Number of functional MoUs during the last five years

<table>
<thead>
<tr>
<th>Organisation with which MoU is signed</th>
<th>Name of the institution/industry/corporate house</th>
<th>Year of signing MoU</th>
<th>Duration</th>
<th>List the actual activities under each MoU year wise</th>
<th>Number of students/teachers participate d under MoUs</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
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<tr>
<td>National Geophysical Research Institute, Hyderabad</td>
<td>CSIR</td>
<td>2012</td>
<td>Till date</td>
<td>Internship, project work, sharing of research facilities, sample analysis</td>
<td>8</td>
<td>sample analysis</td>
<td>project work, sample analysis</td>
<td>joint publication, sample analysis</td>
<td>joint publication,</td>
<td>sample analysis, joint publication (2)</td>
<td>joint publication</td>
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<td>4Th Paradigm Institute, Bangalore</td>
<td>CSIR</td>
<td>2013</td>
<td>Till date</td>
<td>Internship, project work, sharing of research facilities, sample analysis, Research and infrastructure Development</td>
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<td>Establishment of Broad Band Seismic Stations Across Jammu and Kashmir</td>
<td>Establishment of 09 Global Position Systems (GPS) dat Acquisition Stations in the Kashmir Valley</td>
<td></td>
<td>joint publication</td>
<td>joint publication</td>
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<tr>
<td>Geological Survey of India</td>
<td>GSI</td>
<td>2014</td>
<td>Till date</td>
<td>Project work, sharing of research facilities, field training to students,</td>
<td>3 Batch’s</td>
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<td>field training to students of MSc Applied Geology</td>
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<tr>
<td>Himalayan University Consortium Charter</td>
<td>Himalayan University Consortium Charter</td>
<td>2016</td>
<td>Till date</td>
<td>Internship, project work, sharing of research facilities, sample analysis, Joint supervision of PhD.</td>
<td>5</td>
<td></td>
<td>Establishment of Meteorological Stations in J&amp;K (at Kashmir University, Anantnag and Leh,)</td>
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<td>Establishment of Ice Core analysis facility at Kashmir University</td>
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<td>IITM, The Indian Institute of Tropical Meteorology, Pune, India</td>
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<td>2011</td>
<td>Till date</td>
<td>Joint project work, sharing of research facilities, sample analysis, Joint supervision of PhD.</td>
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<tr>
<td>Bhaba Atomic Research Centre, Mumbai</td>
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<td>2014</td>
<td>Till date</td>
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MoU BETWEEN CSIR 4PI and UNIVERSITY OF KASHMIR

THIS MEMORANDUM OF UNDERSTANDING (hereinafter referred to as "MOU") is made and entered into on this 30th day of December Two Thousand Thirteen between:

University of Kashmir, located at Hazratbal, Srinagar - 190006, J&K, India represented by its Vice Chancellor (hereinafter called "UoK", which expression shall where the context so admits include its successors and permitted assignees) on the first part;

AND,

Council of Scientific and Industrial Research, a society registered under the Societies Registration Act "(XXI of 1860)" having its registered office at Anusandhan Bhavan, 2, Rafi Marg, New Delhi 110 001, India represented through its constituent laboratory CSIR Fourth Paradigm Institute (formerly CSIR Centre for Mathematical Modelling and Computer Simulation) located at National Aerospace Laboratories, Belur campus, Bengaluru, (hereinafter called "CSIR 4PI", which expression shall where the context so admits include its successors and permitted assignees) on the other part.

Hereinafter, both parts are individually referred to as "PARTY" and collectively as "PARTIES" in the MoU.

1. Preamble:

Whereas, University of Kashmir is a multi-faculty University, imparting instruction in various subjects in the Faculty of Arts, Languages, Natural Sciences, Social Sciences, Education, Commerce, Law, Medicine, Dental Surgery, Engineering, Music and Fine Arts and Non-formal Education; and,

Whereas, CSIR 4PI is center for data intensive research, mathematical modelling and computer simulation under the aegis of CSIR, Government of India presently working in the areas of Solid Earth Modelling, Ocean and Atmosphere Modelling, Network and Cyber security, Nonlinear Dynamical System and Computational Mechanics with a focus on High Performance Computing to R&D in diverse domains including Data Intensive Research and Scientific Computing using Massively Parallel Supercomputers; and

Whereas, Parties agree on the objective of creating a framework for enriching scientific endeavors in mutually agreed fields of research through collaboration in developing and implementing new academic and research programmes and faculty and students exchange. Now therefore, Parties have agreed to come together and have decided to work jointly on the following terms and conditions in certain areas of common interest as listed below:

