अनिल कुमार जैन, भा० प्र० से०
अपर सचिव
ANIL KUMAR JAIN, IAS
Additional Secretary

Prosecy, Planning

भारत सरकार
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE

सत्यमेव जयते

24 JAN 2018
FTS 12141/2018

D.O No.: 05/06/2015-CS-I (Pt.)

Date: 18th January, 2018

Sec Pl

Dy Secy (PL) 30/01/18

Sub.: Engagement of line agencies/ State departments with the projects under National Mission on Himalayan Studies (NMHS) for long-term sustainability of these projects.

Dear Shri Kropha,

In file pls
Urgent
25/01/18

You may be aware that the Government of India launched the **National Mission on Himalayan Studies (NMHS)** as a **Central Sector (CS) Grant-in-Aid Scheme** in 2015. The Ministry has set-up the Project Management Unit (PMU) of NMHS at G.B. Pant National Institute of Himalayan Environment and Sustainable Development (GBPNIHESD) being the Nodal Institute for the Indian Himalayan Region (IHR).

JT Secy.

The jurisdiction of NMHS covers all 12 States of the IHR with a broad Vision "To support the sustenance and enhancement of the ecological, natural, cultural, and socio-economic capital assets and values of the Indian Himalayan Region (IHR)". A note on progression of NMHS is enclosed as **Annexure-I** for your kind information. During the last two years, mission activities have been initiated all across the IHR states by supporting 51 innovative pilot/ research/ studies and related development interventions (**Annexure-II**).

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"Livelihood Options & Employment Generation" and **"Skill Development & Capacity Building"** have been the prioritized thematic areas under the NMHS and projects in these thematic areas have been initiated in your state through Non-Governmental Organizations (**Annexure-III**). Most of these projects are directly relevant for State departments/Line agencies and active engagement of concerned line agencies/state departments will help in long term sustainability of these projects.

In view of this, you are requested to please suggest relevant Line Agencies/Departments under the State Government which could be directly associated with all such projects for its long-term sustainability. Further, an appropriate communication is requested from your good office to all such agencies for their active participation in the NMHS activities

In case the State Government or the concerned line agency is willing to undertake a project under NMHS, the proposal can be submitted for consideration by this Ministry. Detailed Guidelines in this regard can be seen on Ministers web site at http://envfor.nic.in/ or at http://nmhs.org.in.

Thanking you and with best regards,

Encl: A.A.

Yours Sincerely,

(A.K. Jain)

To,

Shri K. S. Kropha,
Chief Secretary,
Government of Meghalaya,
Secretariat, Shillong-793001

Copy to: Er. Kireet Kumar, Director I/C and Nodal Officer, NMHS-PMU, GBPNIHESD HQs, Kosi-Katarmal, Almora 263643, Uttarakhand.

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Annexure-I

NATIONAL MISSION ON HIMALAYAN STUDIES (NMHS)

- The Himalaya, a highly complex and diversified mountain system both in terms of biological and physical attributes, is considered a life-support system for millions of people in uplands and much more in lowland areas of India. It acts as climate regulator for much of Asia and is globally recognized for its sacred, spiritual and philosophical values. While the richness and uniqueness of bio-physical and socio-cultural diversity, and rich heritage of Indigenous Knowledge and Practices (IKP) have earned the Himalaya a global recognition, this system being young and geotectonically active remains inherently unstable, fragile, and prone to natural disasters. Also, the vulnerability of this mountain chain towards human-induced disturbances is now well established. Therefore, being special and change sensitive system, and more importantly due to its life-support values, the Himalaya deserves a special attention.

- Recognizing the above, and realizing that the Himalaya is important for Ecological Security of the country, the Government of India attaches highest priority to protect unique but highly fragile Himalayan ecosystem. The **National Mission on Himalayan Studies (NMHS)**, a Central Sector Grant-in-aid Scheme, therefore, targets to provide much needed focus, through holistic understanding of systems components and their linkages, in addressing the key issues relating to conservation and sustainable management of natural resources in Indian Himalayan Region (IHR). The jurisdiction of NMHS includes all IHR states with a broad Vision to support the sustenance and enhancement of the ecological, natural, cultural, and socio-economic capital assets and values of the IHR. The mission is to launch and support innovative studies and related knowledge interventions. Mission strategy is to focus on enhancing livelihoods of local communities, in line with the National Environment Policy, 2006 of the Government.

- The broad objectives of the Mission are (i) to build a body of scientific and traditional knowledge on the aforesaid indicative thematic areas, (ii) to build a network of practitioners (individual and institutions) engaged in working solutions to problems in the thematic areas and (iii) to demonstrate workable/implementable/replicable solutions to the problems in the thematic areas.

