



From: Principal & Secretary

+91 3213 255282

saratcentenary@gmail.com

scollegednk.ac.in

Dhaniakhali, Hooghly, 712302

# Sarat Centenary College

Dhaniakhali, Hooghly

Founded: 1976

Recognised Under UGC 2F&12B

WB Govt. Aided

Affiliated to The University of Burdwan

## 3<sup>RD</sup> CYCLE NAAC ACCREDITATION PROCESS-2024

**CRITERIA: 3 RESEARCH, INNOVATIONS AND EXTENSION**

**Key Indicator: 3.5 Collaboration**

**Metric: 3.5.1- Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years.**

**\* Document of Collaborative Research between Sarat Centenary College and Department of Bio-Technology (Govt. of India)**



[DR SANDIP KUMAR BASAK]  
Principal, Sarat Centenary College  
**Principal & Secretary,**  
Sarat Centenary College  
P.O.- Dhaniakhali, Dist.- Hooghly

**No. BT/PR30531/BCE/8/1496/2018**  
GOVERNMENT OF INDIA  
MINISTRY OF SCIENCE & TECHNOLOGY  
DEPARTMENT OF BIOTECHNOLOGY

Block 2, 6-8th Floors  
CGO Complex, Lodhi Road,  
New Delhi- 110 003  
Dated: 29/02/2020.

**ORDER**

Sanction of the President is hereby accorded, under Rule 18 of the Delegation of Financial Powers Rules, 1978, for the implementation of the project entitled "**Demonstration of established bio-restoration technology for ecological restoration of degraded mangrove ecosystem in Indian Sunderbans through site-specific approach across differential degradation gradients**" for a period of 5 Year 0 Month at a total cost of Rs. **24189420** (Rupees Two Crores Fourty One Lakhs Eighty Nine Thousand Four Hundred and Twenty Only) on the terms and conditions detailed here under:-

**2 The Project :**

**2.1 Title : Demonstration of established bio-restoration technology for ecological restoration of degraded mangrove ecosystem in Indian Sunderbans through site-specific approach across differential degradation gradients**

**2.2 Details of the Investigators:**

**Dr. Krishna Ray**

Assistant Professor  
Department of Botany, West Bengal State University  
Berunanpukuria, Malikapur, Barasat, Kolkata, West Bengal, 700126

**CO-PI:**

**Dr. Sandip Kumar Basak**

Principal, Botany,  
Sarat Centenary College  
Dhaniakhali, Hooghly, Chandannagar, West Bengal 712302

**Dr. Singaram Kulandaivel**

Conservator of Forests & Joint Director  
Forest Department, Govt of West Bengal  
West Bengal Forest Department  
3rd floor, North Block, Bikash Bhawan, Salt Lake, Kolkata, West Bengal, 700091

**2.3 Objectives:**

1. To restore degraded mangrove plots on the mud flats and along the eroded embankments measuring in total ~100 acres along the estuarine areas of Sundarbans with the help of already established restoration technology
2. To identify the degradation stressors associated with loss of mangrove ecosystem homeostasis across the degradation gradient and an attempt to mitigate them

**2.4 Time Schedule:**

The duration of the project is 5 Year 0 Month from the date of this sanction order.

## 2.5 Project Cost:

The total cost of the project is Rs. **24189420/-** (Rupees Two Crores Forty One Lakhs Eighty Nine Thousand Four Hundred and Twenty Only) as per details given below:

Budget Head	Year I	Year II	Year III	Year IV	Year V	Total(Rs.)
Equipment	1010300.00					<b>1010300.00</b>
Manpower	3794400.00	3794400.00	3913440.00	3913440.00	3913440.00	<b>19329120.00</b>
Overhead	70000.00	70000.00	70000.00	70000.00	70000.00	<b>350000.00</b>
Travel	300000.00	300000.00	300000.00	300000.00	300000.00	<b>1500000.00</b>
Consumables	250000.00	250000.00	250000.00	250000.00	250000.00	<b>1250000.00</b>
Contingency	150000.00	150000.00	150000.00	150000.00	150000.00	<b>750000.00</b>
<b>Total (Rs.)</b>	<b>5574700.00</b>	<b>4564400.00</b>	<b>4683440.00</b>	<b>4683440.00</b>	<b>4683440.00</b>	<b>24189420.00</b>

## 2.6 Equipment

The details of the equipment sanctioned for the implementation of the project at **Annexure-I**