- Lithosphere Modelling using Broadband Seismology
- Earthquake Hazard and Risk Assessment
- Crustal Deformation Study
- Climate Change and Atmospheric Modelling
- Network and Cyber security
- Nonlinear Dynamics and Computational Mechanics
- High Performance Scientific and Data Intensive Computing
10. FORCE MAJEURE

Neither Parties shall be held responsible for non-fulfilment of their respective obligations under this MoU due to the expiry of one or more of the Force Majeure events such as, but not limited to, the acts of God, War, Flood, Earthquake, Strikes, Lockouts, Epidemic, Riots, Civil commotions etc. provided on the occurrence and cessation of any such event the Party affected thereby shall give a notice in writing to the other Party within 30 (Thirty) days of such occurrence or cessation. If the Force Majeure conditions continue beyond 6 (six) months, the Parties shall jointly decide about the future course of action.

11. GOVERNING LAWS AND DISPUTES RESOLUTION

This MoU shall, in all respects, be governed by and construed in all respects in accordance with the laws of the Republic of India.

This MoU is to create a framework for enriching scientific endeavours in mutually agreed fields of research through collaboration in developing and implementing new academic and research programmes and faculty and students exchange. Hence any question, doubt or dispute arising out of the interpretation of any term or usage herein or on the implementation and functioning of the various understandings forming a part of this MoU shall be resolved by the Heads of the two organizations or their authorized representatives for the purpose mentioned herein by discussions and negotiations based on consensus in the spirit of developing and strengthening the mutual relationships. Any unresolved dispute if any, shall be referred to Sito Arbiter in accordance with Arbitration and Conciliation Act, 1996 and rules framed thereof. Arbitrator shall be appointed on mutual consent of Parties. Arbitration shall be conducted in English language. The decision of arbitrator so reached shall be final and binding on both the parties.

9. SEAL OF THE PARTIES

In witness whereof, the PARTIES represented by their authorized representatives, set forth their hands on this the day, month and year first stated above, agreed and accepted this MoU to be signed in the presence of the following witnesses:

<table>
<thead>
<tr>
<th>For and on Behalf of UoK</th>
<th>For and on Behalf of CSIR-4PI</th>
</tr>
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<tbody>
<tr>
<td>Signature:</td>
<td>Signature:</td>
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</table>
| Name:  
A M SHAH                    | Name:                         |
|                               | N. K. SHARADA                 |

Seal & Designation:

Seal & Designation:

Witnesses (Name & Signature):

1. [Signature]

2. [Signature]
Memorandum of Understanding

between

Geological Survey of India
Ministry of Mines
Govt. of India

and

University of Kashmir,
Srinagar

on

Collaboration between Geological Survey of India and University of Kashmir on enriching and sharing of Geoscientific knowledge

DECEMBER, 2014
Srinagar
If to KU - Vice-Chancellor of University of Kashmir, Hazratbal, Srinagar
Kashmir, J&K State-19006
Phone No. 0194- 227-2000 Fax: 0194-2415137

15. Entire Contract and Amendments
The MoU will be signed along with attached signed addenda and/or
subsequent agreements, which will constitute the entire agreement between
the GSI and KU. No prior written or oral representations shall be binding and
all amendments and/or subsequent agreements shall be in writing and signed
by a party of equal position as those of the executing parties hereto.

IN WITNESS WHEREOF the parties hereto have duly executed this MoU.
The ...th day of ... , 2014 (Year Two Thousand Fourteen)

For Geological Survey of India by

Name: SHANKAR PAL NIM
Title: Dy. Director General, GSI, Jammu

In the presence of Witnesses:

JANAK RAI
DIRECTOR
GSI, Jammu

For University of Kashmir, Srinagar by

Name: KHURSHID ANDRABI
Title: Vice-Chancellor

In the presence of Witnesses:

(1) Dean, Academic Affairs, KU
(2) Dean, Research, KU
(3) Head, Dept. of Earth Sciences, KU
MEMORANDUM OF UNDERSTANDING (MOU)

AGREEMENT FOR SCIENTIFIC COOPERATION IN RESEARCH BETWEEN
THE INDIAN INSTITUTE OF TROPICAL METEOROLOGY, PUNE, INDIA
(An Autonomous Institute under Ministry of Earth Sciences, Govt. of India)
AND
UNIVERSITY OF KASHMIR, SRINAGAR KASHMIR, INDIA