- The NMHS has identified a list of 25 indicative thematic areas under 6 broad thematic thrusts: (i) Sustainable management of land and water resources; (ii) Environmental assessment and management; (iii) Conservation and sustainable use of biodiversity;(iv) Sustainable infrastructure and energy security; (v) Supplementary livelihood options; and (vi) Awareness and capacity building. While targeting the above-mentioned goals and thematic thrusts, the Mission specifically focuses on achieving the objectives of: (a) building a body of scientific and traditional knowledge on the aforesaid indicative thematic areas; (b) building a network of practitioners engaged in working solutions to problems in the thematic areas; (c) demonstrating workable/implementable/replicable solutions to the problems in the thematic areas. The core philosophy is to enhance the focus and funding to support demand-driven research and technological innovations by

way of supporting *Studies, Pilots and Interventions* along with institutional strengthening and capacity building.

- The scheme, in addition, also envisages facilitating knowledge building in IHR Institutions by way of: (i) creating various fellowship and academic (national) exchange programs, (ii) upgrading infrastructure of key academic and research institutions, (iii) promoting education, awareness and outreach programs and events, (iv) developing online system for monitoring and dissemination of results of the studies, (v) creating of a central capacity building/training unit or establishing Centre for Himalayan studies; (vi) supporting Masters Programme in Himalayan Universities; (vii) organizing seminar, conferences, symposia, colloquium, etc., (viii)organizing international, regional and national conferences/workshops, etc.

- For NMHS a provision of Rs. 63.45 crores and Rs. 16.50 crore has been made in the financial years 2015-16 and 2016-17,. respectively. It is proposed to carry forward the initiative to the next five year with standard incremental increase of 10-15% every year. It is also to be informed that the 1st instalment of grant-in-aid of Rs. 32.65 crore was received by the Institute on 16-12-2015 and subsequently the 2nd instalment of Rs. 30.80 crore was sanctioned by the MoEF&CC on 29.03.2016 and the same was actually received by the Institute on 02.04.2016 in the financial year 2016-17. Therefore the amount of Rs.30.80 crore will be utilized for disbursement of 2nd year grant of on-going projects/fellowships and 1st instalment of new projects/fellowships to be sanctioned in the current financial year 2016-17 by December/January. The 2nd instalment of on-going projects/fellowships shall be released only after completion of one year i.e. in the month of March, 2017. Total grant received in 2016-17 is Rs. 14.00 Crore. An amount of Rs. 2.50 crore was also sanctioned in 2016-17, which was received in April 2017.

- The scheme is being implemented by the Ministry of Environment, Forest & Climate Change (MoEF&CC), and it has its nodal and serving hub with G.B. Pant Institute of Himalayan Environment & Development (GBPIHED), Kosi Katarmal, Almora (Uttarakhand) with a fully dedicated Project Management Unit (PMU) for NMHS (sanctioned on Aug 31.8.2015). To guide the overall implementation a Steering Committee, Chaired by the Secretary MoEF&CC, is in place. Also, a Scientific and Technical Advisory Group (STAG) with wide base representation of Stakeholder Groups, and under the Chair of Special/Additional Secretary, MoEF&CC, has been constituted.

- Project Management Unit (PMU) has been established at GBPIHED with project based staff namely Project Scientists (1 in GBPNIHESD and 1 in MoEF&CC), Finance Specialist (1), Project Monitoring Officer (1), Project Assistants (2), Data Entry Operators (2 at GBPIHED 1 at MoEF&CC), Office Attendants (1 each at GBPIHED and MoEF&CC). Data Centre is also made functional with contractual staff. Appointment of Project Manager, Project Scientist (1), and Project Assistant (at MoEF&CC) is in progress. A dedicated database management centre is also established under PMU with one Computer Lab Assistant one ICT Technician. Filling up of other positions of Data Centre (2 Office/lab Assistants, 1 Project Scientist, 2 ICT Technician, 3 RAs and 6 JRFs) will be done in

phased manner depending upon the work requirement.

- First call for projects has been made in Jan. 2016. Total 381 proposals have been received through open advertisement for conducting studies in IHR under Large Grant (45), Medium Grant (154) and Small Grant (182). In Year 2015–16, total 3 Scientific and Technical Advisory Group (STAG) and 2 Steering Committee meetings were conducted for review and evaluation of Project Proposals received for NMHS Year 2015–16.

- Total 4 meetings of STAG and 3 meetings of Steering Committee were organized in last two years by the PMU. Targeting the Indian Himalayan Region (IHR), total 42 Project Grants [*i.e.* 7 Large Grant (LG), 16 Medium Grant (MG) and 19 Small Grant (SG) Projects] were approved by the Steering Committee under the NMHS with the recommendations of Subject Expert Sub-committees and STAG. All 12 IHR States are covered directly under various research studies and development interventions besides indirect benefits *via* capacity building and awareness programmes. Total cost of these NMHS project grants is approx. Rs. 62.06 crores of which, 29.07 crore is the 1st year sanctioned project grant.