## 2.7 Manpower:

The details of the manpower sanctioned for the implementation of the project at **Annexure-II**

## 3. Head of Account:

The **Non-Recurring** expenditure involved is debitable to:

Demand No. 87	Department of Biotechnology
<b>3425</b>	Other Scientific Research 2019-2020
<b>3425.60</b>	Others (Sub Major Head)
<b>3425.60.200</b>	Assistance to other Scientific Bodies (Minor Head)
<b>3425.60.200.29</b>	Biotechnology Research and Development
<b>3425.60.200.29.17</b>	Assistance for Research and Development
<b>3425.60.200.29.17.35</b>	Grants for creation of capital assets

The **Recurring** expenditure involved is debitable to:

Demand No. 87	Department of Biotechnology
<b>3425</b>	Other Scientific Research 2019-2020
<b>3425.60</b>	Others (Sub Major Head)
<b>3425.60.200</b>	Assistance to other Scientific Bodies (Minor Head)
<b>3425.60.200.29</b>	Biotechnology Research and Development
<b>3425.60.200.29.17</b>	Assistance for Research and Development
<b>3425.60.200.29.17.31</b>	Grants -in-Aid General

## 4. Terms & Conditions:

**4.1** The other terms and conditions governing this sanction are attached at Annexure- III.

**4.2** A Memorandum of Agreement (MoA) will be signed between the Department of Biotechnology and the grantee institution on Non-Judicial stamp paper Rs. 100/- in the enclosed format and the second release/installment will be made only after signing of MoA between the grantee institutions and DBT. In case of NGO's and Private Institution's, execution of MOA is mandatory before first release. A format of the MoA is enclosed in Annexure-IV

**4.3** The Institute/Agency will keep the whole of the grant in a Bank Account earning interest, and the interest so earned should be reported to DBT in the Utilization Certificate and Statement of Expenditure. The Interest so earned will be treated as created to the institute/Agency and shall be adjusted towards further installment of the grant and or at the time of Final Settlement of Accounts.

**5.** No International Travel will be undertaken from the sanctioned project grant unless specified otherwise.

**6.** The Registrar; West Bengal State University, Kolkata, West Bengal would be responsible for submission of Statements of Expenditure (SoE), utilization certificates (UC), Assets Certificates, Manpower staffing & expenditure details in prescribed DBT formats to DBT in respect of grants released in this project from time to time.

**7.** PI's of DBT sponsored projects can consider appointment of JRF from Category-II merit list of DBT-BET exam so that candidates can be paid fellowships at par with NET/GATE/BET qualified candidates as per DST OM No. A.SR/S9/Z-08/2018 dated 30 Jan 2019. However, there is no compulsion on PI's to select candidates for JRF in their projects from Category-II of DBT-BET.

**8.** As per Rule 236 (1) of GFR 2017, the accounts of all Grantee Institutions or Organizations shall be open to inspection by the sanctioning authority and audit, both by the Comptroller and Auditor General of India under the provision of CAG (DPC) Act 1971 and internal audit by the Principal Accounts Office of the Ministry or Department, whenever the Institution or Organizations is called upon to do so.

**9.** If the Research Project involves biological resources, the obligations under the Biological Diversity Act 2002 as applicable shall be complied with by the Project Investigator, the details of such obligations can be accessed at [www.nbaindia.org](http://www.nbaindia.org)

**10.** If this project works requires any Statutory Clearance (such as Ethical Committee Clearance, Informed Consent, Animal Ethics Committee Clearance, Institutional Bio-safety Committee Clearance, National Biodiversity Authority approval etc.), Project investigator(s) and Host Institution(s) shall compulsorily comply the same before undertaking such activities.

**11.** This issues, under the power delegated to this Department and with the concurrence of IFD vide their SAN No 102/I.F.D./SAN 3972 / 2019/2020 dated 29.02.2020.

