

No. BT/PR12899/NDB/39/506/2015
GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY

Block 2, 6-8th Floors
CGO Complex, Lodhi Road,
New Delhi- 110 003
Dated:20/06/2017

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: "**Mapping and Quantitative Assessment of Plant Resources and its Distribution in Madhya Pradesh, Central India**" for a period of 4 Year 0 Month at a total cost of Rs. **21226440** (Rupees Two Crores Twelve Lakhs Twenty Six Thousand Four Hundred and Fourty Only) on the terms and conditions detailed here under:-

2 The Project :

2.1 Title : "Mapping and Quantitative Assessment of Plant Resources and its Distribution in Madhya Pradesh, Central India"

2.2 Details of the Investigators:

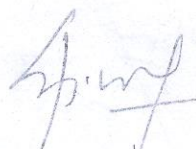
Project Coordinator and Principal Investigator:-

Prof. Mohammed Latif Khan
Professor
Department of Botany
Dr. Harisingh Gour Central University,
Sagar, Madhya Pradesh, 470003

Principal Investigators:-

Dr. Amit Kumar
Assistant Professor,
Department of Land Resource Management,
Central University of Jharkhand,
Ranchi, Jharkhand-835205

Prof. P K Khare
Professor
Department of Botany
Dr. Harisingh Gour Central University,
Sagar, Madhya Pradesh- 470003



CO-PI:

Dr. Purabi Saikia
Assistant Professor,
Department of Environmental Sciences,
Central University of Jharkhand
Ranchi, Jharkhand- 835205

Technical Collaborator

Prof .K N Ganeshiah
Professor
Department of Genetics and Plant Breeding
University of Agricultural Sciences
GKVK, Bengaluru
Karnataka-560065

Consultant Plant Taxonomist

Prof. T. R .Sahu
Professor
Department of Botany
Dr. Harisingh Gour Central University,
Sagar, Madhya Pradesh- 470003

2.3 Overall Objectives:-

1. To study the floristic composition and to analyze the quantitative and qualitative characteristics of vegetation of Madhya Pradesh.
2. To study the population and regeneration status of documented tree species.
3. To identify the threats on plant resources and enlisting the threatened species.

Work Allocation:-

1. Dr. Harisingh Gour Central University, Sagar, MP will take care of Field Data Collection and Plant Identification.
2. Central University of Jharkhand, Ranchi will create grid based TREE model, field work designing, image processing, data compilation, management, data base preparation and will also help in Plant Identification.

Time schedule of activities:-

S.no	Work Element	Time Period(months)
1.	Procurement of instruments	0-3
2.	Recruitment of Personal	0-3
3.	Literature survey and methodology and sampling related knowledge gathering	3-5
4.	Training to the project staff and Team members to feed the data sheets etc.	3-5
5.	Developing and assigning grids	4-6
6.	Identifying heterogeneity of grids to decide transect preferably on the basis of NDVI etc	4-8
7.	Data base management	4-48
8.	Data collection by field sampling	6-45
9.	Analysis of Data	6-45
10.	Interpretation of results & suggestion for its utilization	42-48
11.	Preparation of Reports	44-48

Year wise plan of work and targets to be achieved:-

(After receiving grant ,procurement of instrument & appointment project staff)

1 st year	1. Literature survey (to be continued till the completion of the study) 2. Grid Generation and identifying heterogeneity of grids to decide transects preferably on the basis of NDVI etc 3. Floristic survey of total 300 transects(100 transects per group) 4. Population and regeneration status study of selected tree species 5. Plant identification and herbarium preparation (to be continued till the completion of the study) 6. Database management (to be continued till the completion of the study)
2 nd year	1. Floristic survey of total 720 transects. (240 transects per group) 2. Continuation of Population and regeneration status study. 3. Vegetation classification, characterization, quantification and mapping using satellite remote sensing.
3 rd year	1. Floristic survey of total 720 transects (240 transects per group) 2. Continuation of Population and regeneration status study 3. Continuation of spectral data collection of selected tree species. 4. Vegetation classification, characterization, quantification and mapping using satellite remote sensing.
4 th year	1. Floristic survey of total 720 transects (240 transects per group) 2. Compilation of the Data, Satellite image processing , GIS analysis and statistical data and analysis 3. Generation of Plant distribution maps 4. Report writing and submission

2.4 Time Schedule:

The duration of the project is 4 Year 0 Month from the date of this sanction order.