- From all across IHR, 28 fellowship proposals were received, of which total 12 Universities/ Institutions in the IHR have been granted the Fellowship Grants for Yr. 2015–18 session. Total 30 Research Associates (RAs) and 89 Junior Research Fellow/ Project Associates (JRFs/ JPFs) will be engaged in various Himalayan study areas to address critical issues faced in the IHR. Total 4 IHR States *viz.*, Himachal Pradesh, Sikkim, Uttarakhand and Jammu & Kashmir will be covered directly *via* these fellowship studies besides other beneficiaries/ stakeholders indirectly through the capacity building and outreach programmes. Total fellowship grant of approx. Rs. 21.39 crores has been sanctioned for these 12 IHR Institutions. Of which, approx. Rs. 7.0 crores is the 1st year sanctioned fellowship grant.

- For educating about the NMHS during the inception phase, a Mission Document of National Mission on Himalayan Studies (NMHS) was prepared, which has also been published after rigorous consultations from experts and concerned stakeholders. The document was released by the Hon'ble Minister of Environment, Forests and Climate Change on June 11, 2016. The NMHS Mission Document will help in disseminating information as well as raising further awareness about the Himalaya.

- NMHS Progress was also presented before the Review Committee of MoEF&CC on July 11, 2016 which was chaired by the Sr. Economic Advisor, MoEF&CC. A component wise detailed proposal for release of grant for 2016-17 has been submitted to MoEF&CC on July 29, 2016.

- The NMHS-PMU office and Database Management Centre for Himalayan Studies (DMCHS) were inaugurated by Shri A.N. Jha, Secretary, MoEF&CC, GoI in presence of Dr.Amita Prasad, Additional Secretary, MoEF&CC, GoI, Dr. P.P.Dhyani, Director, GBPNIHESD. Er. Kireet Kumar, Nodal Officer, NMHS-PMU, GBPNIHESD and other staff of the Institute on September 11, 2016 at GBPNIHESD Hqs. Kosi-Katarmal, Almora.

- 4th Meeting of STAG was held on Sept 29, 2016 at MoEF&CC which was chaired by the Dr. Amita Prasad, Additional Secretary, MoEF&CC, GoI. All the deferred and revised projects were placed before the STAG. Total 13 Projects were recommended for the consideration of Steering Committee under different thematic areas with the total cost of projects about Rs. 15.84 Cr. The advertisement for the new project and fellowship proposals was also approved along with the panel of experts for Monitoring, Learning and Evaluation (MLE) missions.

- 3rd meeting of Steering Committee was held on March 3, 2017 and total 15 new projects were approved in medium and small grant categories. All the 180 project proposals (3 Large Grant, 71 Medium Grant and 106 Small Grant proposals) of Rs. 270.09 Crore for three years and 24 fellowship proposals (for 15 NMHS RAs and 50 NMHS JRFs) of Rs. 10.18 Crore received against the advertisements were called off by the Steering Committee.

- A Brainstorming Session on National Mission on Himalayan Studies (NMHS) was organized on July 6, 2017 at MoEF&CC under the Chairmanship of Secretary, MoEF&CC involving different stakeholders including Experts, Central and State Ministries, National and International Institutions, NGOs and Project Proponents of NMHS. Total 60 participants attended the Session. The draft minutes of the Session are submitted to MoEF&CC.

- First Project monitoring workshop was organized on Oct 13-14, 2017 at GBPNIHESD to review the progress of all 42 projects sanctioned under NMHS in 2015-16 and 2016-17.

- 5th meeting of STAG was held on December 15, 2017 which was chaired by Shri A.K. Jain, Additional Secretary, MoEF&CC. Total 21 projects costing more than 4.00 crore each out of total 131 projects received against the new call for proposal in 2017-18, were presented before STAG. The STAG recommended 9 projects for funding to Steering Committee. Out of 5 proposals of Him-Nature Learning Centre (NLC) received from 5 IHR States as a new activity, 3 Him-NLC were recommended to Steering Committee (SC) for approval.

- 4th meeting of the Steering Committee was held on December 20, 2017 under the Chairmanship of Sh. C.K. Mishra, Secretary, MoEF&CC. The SC approved 9 action research projects costing Rs. 31.29 Crore and 3 Him-NLC projects for Tripura, Assam & Manipur costing Rs. 10.62 Crore.

Major achievements of the Mission till date are as follows.