**12.** This sanction order has been noted at serial no. NIL in the Register of Grants.



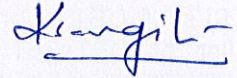
**(Dr. Sangita Kasture)**  
**Scientist 'F'**

डॉ. संगीता कस्तूरे / Dr. Sangita Kasture  
वैज्ञानिक 'एफ' / Scientist 'F'  
बायोटेक्नोलॉजी विभाग / Deptt. of Biotechnology  
विज्ञान और प्रौद्योगिकी मंत्रालय / Ministry of Science & Tech.  
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

**To,**  
The Pay & Accounts Officer,  
Department of Biotechnology,  
New Delhi - 110 003.

**Copy to:**

- 1 The Principal Director of Audit (Scientific Departments), DACR Building, New Delhi- 110 002.
- 2 The Registrar, West Bengal State University, Barasat, Berunanpukuria, Malikapur, North 24 Praganas, Kolkata - 700126, West Bengal
- 3 Dr. Krishna Ray, Assistant Professor, Department of Botany, West Bengal State University, Berunanpukuria, Malikapur, Barasat, Kolkata - 700126, West Bengal
- 4 Dr. Sandip Kumar Basak, Principal, Botany, Sarat Centenary College, Dhaniakhali, Hooghly, Chandannagar West Bengal 712302
- 5 Dr. Singaram Kulandaivel, Conservator of Forests & Joint Director Forest Department, Govt of West Bengal, West Bengal Forest Department, 3rd floor, North Block, Bikash Bhawan, Salt Lake, Kolkata, West Bengal, 700091
- 6 Cash Section, DBT (2 copies).
- 7 Sanction Folder.
- 8 File Copy.



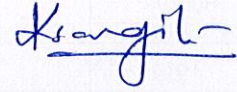
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विज्ञान और प्रौद्योगिकी मंत्रालय / M/o Science & Tech.  
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

### Annexure -I

Details of the Equipment sanctioned for the implementation of the project entitled **"Demonstration of established bio-restoration technology for ecological restoration of degraded mangrove ecosystem in Indian Sunderbans through site-specific approach across differential degradation gradients"**:

West Bengal State University			
SNo.	Name of Equipment	No.	Cost(Rs.)
1.	Maintenance of the earlier constructed central nursery on site and other branch nurseries required to be constructed	1	180000.00
2.	B.O.D. incubator shaker	2	197800.00
3.	Freezer cum Cooler	1	29400.00
4.	Concentrator plus, complete system with integrated diaphragm vacuum pump with rotor	1	550000.00
5.	Liquid Nitrogen Container	1	53100.00
Total			1010300.00



**(Dr. Sangita Kasture)**  
**Scientist 'F'**

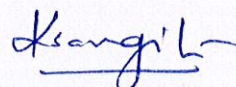
डॉ. संगीता कस्तुरे / Dr. Sangita Kasture  
वैज्ञानिक 'एफ' / Scientist 'F'  
बायोटेक्नोलॉजी विभाग / Deptt. of Biotechnology  
विज्ञान और प्रौद्योगिकी मंत्रालय / M/o Science & Tech.  
भारत सरकार, नई दिल्ली / Govt. of India, N. Delhi

## Annexure -II

Details of the manpower sanctioned for the implementation of the project entitled **"Demonstration of established bio-restoration technology for ecological restoration of degraded mangrove ecosystem in Indian Sunderbans through site-specific approach across differential degradation gradients"**:

Head	No. of Position	Year I	Year II	Year III	Year IV	Year V	Total (Rs.)
Junior Research Fellow Rs. 31000/-+24% HRA	2	922560	922560	0	0	0	<b>1845120</b>
Senior Research Fellow Rs.35000/-+24% HRA	2	0	0	1041600	1041600	1041600	<b>3124800</b>
Research Associate Rs. 47000/-+24% HRA	1	699360	699360	699360	699360	699360	<b>3496800</b>
Field Assistant/ Field supervisor@ Rs.20000/-+24% HRA	1	297600	297600	297600	297600	297600	<b>1488000</b>
Workers/ Field workers @ Rs.18000/-+24% HRA	7	1874880	1874880	1874880	1874880	1874880	<b>9374400</b>
<b>Total(Rs.)</b>		<b>3794400</b>	<b>3794400</b>	<b>3913440</b>	<b>3913440</b>	<b>3913440</b>	<b>19329120</b>

Emoluments detail of research personal(s) mentioned in table(s) of Annexure-II shall be applicable only if candidate(s) met educational qualification and eligibility criteria as per DST OM No. SR/S9/Z-08/2018 dated 30.01.2019 for JRF/SRF/RA and OM No. SR/S9/Z-05/2019 dated 21.08.2019 for all other categories.



**(Dr. Sangita Kasture)**  
**Scientist 'F'**

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वैज्ञानिक 'एफ' / Scientist 'F'  
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