2.5 Project Cost:

The total cost of the project is Rs. **21226440/-** (Rupees Two Crores Twelve Lakhs Twenty Six Thousand Four Hundred and Fourty Only) as per details given below:

Institute	Year I	Year II	Year III	Year IV	Total Cost(Rs.)
1. Central University of Jharkhand	1769800	1180080	1285488	1306392	5541760
2. DR. H.S. GOUR UNIVERSITY	4458800	3510240	3826464	3889176	15684680
Total (Rs.)	6228600	4690320	5111952	5195568	21226440

Institute wise details are:

Budget Head	Year I	Year II	Year III	Year IV	Total(Rs.)
1. DR. H.S. GOUR UNIVERSITY , Sagar					
Equipment	1000400.00				1000400.00
Manpower	2678400.00	2730240.00	3046464.00	3109176.00	11564280.00
Overhead	200000.00	200000.00	200000.00	200000.00	800000.00
Travel	360000.00	360000.00	360000.00	360000.00	1440000.00
Consumables	120000.00	120000.00	120000.00	120000.00	480000.00
Contingency	100000.00	100000.00	100000.00	100000.00	400000.00
Total (Rs.)	4458800.00	3510240.00	3826464.00	3889176.00	15684680.00
2. Central University of Jharkhand					
Equipment	607000.00				607000.00
Manpower	892800.00	910080.00	1015488.00	1036392.00	3854760.00
Overhead	100000.00	100000.00	100000.00	100000.00	400000.00
Travel	60000.00	60000.00	60000.00	60000.00	240000.00
Consumables	60000.00	60000.00	60000.00	60000.00	240000.00
Contingency	50000.00	50000.00	50000.00	50000.00	200000.00
Total (Rs.)	1769800.00	1180080.00	1285488.00	1306392.00	5541760.00

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. 85	Department of Biotechnology
3425	Other Scientific Research 2017-2018
3425.60	Others (Sub Major Head)
3425.60.200	Assistance to other Scientific Bodies (Minor Head)
3425.60.200.29	Biotechnology Research and Development, Human Resource Development, Research Resources and Facilities
3425.60.200.29.17	Assistance for Research and Development
3425.60.200.29.17.35	Grants for creation of capital assets

The Recurring expenditure involved is debitable to:

Demand No. 85	Department of Biotechnology
3425	Other Scientific Research 2017-2018
3425.60	Others (Sub Major Head)
3425.60.200	Assistance to other Scientific Bodies (Minor Head)
3425.60.200.29	Biotechnology Research and Development, Human Resource Development, Research Resources and Facilities
3425.60.200.29.17	Assistance for Research and Development
3425.60.200.29.17.31	Grants-in-aid General

4. Terms & Conditions:

Considering the time bound nature of the project, the project will be monitored by the Task Force / Committee constituted by DBT. In addition, the PI will submit half yearly progress report as per format in Annexure-V.

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

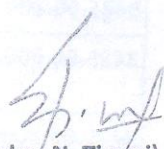
4.2 A Memorandum of Agreement (MoA) will be signed between the Department of Biotechnology and the grantee institution on Non-Judicial stamp paper Rs. 100/- in the enclosed format and the second release/installment will be made only after signing of MoA by the grantee institutions and its acceptance by DBT. In case of NGO or Private Institution, MOA signed is mandatory 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 Utilisation 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, Central University of Jharkhand, Ranchi, Jharkhand and The Registrar, DR. H.S. GOUR UNIVERSITY, Sagar, Madhya Pradesh 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.

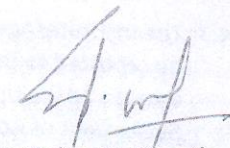
7. PI's of DBT sponsored projects can consider appointment of JRF from Category-II merit list of DBT-BET exam so that candidates can be paid fellowships at par with NET/GATE/BET qualified candidates as per DST OM No. A.SR/S9/Z-09/2012 dated 21 Oct 2014. However, there is no compulsion on PI's to select 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 Organisations 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 Organisation is called upon to do so.
9. This issues under the power delegated to this Department and with the concurrence of IFD vide their SAN No. **102/IFD/SAN/1206/2017-2018** dated **June, 19 2017**.
10. This sanction order has been noted at serial no. 9 in the Register of Grants.


