&CC (DD. No. 579510, dated 15.03.2022) and the same was deposited into Govt. Bank account, MoEF&CC.

The PI shown arrears in their consolidated Utilization Certificate which is due from the Ministry.

The Committee has suggested that once the project has been settled, then the FTR need to be forwarded to ZSI and BSI and other academic/research institutions for wider publicity as per the standard protocol. Specimen samples and new species records should be formatted and sent to the ZSI and BSI respectively. The Committee also recommended to release the arrears to the research scholars based on the written request from them.

**Agenda Item No. 4:** Consideration of old **R&D** projects for Final Technical Report (FTR) presentations:

**4.1. 19-339/2013-RE– “Bulk Utilization of Red Mud for Making Advanced Ligno-Silico Aluminous (LSA) Geopolymeric Materials”** sanctioned to Dr. (Er) Manish Mudgal, Senior Principal Scientist, Section Head, CSIR-AMPRI, Bhopal.

**Project Details:** This project was started on August, 2016 for a period of 3 years with a total cost of ₹63,90,920/-. The tenure of the project completed in 31<sup>st</sup> March, 2020. A total of ₹45,47,520/- (in 02 instalment) has been released so far out of approved project cost of ₹63,90,920/-.

This project was placed in 3<sup>rd</sup> TFAC Meeting held on 17.05.2019 and TFAC gave extension of 07 months for completion of the project i.e. upto 31.03.2020. Now, the PI had submitted Final Technical Report of the research project and also requested to the release of third Instalment amounting to ₹18,09,880/-.

Based on the presentation, the Committee adjudged the progress of the project as **satisfactory**. The Committee accepted the FTR and also agreed to release the balance amount, if any to the project proponent on receipt of the required documents from the PI/Institution through proper channel.

**4.2. 19-56/2013-RE – “Impact of Environmental Bioaerosol Pollution on Human Health: A “case-control Study” for Exacerbation of COPD in North Indian Population”** sanctioned to Dr. Chirashree Ghosh, Department of Environmental Studies, University of Delhi, Delhi.

**Project Details:** This project was started on 1<sup>st</sup> November, 2015 for a period of 3 years with a total cost of ₹37,72,216/-. The tenure of the project was completed on May, 2020 (including extension granted by the Ministry). A total of ₹31,06,644/- has been released so far out of approved project cost of ₹37,72,216/-.

This project was considered in the 16<sup>th</sup> Meeting of the TFAC held on 07.08.2020. The PI had informed to the TFAC that the work relating to Objective 4 given below has not been completed:

**Objective 4:** *To evaluate correlation among (i) seasonal and temporal bio-aerosols enumeration, (ii) inflammatory cytokine levels, (iii) respiratory dysfunction in order to identify the role of Gene Environment interaction in COPD in association with ambient Bioaerosols.*

*The PI sought an extension upto May 2020 for completion of the study and for the submission of FTR. The Committee had noted that the composition of bio-aerosols (fungi and bacteria) found in PM10 and PM2.5 in the geographical area of study as sought by Steering Committee is yet to be provided. The Committee after deliberations agreed for another extension of the project until May 2020 for completion and submission of FTR with no additional budget. The Committee decided that no further extension should be provided to the PI for completion of the*

*project. The Committee agreed for release of next instalment as per GFR 2017, subject to receipt of Hard copy of the Interim Report and hard copies of documents submitted to be complete and in order.*

*The TFAC was informed that the PI has not submitted any document after the 9<sup>th</sup> TFAC meeting held on 18.11.2019. The Committee was informed that an amount of Rs 31,06,644/- (82.23%) has been already released of the total cost of Rs. 37,72,216/- of the project. As per the (old) R&D Scheme Guidelines of 2012, a maximum of 90% can be released and the PI is thereafter required to submit the FTR, and Consolidated audited UC, ES, bills & receipts, photographs of permanent equipment, etc for consideration and acceptance of FTR for final release of balance payment of 10% after acceptance of FTR. The*

*Committee after deliberations decided to release an amount of ₹2,88,351/- totalling 90% of the total project cost. The Committee requested RE Division to follow up with the PI for early submission of the FTR for consideration of the TFAC and the Consolidated audited UC, ES etc as per check list without any further delay.”*

Now, the PI has submitted Final Technical Report of the above said research project.