  - Total 241 project **intervention/monitoring sites** are being studied and/or developed in terms of various critical issues ranging from **spring rejuvenation to river bank filtration, watershed development, installation of surface-weather stations in various parts of IHR, identification of species and their conservation**, etc.

  - Total **9 innovative models or methods** are progressing at present in different Himalayan States, which include "**Ecological Niche Modelling**" in

Uttarakhand, a low-cost "**Bio-waste Conversion Model**" in J&K, an alternative model for "**Acid Mine Drainage (AMD)**" in Meghalaya, etc.

- **One patent** has also been filed on a very critical issue of pollution in Himalaya due to solid-plastic waste, also prone to health hazards. The proponent is setting up a **plant for turning Solid Plastic Waste into an additive bio-fuel "Graphene"**, which has multi-facet utilities and applications ranging from additives for concrete mixture to futuristic solar photovoltaics, etc.

- Total 27 trainings have been conducted on several important issues like **Food Processing Technologies, Bio-briquetting, Bio-waste conversion and utilization for enhancing crop production and soil health,** etc. Total **62 households** have started income-generating from the bio-briquetting model in Uttarakhand.

- Total four (4) types of **replicable processing units** are underway, covering **Chir-Pine Needles Processing Unit, Bio-briquetting Processing Unit, Bio-waste Conversion Units, and Inline Electrolysis Unit**.

- **The Himalayan Database** is another priority of the Scheme, which has started covering 26 types of database in the present phase *viz.*, **Hydrological and Hydraulic Database, Water Quality Database, GIS Database on LULC and spatial distribution of certain important Himalayan species, Biodiversity database, weather and climate database**, etc.

- Total **3 Training Manuals and 12 research papers** have been published and distributed among stakeholders as knowledge products on topics like **Bio-briquetting, Study of Timber line and Tree line, Wildlife Population Estimation Protocol for Sikkim, Biodiversity of Surya-Kunj,** etc.

- Total **16 Demonstration Models** have been set as examples highlighting **Protected Cultivation Models, Vermi-compost Models, Waste Land Rehabilitation Model**, etc.

- **3 Him-Nature Learning Centres** are sanctioned for 3 States (Tripura, Assam and Manipur) through State Forest department.

Annexure-II

National Mission on Himalayan Studies (NMHS
Details of approved projects Details in 2015-16

S.N.	Project Title & PI	Total Grant (In Crore)
1.	Biodiversity Assessment through Long-term Monitoring Plots in Indian Himalayan Landscape. Dr. Paramjit Singh, Botanical Survey of India, Kolkata(WB	3.43
2.	Rejuvenation of springs and Spring-fed Streams in Mid-Himalayan Basins using Spring Sanctuary Concept. Er. S. Tarafdar, GBPNIHESD, Garhwal Unit, Srinagar (UK).	3.77
3.	Management, and Long-Term Monitoring of Shifting Cultivation and Coal Mining in North-Eastern India. Prof. S. K. Barik, North-Eastern Hill University, Shillong, Meghalaya.	2.86
4.	Timberline and Altitudinal Gradient Ecology of Himalayas, and Human Use Sustenance in a Warming Climate. Prof. S. P. Singh, Central Himalayan Environment Association (CHEA), Nainital (UK).	6.41
5.	Human- Wildlife Conflict Resolution Mechanism in Indian Himalayan Region: Risk Assessment, Prediction, and Management through Research and Community Engagement. Dr. G. S. Rawat, Wildlife Institute of India, Dehradun (UK)	4.45
6.	Dynamics of Himalayan Ecosystem and its Impact under Changing Climate Scenario. Prof. A. P. Dimri, Jawaharlal Nehru University, New Delhi.	2.10
7.	Coping with Uncertainty: Building Community Resilience and Ecosystem Based Adaptation to Climate Change in the Indian Himalayan Region. Prof. J. S. Rawat, International Union for Conservation of Nature (IUCN), New Delhi	5.36
8.	Environmentally Sustainable Smart Synthesis of Carbon Nano material along with the production of High Value Added Fuel and Additives for the Concrete Mixture from Waste Plastic, Hazardous Waste Around the Himalayan Region. Dr. Nanda Gopal Sahoo, Nanoscience and Nanotechnology center, Department of Chemistry, Kumaun University, Nainital	1.97
9.	Establishment of Gene Pool, Propagation and Ex-Situ Conservation of selected sensitive high altitude Medicinal and Aromatic plant species and Nature Interpretation Site (NIS) for creating Awareness among the various stakeholders. Dr. P. Prasad, High Altitude Plant Physiology Research Centre (HAPPRC) Hemwati Nandan Bahuguna Garhwal University (A Central University Srinagar (Garhwal)	2.08
10.	Sustainable use of Sikkim Himalayan Biodiversity for socioeconomic development of mountain villages with special reference to *Ophiocordycepssinensis, Hippophaesalicifolia, Docyniaindica* and *Rhuschinensis*: Technology development, alternative livelihood and conservation.	0.94