In view of the common wish to continue relations for scientific collaboration between the university
(located at scientifically strategic location) and the research Institution in the fields of mutual interest,
the Indian Institute of Tropical Meteorology, Pune (hereinafter referred to as IIITM) and the
University of Kashmir, Srinagar, Kashmir (hereinafter referred to as UKSK), in harmony with the
spirit of scientific collaboration within the country and to spread front line atmospheric sciences
research in Indian universities that characterises relations between them, have agreed to sign the
following:

AGREEMENT FOR SCIENTIFIC AND CULTURAL COLLABORATION

(Objective)

Article 1
The UKSK and the IIITM will endeavour to enhance research activities by supporting the other Party’s
research efforts under the principle of respecting mutual autonomy. In particular both Parties will
contribute to the development of integrated modelling and monitoring systems for effective air
pollution assessment and applied research both at regional and national scale.

(Areas for and contents of collaboration)

Article 2
Areas for collaboration between the two Parties will involve integrated monitoring and assessment
modelling for air quality evaluation, impacts and planning, including:
- Regular monitoring of all major air pollutants along with meteorological fields,
- Development of pollutant emission inventories,
- Observational data assimilation,
- 3-D simulation of chemical and transport phenomena in the boundary layer and troposphere,
- Secondary pollutants (ozone and fine particles) assessment at regional scale,
- Forecast and prevention of critical and severe population exposures,
- Evaluation of impact of air pollution on Health and climate changes
- Optimization of air pollution mitigation strategies.

(Exchange of research staff)

Article 3
The exchange is defined principally in the following ways:

a) The Parties will agree to the reciprocal exchange of professors, scientists and Ph.D. students
   for study visits, research, conferences, and will favour the exchange of scientific experience
   and knowledge.

b) The Parties will share information about conferences, symposium and seminars organised at
   national level.

c) The Parties will provide the basic infrastructural facilities to the visiting researchers for
   carrying out research activity in their University/institute.
Article 4

- The Air pollution measurement System (includes expensive and sophisticated scientific instruments, UPS, and all other accessories) will be fully sponsored, procured by IITM. The IITM will also install and commission it in a suitable location at UKSK and will also maintain it regularly by deputing one contract engineer. All the instruments provided by IITM and the data generated will always remain the property of IITM and will be returnable after the expiry of MOU. The scientific data product of the project may be utilized by both the parties in mutual collaboration for maximum scientific benefit and IITM will have lead in reports and publications. Dissemination of the data will remain the prerogative of IITM.

- The UKSK will provide all possible infrastructural facilities (in kind) like a well furnished laboratory room of a minimum size of 5 x 5 m² with open space, adequate raw power supply of around 5kW, furniture, etc in a suitable location in the campus which may be decided mutually.

- Department of Geology, Geophysics and Geo-informatics, UKSK, will act as collaborating Department to look after this project locally and one scientist from this department will act as local coordinator responsible for administrative and scientific control for this project from UKSK.

- It is agreed that at least two Junior research Fellows (JRF) are selected and sponsored by UKSK from their internal system for this project which may eventually lead them to complete their Ph.D. This is envisaged to enhance the human resource development in the subject area of air quality and climate change which will further spread the scientific message in national capacity building.

- Project students can be registered for Ph.D. degree at UKSK or Pune University under the joint guide-ship of the program Director of IITM (Dr. G. Beig) and UKSK. To facilitate the arrangement, Program Director from IITM shall be recognized by UKSK as Ph.D. guide.

(Term of the agreement)

Article 5

The agreement will come into effect with the signatures of the appointed representatives of the two Parties & will have duration of five years. IITM reserves the right to terminate the agreement. Present agreement may be renewed for additional terms upon the mutual written approval from both Parties.

Prof. Talat Ahmad
Vice-Chancellor, University of Kashmir, Srinagar, Kashmir

Dr. Shaxil Ahmad Romshoo
Geology & Geophysics
University of Kashmir, Srinagar

Prof. B. N. Goswami
Director, Indian Institute of Tropical Meteorology, Pune

Dr. Gufran Beig
Program Director, Indian Institute of Tropical Meteorology, Pune.