(Dr. Onkar N. Tiwari)
Scientist 'D'

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

Copy to:

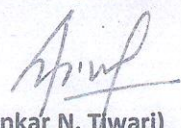
- 1 The Principal Director of Audit (Scientific Departments), DACR Building, New Delhi- 110 002.
- 2 Prof. Mohammed Latif Khan (Project Co-ordinator), Department of Botany, Dr. Harisingh Gour Central University, Sagar, Madhya Pradesh-470003
- 3 The Registrar, Dr. Harisingh Gour Central University, Sagar, Madhya Pradesh- 470003
- 4 The Registrar, Central University of Jharkhand, Ranchi, Jharkhand- 835205
- 5 Professor M L Khan, Department of Botany, Dr. Harisingh Gour Central University, Sagar, Madhya Pradesh- 470003
- 6 Dr. Purabi Saikia, Assistant Professor, Department of Environmental Sciences, Central University of Jharkhand, Ranchi, Jharkhand- 835205
- 7 Dr. Amit Kumar, Assistant Professor, Department of Land Resource Management, Central University of Jharkhand, Ranchi, Jharkhand- 835205
- 8 Dr. P K Khare, Professor, Department of Botany, Dr. Harisingh Gour Central University, Sagar, Madhya Pradesh- 470003
- 9 Cash Section, DBT (2 copies).
- 10 Sanction Folder.
- 11 File Copy.


(Dr. Onkar N. Tiwari)
Scientist 'D'

Annexure -I

Details of the Equipment sanctioned for the implementation of the project titled "Mapping and Quantitative Assessment of Plant Resources and its Distribution in Madhya Pradesh, Central India":

Dr. H.S. GOUR UNIVERSITY, Sagar			
SNo.	Name of Equipment and per unit cost	No.	Cost(Rs.)
1.	Laser Printer (Black & White)	1	19700.00
2.	DSLR Camera	2	77700.00
3.	Thermohygrometer	3	34800.00
4.	Luxmeter	3	34200.00
5.	Handheld GPS with post processing office software	2	458000.00
6.	Herbarium Cabinets	12	150000.00
7.	Laptop and Desktop and accessories	1 each	130000.00
8.	Computer Tablet	3	53700.00
9.	Digital Caliper	3	42300.00
Total			1000400.00
Central University of Jharkhand, Ranchi			
SNo.	Name of Equipment and per unit cost	No.	Cost(Rs.)
1.	Computer Desktop and accessories	2	134600.00
2.	DSLR Camera	1	38800.00
3.	Laser Computer Printer (A4)	1	19700.00
4.	5KVA UPS	1	185000.00
5.	Handheld GPS with post processing office software	1	228900.00
Total			607000.00


(Dr. Onkar N. Tiwari)
Scientist'D'

Details of the manpower sanctioned for the implementation of the project titled "Mapping and Quantitative Assessment of Plant Resources and its Distribution in Madhya Pradesh, Central India":

Head	No. of Position	Year I	Year II	Year III	Year IV	Total (Rs.)
1. Central University of Jharkhand, Ranchi						
Junior Research Fellow @Rs.25000+20%HRA for 1 st and 2 nd year and Senior Research Fellow @Rs.28000/-+20%HRA for 3 rd and 4 th year	2	720000.00	720000.00	806400.00	806400.00	3052800.00
Technical Assistant @Rs.12000/ Per month +20%HRA for 1 st year with 10% increment for 2 nd , 3 rd and 4 th year	1	172800.00	190080.00	209088.00	229992.00	801960.00
Total(Rs.)		892800.00	910080.00	1015488.00	1036392.00	3854760.00
2. DR. H.S. Gour University, Sagar						
Junior Research Fellow @Rs.25000+20%HRA for 1 st and 2 nd year and Senior Research Fellow @Rs.28000/-+20%HRA for 3 rd and 4 th year	6	2160000.00	2160000.00	2419200.00	2419200.00	9158400.00
Technical Assistant @Rs.12000/ Per month +20%HRA for 1 st year with 10% increment for 2 nd , 3 rd and 4 th year	3	518400.00	570240.00	627264.00	689976.00	2405880.00
Total(Rs.)		2678400.00	2730240.00	3046464.00	3109176.00	11564280.00

Emoluments detail of research personal(s) mentioned in table(s) of Annexure-II shall be applicable only if candidate(s) met educational qualification (Graduate in Science) and eligibility criteria as per DST OM No.SR/S9/Z-09/2012 dated 21.10.2014 and eligibility criteria of the Technical Assistant will be as approved in this project.

(Dr. Onkar N. Tiwari)
Scientist'D'