	Dr. Dhani Raj Chhetri, Associate Professor, Dept. of Botany, Sikkim University, 6th Mile, Samdur, P.O. Tadong, Gangtok, Sikkim	
11.	Collection, evaluation and conservation of native crops germplasm form Uttarakhand hills and pre-breeding through community participation. Dr. Anand Singh Jeena, Professor, Directorate of Experiment Station, G.B. Pant University of Agriculture & Technology, Pantnagar, U.S. Nagar, Uttarakhand	**0.51**
12.	Multidisciplinary studies in Floristic assessment, ecological analysis, ecosystem services, conservation and sustainable management of selected National Parks in Western Himalaya. Dr. Paramjit Singh/BSI, Kolkata, W.B.	**0.71**
13.	A Sustainable Approach for livelihood improvement by Integrated Natural Resource Management in the central Himalaya. Dr. D.S. Rawat, Scientist 'F', GBPIHED, Kosi-Katarmal, Almora, Uttarakhand.	**2.42**
14.	Enhancing livelihood of Himalayan communities through action research and transforming wild produces into high value products. Dr. RajendraDobhal, Uttarakhand State Council For Science & Technology (U-COST), Department of Science & Technology, Govt. of Uttarakhand, Dehradun.	**2.50**
15.	Fish Faunal Diversity, Habitat Ecology and their Conservation strategies of the Kameng River system in Arunachal Pradesh. Dr. Dandadhar Sarma, Associate Professor, Department of Zoology, Gauhati University, Guwahati, Assam	**0.25**
16.	Identification, assessment and enhancement of soil carbon and nitrogen sequestration potential of different ecosystems in the central Himalayan through a participatory approach. Shri. V.S. Meena Scientist (Soil Science), ICAR-VPKAS, Almora, Uttarakhand	**0.33**
17.	Population dynamics and Biogeography of Himalayan Mouse-Hare Ochotona roylei in relation to their impact on the medicinal flora of Western Himalaya. Prof. S.N. Bahuguna, Department of Zoology & Biotechnology, H.N.B Garhwal University, Srinagar-Garhwal, Uttarakhand	**0.27**
18.	Conservation strategies for Taxuswallichiana and Ulmuswallichiana by DNA markers and geospatial technology. Dr. Pankaj Bhardwaj, Centre for Plant Sciences, Central University of Punjab, City Campus, Mansa Road, Bathinda, Punjab	**0.35**
19.	Survey and Mapping of Medicinal and Aromatic Plants (MAPS) and other RET/NTFPs on alpine regions of Uttarakhnad and developing Uttarakhand-Alpine Information System (UK-AIS). Dr. Gajendra Singh, Uttarakhand Space Application Centre, Dehradun, UK.	**0.37**
20.	Vegetation heterogeneity and impacts of changing climatic and land use patterns on two contrasting timberline ecotones of Upper Chenab catchment, J&K and conservation strategies thereof. Prof. Anil K Raina, Professor and Head, Department of Environmental Sciences, University of Jammu, Baba SahebAmbedkar Road, New University Campus Jammu (J&K	**0.25**
21.	Drinking Water Security for Rural Areas in Uttarakhand Himalayas by Riverbank Filtration, Robust Disinfection Systems and Community Participation.	**0.50**

	Er. P.S. Patwal, Jal Bhawan, Cooperation Centre for Riverbank Filtration (CCRBF), Dehradun	
22.	Development of psychrophilic earthworms for bio-waste conversion in Guraj and Tulail valleys of Jammu & Kashmir. Dr. Tahir Ahmad Sheikh, Assistant professor (Agronomy), Chief Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir, Shalimar, Srinagar, J&K	**0.14**
23.	Geomorphic characterization of flash floods and mass wasting in upper Ganga terrain of Garhwal Himalaya: role of climate - tectonic interaction in gradation processes". Dr. A.K. Pandey, CSIR, National Geophysical Research Institute Uppal Road, Hyderabad	**0.50**
24.	Post-Fire Management in the Pine Fortes of Indian Himalayan Region By studying, conserving and distributing cultivable microbial biota to increase ecological succession and to revive forest productivity. Prof. Adesh K Saini, Center of Himalayan Research on Himalayan Sustainability and Development, Shoolini University of Biotechnology and Management Sciences, Solan (HP).	**0.40**
25.	Understanding the degradation and loss of primary forest in the Teesta valley of the Sikkim Himalaya: a framework for recovery and management of biodiversity and bio-resources. Dr. Robert John Chandran, Indian Institute of Science Education and Research, Kolkata (WB)	**0.23**
26.	Ecological monitoring and status of fish fauna in hydropower affected Alaknanda-Bhagirathi-Ganga Rivers. Dr. Prakash Nautiyal, Department of Zoology& Biotechnology, HNB Garhwal University, Srinagar, Uttarakhand.	**0.21**
27.	Environmental monitoring and assessment of climate change of tourism affected Himalayan sub regions of Shimla and Chamba (HP). Dr. Sunil Mittal (Astt. Professor), Centre for Environmental Science and Technology, Central University of Punjab, Batinda	**0.32**
	Total	**43.63**