The PI had made the presentation and she stated that the 02 students didn't get their fellowship. The Committee has suggested that the FTR should be sent to the Committee members and they look into it and then again, it will be placed in the next TFAC meeting for acceptance for the release of the 10% amount and closure of the project account finally.

**4.3. 14/246/2015-RE – “Monitoring structure, functioning and ecosystem services of dry tropical forest ecosystem of Gir for conservation and management of ecosystem, prey populations and predators”** sanctioned to Dr. Jamal A. Khan, Department of Wildlife Sciences, Aligarh Muslim University, Aligarh.

**Project Details:** The above said project was sanctioned at a total cost of ₹53,52,680/- for a period of 03 years. The project started on 10<sup>th</sup> May, 2016 and the tenure of the project was completed in 31<sup>st</sup> March, 2020 (extension granted by the 3<sup>rd</sup> TFAC held on 17.05.2019). A total of ₹37,90,237/- (in 03 instalments) has been released so far out of approved project cost of ₹53,52,680/-.

*“The proposal was considered in the 3<sup>rd</sup> meeting of Steering Committee held on 30th August 2018 and in the 3<sup>rd</sup> TFAC meeting held on 17.05.2019. The project's tenure has been extended until 31st March 2020. The PI had, during the meetings, sought engagement of a Field Assistant whose assistance is absolutely essential for continuing the project. The TFAC and the MoEF&CC had requested the PI to furnish details of his requirement. However, details of this were not received for release of funds for engaging a field assistant. MS, TFAC stated that a letter dated 28th November 2019 has been now received from the PI stating that a second field assistant has been engaged since September 2018 to assist the team in field work. The first field assistant is being paid ₹8000/month. The total salary implication of engaging a field assistant is ₹1,52,000/- (₹8000 x 19 months) since September 2018 till 31.03.2020. This can be provided from Fellowship Head and the funds are available there under.*

*The TFAC agreed for the PI to utilize the funds available in Fellowship Head of the project funds.”*

Now, the PI has submitted Final Technical Report of their above said research project.

The PI made a presentation on the findings of the project. The Committee observed that the PI has done component wise study and completed all its envisaged objectives and outcome of the project. The Committee adjudged the findings /progress of the project as **satisfactory**. Based on the presentation, the Committee has accepted the FTR and also agreed to release the balance amount, if any to the project proponent.

**4.4. 19-79/2013-RE – "Remediation of Ground Water Contaminated with Hexavalent Chromate in Sukinda Valley, Odisha; Using Nano Zero Valent Iron (n-ZVJ) Technology"** sanctioned to Dr. Alok Sihha, Centre for Mining Environment, Department of Environmental Science and Engineering, Indian School of Mines, Dhanbad.

**Project Details:** The project was sanctioned at a total cost of ₹24,80,800/- for a period of 02 years. The project started on 17<sup>th</sup> March, 2017 and its tenure was completed on March, 2021 (including extension granted by the 13<sup>th</sup> TFAC). A total amounting of ₹23,32,720/- has been released (in 02 instalments) so far against the approved project cost of ₹24,80,800/-.

The PI made a presentation on the findings of the project. The Committee observed that the PI achieved all the objectives and outcomes mentioned in the proposal. The Committee adjudged the findings /progress of the project as **satisfactory**. Based on the presentation, the Committee has accepted the FTR and also agreed to release the balance amount, if any to the project proponent.

The meeting ended with note of thanks to the Chair.