Dr. Gufran Beig
Scientist-F
Indian Institute of Tropical Meteorology
Pune - 411 008, India
MoES (Govt. of India)
Endorsement at the HUC Annual Meeting
New Delhi, 26th October 2016

New Members, starting 2016
Full Members

Jun Sheng, Mr
President
YUNNAN AGRICULTURAL UNIVERSITY
China

Date:________ date

Jiang Zhaogang, Senior Economist
President
SOUTHWEST FORESTRY UNIVERSITY
China

Date:________ date

Khurshid Iqbal Andral, PhD Professor
Vice Chancellor
KASHMIR UNIVERSITY
India

Date: 26/10/16

Leena Srivastava, PhD
Vice Chancellor
TERI UNIVERSITY
India

Date: 26/10/16

Myo Kywe, PhD Professor
Rector
YEZIN AGRICULTURAL UNIVERSITY
Myanmar

Date:________

Chiranjib Prasad Sharma Banstola, PhD Professor
Vice Chancellor
POKHARA UNIVERSITY
Nepal

Date:________
MEMORANDUM OF UNDERSTANDING

Between
University Of Kashmir, Srinagar
AND
CSIR- National Geophysical Research Institute, Hyderabad

The University of Kashmir, Srinagar, and CSIR- National Geophysical Research Institute, Hyderabad (hereafter called “Organizations”) sign this Memorandum of Understanding (MOU) today on August 25, 2012 in the presence of Jashan Omar Abdullah, Hon’ble Chief Minister, Jammu and Kashmir with the objective of developing a Centre for Geophysical Education and Research (CeGER) specific to Earthquake Hazard and Hydrological studies, at the University of Kashmir. This memorandum will provide a framework for enriching scientific endeavors in the above fields through collaboration in developing new academic and research programmes and faculty and students exchange.

I. Academic:

- The two Organizations shall collaborate in developing new academic programmes and enrich existing ones towards addressing emerging issues requiring knowledge and expertise.
- Collaboration shall be encouraged between various academic Departments/groups of the two Organizations to help each other mutually advance the content and level of academic programmes.

II. Research:

The two Organizations shall collaborate with each other in the following fields towards the promotion of high quality research work:

- Formulate and implement Joint Research Projects and allow joint supervision of research programmes (Ph.D.).
- Design and Conduct conferences/workshops/seminars jointly with active participation of faculty members from the two Organizations.

III. Faculty Exchange:
MEMORANDUM OF UNDERSTANDING (MoU)
BETWEEN
Bhabha Atomic Research Centre (BARC),
Department of Atomic Energy (DAE), Mumbai
AND
Department of Earth Sciences
University of Kashmir
Srinagar
FOR THE XIIth PLAN PROJECT ON
NATIONWIDE ENVIRONMENTAL GAMMA RADIATION MONITORING USING TLDS

THE MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MoU) made and entered into on this 05th day of November in the year 2014 between Bhabha Atomic Research Centre (BARC), Mumbai - 400 085, Department of Atomic Energy (DAE), Government of India (hereafter called BARC which expression shall include its successors-in-interest and assigns) of the one part.

AND

Department of Earth Sciences, University of Kashmir (UoK), Srinagar (hereinafter called UoK, which expression shall include its successors-in-interest and assigns) on the other part.

PREAMBLE

Whereas University of Kashmir at its Department Earth Sciences has expertise in the field of environmental sampling and analysis for various conventional and radioactive constituents in various matrices of environment.

Whereas BARC, is a premier multidisciplinary R&D organization engaged in research with the objective of generating knowledge and techniques for nuclear power production, advancement of science, and needs data on environmental gamma radiation levels for Jammu & Kashmir State.
In witness whereof, the parties have signed this memorandum of understanding and affixed their respective seals on the date first noted above.

<table>
<thead>
<tr>
<th>BARC</th>
<th>UoK</th>
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<tr>
<td><strong>Signed, sealed and Delivered</strong></td>
<td><strong>Signed, sealed and Delivered</strong></td>
</tr>
<tr>
<td><strong>For and on behalf of BARC,</strong></td>
<td><strong>For and on behalf of UoK,</strong></td>
</tr>
<tr>
<td>Trombay, Mumbai – 400 085</td>
<td>Hazratbal Srinagar-190006</td>
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<td><strong>Signature:</strong></td>
<td><strong>Signature:</strong></td>
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<tr>
<td>डा. डी. म. शर्मा [Signature]</td>
<td>विज्ञापन विभाग, University of Kashmir, Srinagar</td>
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<td><strong>Name:</strong></td>
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<td>डा. डी. म. शर्मा [Name]</td>
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<tr>
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<td>स्रीनागार, J &amp; K</td>
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<td><strong>Date:</strong></td>
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<thead>
<tr>
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<th>Witness-1:</th>
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<tr>
<td>र. (महात्मा) र. र. पंडित [Witness-1]</td>
<td>शहीद आ. र. शर्मा [Witness-1]</td>
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<td>भारत सरकार / Government of India</td>
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In witness whereof, the parties have signed this memorandum of understanding and affixed their respective seals on the date first noted above.