Details of new projects approved in 2016-17

S.N.	Project Title & PI	Total Grant (In Crore)
1.	Understanding Mountain Peoples' approach and practices to combating Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms PI: Dr. Sushil Ramola, IMI, New Delhi	**0.94**
2.	Creating Communities of Practice and resilient village ecosystems in the mountain region of Uttarakhand PI: Dr. Lalit Pandey, Seva Nidhi, Almora	**0.95**
3.	Anthropogenic impacts and their management options in different ecosystems of the Indian Himalayan Region PI: Dr. J.C. Kuniyal, GBPNIHESD, HP Unit, Kullu	**2.68**
4.	Capacity Building Strategies for Managing Complex Disasters in the face of Climate Change PI: Dr. Shyamli Singh, IIPA, New Delhi.	**0.82**
5.	Strengthening State Training Institutions for Enhancing Capacities of Functionaries and Communities in Four Himalayan States PI: Dr. Ruchi Pant, UNDP, India, New Delhi	**3.27**
6.	Study and Monitoring of Climate Change Impacts and Health of the Environment of the Trans Himalayan Region of Ladakh and the Designing of Effective Development Strategies and Interventions for Adaptation and Mitigation. PI: Mr. Jigmet Tapka, LREDA, Leh-Ladakh, J&K	**3.71**
7.	Developing Disaster Resilience Action plan through GIS and prioritizing actions for Natural Disaster Risk Reduction in Urban Agglomerations of Shillong & GangtokPI: Dr. Jyoti Parikh, IRADe, New Delhi	**1.28**
8.	Community-Managed Conservation of Orchid Biodiversity and Tribal Livelihood Improvement in Manipur Hill Area PI: Dr. A.N. Rao, FEEDS, Manipur	**2.23**
9.	Innovative Technologies for Climate Change Mitigation and Biodiversity Conservation with alternate livelihood opportunities for mountain communities in North Western Himachal Himalayas PI: Lal Singh, HRG, Himachal Pradesh	**0.87**
	Total :	**16.75**
1.	Restoration of Ecosystem Services by Community Involvement in Rudrasagar Lake of Tripura PI: Dr. Sourabh Deb, Tripura University	**0.24**
2.	Capacity building on bamboo treatment techniques for promotion of Earthquake Resilient Housings and Structures in Hill regions of Tripura PI: Pawan K. Kausik, Centre for Forest, Tripura	**0.30**
3.	Promotion of High Value-Low volume crops based enterprises in Higher Himalayas of Uttarakhand PI: Mr. B.M. Kandpal, SIMAR, Dewal, UK	**0.28**
4.	Conservation of local ecology, and degraded or wasteland management through "Rambans" (Agave) plantation and generation of availability of resources in villages for providing base to livelihood activities PI: Mr. Satish Kandwal, GAURAS, Pauri, UK	**0.34**
5.	Bamboo bricks/laminates from BMFs (Bamboo Micron Fibres) for low cost housing structures for North Eastern Himalayan region PI: Dr. S. Halder, NIT, Silcher, Assam	**0.45**
6.	Livelihood improvement and empowerment of rural poor through quality bulb production in cut flowers under temperate conditions of Kashmir Valley PI: Dr. Z.A. Bhat, SKUAST, J&K	**0.44**
	Total	**2.05**
	Grand Total (Medium and Small Grant)	**18.80**