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**LIST OF PARTICIPANTS**

<b>Sl.</b>	<b>Name/Address</b>	<b>Remarks</b>
1.	Prof. C. R. Babu (Retd.), Prof Emeritus Former Pro-VC, University of Delhi, Delhi	Chairperson
2.	Shri. M. Dwarkanath (Retired Director), DSTE, Government of Puducherry/SSO, Government of Delhi), Coimbatore	Member
3.	Shri Hitendra Padalia, Indian institute of Remote Sensing(IIRS), Dehradun	Member
4.	Shri Venkatrama Sharma, Representing Director, National Centre for Coastal research (NCCR), M/o Earth Sciences, Pallikaranai, Chennai	Member
5.	Dr. Gurmeet Singh, National Centre for Sustainable Coastal Management, Chennai	Member
6.	Dr. Jigisha Parikh, Professor, Chemical Engineering, Sardar Vallabhbhai National Institute of Technology, Surat-395007.	Member
7.	Shri V.P. Yadav, Scientist, Central Pollution Control Board, New Delhi	Member
8.	Shri G. Rambabu, Scientist, Central Pollution Control Board, New Delhi	Member
9.	Dr. Bitapi C Sinha, Wildlife Institute of India (WII), Chandrabani, Dehradun	Member
10.	Dr. Rita Khanna, Adviser, MoEF&CC	Member-Secretary
11.	Dr. Dharmendra Kumar Gupta, Scientist-F, MoEF&CC	Special Invitee
12.	Dr. Rajendra Kumar, Scientist-C, MoEF&CC	Special Invitee
13.	Shri Shivam Tyagi, ASO (RE), MoEF&CC	Special Invitee

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## LIST OF PROJECT INVESTIGATORS

Sl.	File Number	Name/Address
1.	19-7/2018/RE	Dr. Gautam Talukdar, WII, Dehradun Email: gautam@wii.gov.in
2.	19-14/2018/RE	Dr. Samrat Mondol, WII, Dehradun Email: samrat@wii.gov.in
3.	19-13/2018/RE	Dr. Vishnupriya Kolipakam, WII, Dehradun Email: vishnupriya@wii.gov.in
4.	19-4/2018-RE	Dr. S. Sathyakumar, Scientist-G, WII, Dehradun Email: ssk@wii.gov.in
5.	19-31/2018/RE	Dr. Manchi Shirish, SACON, Coimbatore. Email: manchishirish@sacon.in
6.	19-29/2018-RE	Dr. S. Babu, SACON, Coimbatore. Email: sanbabs@gmail.com
7.	19-112/2010-RE	Dr. P. Shanmugam, CLRI, Chennai Email: pshanmugham@clri.res.in
8.	19-21/2018/RE	Dr. Ajay Kumar, Rain Forest Research Institute, Assam ajayfri@gmail.com
9.	19-15/2018/RE	Dr. Gopi G.V, WII, Dehradun Email: samrat@wii.gov.in
10.	19-26/2018/RE	Dr. Janmejy Sethy, Amity University, Noida Email: jsethy@amity.edu
11.	14-13/2012-RE	Dr. Niladri Hazra, Associate Professor, Department of Zoology, The university of Burdwan, Burdwan. Email: hazra.niladri@gmail.com
12.	19-339/2013-RE	Dr. Manish Mudgal, CSIR- AMPRI, Bhopal Email: manishmudgal@ampri.res.in mmudgal1969@rediffmail.com
13.	19-56/2013-RE	Dr. Chirashree Ghosh, Deptt of Environmental Studies, University of Delhi, Delhi. Email: chirashreeghosh@hotmail.com,
14.	14/246/2015-RE	Dr. Jamal A Khan, Professor & Chairman, Department of Wildlife Sciences, AMU, Aligarh. Email: secretarywsi@gmail.com, jamal.wl@amu.ac.in
15.	19-79/2013-RE	Dr. Alok Sihha, Assistant Professor, Centre for Mining Environment, Department of Environmental Science and Engineering, ISM, Dhanbad. Email: aloksinha11@yahoo.com

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