Details of new projects approved in 2017-18

S. No.	Project Title and PI	Total Grant (In crore)
1.	Invasive Alien Plants in Himalayas: Status, Ecological Impact and Management Prof R.K.Koshli, Central University of Punjab (CUP), Bathinda, Punjab	**4.68**
2.	Conservation of Threatened Vertebrate Fauna in Indian Himalayan Region through Long-Term Monitoring and Capacity Building Dr. Kailash Chandra Zoological Survey of India, Kolkata	**9.96**
3.	Key ecosystem services and biodiversity components in socio-ecological landscapes of Darjeeling - Sikkim Himalaya: deriving management & policy inputs and developing mountain biodiversity information system Dr. Bhoj K Acharya Department of Zoology, Sikkim University	**3.70**
4.	Integrated System dynamical model to design and Testing Alternative intervention strategies for Effective Remediation & Sustainable water Management for two selected river basins of Indian Himalaya Prof Shakil Ahmad Romshoo Department of Earth Science, University of Kashmir, Srinagar, J&K	**2.47**
5.	Water security through community based rejuvenation of springs and catchments Dr. Debashish Sen People's Science Institute, Dehradun, Uttarakhand	**1.91**
6.	Enhancement of the quality of livelihood opportunities and resilience for the people in the Indian Himalayas, through Design of Intervention strategies aimed at maximizing resource potential and minimizing risks in urban-rural ecosystem Dr. K V Ramesh CSIR Fourth Paradigm Institute (CSIR-4PI), Bangalore	**2.42**
7.	Developing livelihood options and explore employment generation by creating sustainable ecotourism opportunities involving youth and women in the mountain ecosystem of Uttarakhand and Himachal Pradesh of India Ms. Zeenat Niazi Society for Development Alternatives, New Delhi	**2.18**
8.	Development of natural resource based livelihood options and employment for small holder mountain farmers of Kumaon and Garhwal Himalayas with special focus on women in the Dudhatoli region catchment of origin of River Ramganga (West Mr. Manoj Maheshwari Institute of Himalayan environmental Research and Education (INHERE), Almora, Uttarakhand	**2.00**
9.	Promoting livelihoods by innovation in temperature horticulture crops in Garhwal and Kumaun regions of Uttarakhand Mr Mahendra Singh Kunwar, Himalayan Action Research Centre, Dehradun, Uttarakhand	**1.97**
	Total	**31.29**

	the Indian Himalayas, through Design of Intervention strategies aimed at maximizing resource potential and minimizing risks in urban-rural ecosystem Dr. K V Ramesh ,CSIR Fourth Paradigm Institute (CSIR-4PI), Bangalore	
	Developing livelihood options and explore employment generation by creating sustainable ecotourism opportunities involving youth and women in the mountain ecosystem of Uttarakhand and Himachal Pradesh of India Ms. Zeenat Niazi, Society for Development Alternatives, New Delhi	Livelihood and Employment Generation.
	Development of natural resource based livelihood options and employment for small holder mountain farmers of Kumaon and Garhwal Himalayas with special focus on women in the Dudhatoli region catchment of origin of River Ramganga (West) Mr. Manoj Maheshwari, Institute of Himalayan environmental Research and Education (INHERE), Almora, Uttarakhand	Livelihood and Employment Generation.
	Promoting livelihoods by innovation in temperature horticulture crops in Garhwal and Kumaun regions of Uttarakhand Mr Mahendra Singh Kunwar,Himalayan Action Research Centre, Dehradun, Uttarakhand	Livelihood and Employment Generation.

Name of State	**Projects Title and PI**	**Theme**
West Bengal	Understanding Mountain Peoples' approach and practices to combating Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms Dr.Sushil Ramola Integrated Mountain Initiative (IMI) New Delhi.	Education, Awareness & Skill Development

Name of State	Projects Title and PI	Theme
Tripura	Understanding Mountain Peoples' approach and practices to combating Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms Dr.Sushil Ramola Integrated Mountain Initiative (IMI) New Delhi.	Education, Awareness & Skill Development
	Capacity building on bamboo treatment techniques for promotion of Earthquake Resilient Housings and Structures in Hill regions of Tripura Dr.Pawan K. Kausik, Centre for Forest- based Livelihoods & Extension, Tripura.	Capacity Building and Livelihood Security

Name of State	Projects Title and PI	Theme
Uttarakhand	A Sustainable Approach for livelihood improvement by Integrated Natural Resource Management in the central Himalaya. Dr. D.S. Rawat,Scientist 'F', GBPIHED, Almora, Uttarakhand.	Education, Awareness & Skill Development
	Understanding Mountain Peoples' approach and practices to combating Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms Dr.Sushil Ramola Integrated Mountain Initiative (IMI) New Delhi	Education, Awareness & Skill Development
	Strengthening State Training Institutions for Enhancing Capacities of Functionaries and Communities in Four Himalayan States Dr. Ruchi Pant, UNDP India	Education, Awareness & Skill Development
	Promotion of High Value-Low volume crops based enterprises in Higher Himalayas of Uttarakhand Sh. B.M. Kandpal, Society for Integrated Management of All Resources, Uttarakhand	Capacity Building and Livelihood Security
	Conservation of local ecology, and degraded or wasteland management through "Rambans" (Agave) plantation and generation of availability of resources in villages for providing base to livelihood activities Sh.SatishKandwal, GirishGrih Udyog Evam Resha UttpadnSamit Kotdwar, PauriGarhwal, Uttarakhand	Livelihood Security and Capacity Building
	Enhancement of the quality of livelihood opportunities and resilience for the people in	Livelihood and Employment Generation.

Details of NLC approved in 2017-18

S. No.	Name Of NLC	Total Grant (In crore)
1.	Him Nature Learning Center, Assam Mr. A. K. Johari, IFS Assam State Biodiversity Board (ASBB), Panjabari, Guwahati.	3.76
2.	Him Nature Learning Center, Tripura Mr Prasenjit Biswas, IFS Wildlife Warden, Sepahijala Wildlife Sanctuary, Sepahijala Tripura	4.10
3.	Him Nature Learning Center, Manipur Mr. Anurag Bajpai, IFS Manipur Zoological Garden, Imphal, Manipur	2.76
	Total	**10.62**

Annexure-III

Name of State	Projects Title and PI	Theme
Arunachal Pradesh	Understanding Mountain Peoples' approach and practices to combating Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms Dr.Sushil Ramola Integrated Mountain Initiative (IMI) New Delhi	Education, Awareness& Skill Development

Name of State	Projects Title and PI	Theme
Assam	Understanding Mountain Peoples' approach and practices to combating Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms Dr.Sushil Ramola Integrated Mountain Initiative (IMI) New Delhi.	Education, Awareness & Skill Development

Name of State	Projects Title and PI	Theme
Himachal Pradesh	Understanding Mountain Peoples' approach and practices to combating Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms Dr.Sushil Ramola Integrated Mountain Initiative (IMI) New Delhi	Education, Awareness & Skill Development
	Strengthening State Training Institutions for Enhancing Capacities of Functionaries and Communities in Four Himalayan States Dr. Ruchi Pant, UNDP India	Education, Awareness & Skill Development
	Developing livelihood options and explore employment generation by creating sustainable ecotourism opportunities involving youth and women in the mountain ecosystem of Uttarakhand and Himachal Pradesh of India Ms. Zeenat Niazi, Society for Development Alternatives, New Delhi	Livelihood and Employment Generation.

Name of State	Projects Title and PI	Theme
Jammu & Kashmir	Understanding Mountain Peoples' approach and practices to combating .Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms Dr.Sushil Ramola Integrated Mountain Initiative (IMI) New Delhi	Education, Awareness & Skill Development
	Livelihood improvement and empowerment of rural poor through quality bulb production in cut flowers under temperate conditions of Kashmir Valley Dr. Z.A. Bhat, Sher-e-Kashmir University ofAgricultural Sciences & Jammu & Kashmir	Capacity Building and Livelihood Security
	Enhancement of the quality of livelihood opportunities and resilience for the people in the Indian Himalayas, through Design of Intervention strategies aimed at maximizing resource potential and minimizing risks in urban-rural ecosystem Dr. K V Ramesh CSIR Fourth Paradigm Institute (CSIR-4PI), Bangalore	Livelihood and Employment Generation

Name of State	Projects Title and PI	Theme
Manipur	Understanding Mountain Peoples' approach and practices to combating Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms Dr.Sushil Ramola Integrated Mountain Initiative (IMI) New Delhi.	Education, Awareness & Skill Development

Name of State	Projects Title and PI	Theme
Meghalaya	Understanding Mountain Peoples' approach and practices to combating Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms Dr.Sushil Ramola Integrated Mountain Initiative (IMI) New Delhi.	Education, Awareness & Skill Development

Name of State	Projects Title and PI	Theme
Mizoram	Understanding Mountain Peoples' approach and practices to combating Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms Dr.Sushil Ramola Integrated Mountain Initiative (IMI) New Delhi.	Education, Awareness & Skill Development
	Strengthening State Training Institutions for Enhancing Capacities of Functionaries and Communities in Four Himalayan States Dr. Ruchi Pant, UNDP India.	Education, Awareness & Skill Development

Name of State	Projects Title and PI	Theme
Nagaland	Understanding Mountain Peoples' approach and practices to combating Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms Dr.Sushil Ramola Integrated Mountain Initiative (IMI) New Delhi.	Education, Awareness & Skill Development

Name of State	Projects Title and PI	Theme
Sikkim	Understanding Mountain Peoples' approach and practices to combating Climate Change in the Indian Himalayan Region: Research to Renewal and Reforms Dr.Sushil Ramola Integrated Mountain Initiative (IMI) New Delhi.	Education, Awareness & Skill Development
	Capacity Building Strategies for Managing Complex Disasters in the face of Climate Change Dr. Shyamli Singh, Indian Institute of Public Administration (IIPA).	Livelihood security and Capacity building
	Strengthening State Training Institutions for Enhancing Capacities of Functionaries and Communities in Four Himalayan States Dr. Ruchi Pant, UNDP India.	Education, Awareness & Skill Development