

उत्तराखण्ड UTTARAKHAND

C 084669

MEMORANDUM OF UNDERSTANDING

This memorandum of understanding is made on this day 6th June 2016.

BETWEEN

| Uttarakhand Open University Haldwani (Hence after referred to as **OUU**) the one part through its Registrar

AND

Institute of Wood Science and Technology (hence after referred to as **IWST**), 18th Cross, Malleswaram, Bangalore, an Institute under ICFRE Dehra Dun through its Director, presently Mr. Surendra Kumar, IFS the other part.

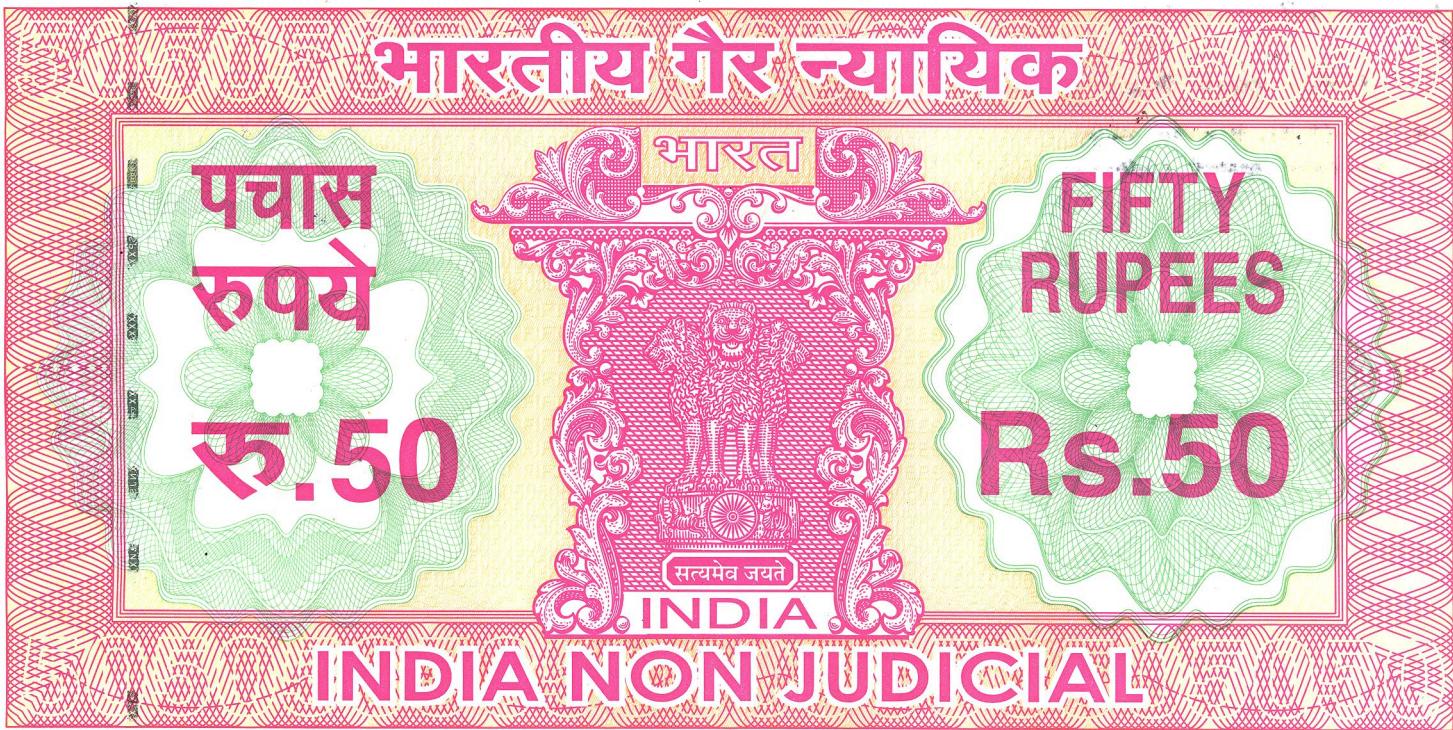
The expressions of **OUU** and **IWST** shall however mean and include the Institutions/ Organizations, their successors, appointees, assignees etc.

WHEREAS **OUU** is an Open University of Government of Uttarakhand. The main objectives of **OUU** include

- Cater to the educational needs of the target groups through Open Distance learning.
- Create skilled and knowledge based human resource for speedy upliftment and development of the State in particular.
- Provide easy access to education to different sections of society, especially to those with seemingly geographical isolation and difficulty.
- Promote national integration and integrated development of human personality.
- Impart knowledge for awareness and skill development.

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उत्तराखण्ड मुक्त विद्यालय
हस्तानी (मैनीसाल)

- 1 - Surendra Kumar, IFS
Director
INSTITUTE OF WOOD SCIENCE AND TECHNOLOGY
MINISTRY OF ENVIRONMENT, FORESTS & CLIMATE CHANGE
Government of India, 18th Cross
Malleshwaram, Bengaluru - 560 003



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- Promote research orientation in the present scenario of technology and development and disseminate knowledge through an innovative multi-media teaching-learning system.
- Promote dissemination of learning and knowledge through distance education systems including the use of any communication technology to provide opportunities for higher education to a large segment of the population and shall in organizing its activities.

WHEREAS IWST is one of the Institutes of Indian Council of Forestry Research & Education (an autonomous body under Ministry of Environment and Forests, Government of India, New Delhi). The main objectives of the Institute are:

- To conduct advance research on wood science and technology at national level and focuses its research activities to important forestry research needs of the States of Karnataka and Goa at regional level.
- To attain excellence in forestry and wood science research for generation of desired resource values, uses, products and services in a way that sustains diversity and productivity in an eco-friendly regime.

Recognizing the importance of scientific cooperation and the mutual benefit to be derived from liberal collaboration, the two institutions believe that a formal memorandum will provide the structure and basis for implementing the expanding joint research, training and education activities. In a nutshell, the following broad areas of collaboration are identified:

- Research and Development
- Forestry Education with particular reference to Advanced Wood Science and Technology
- Certificate/ Diploma/ Advanced Diploma/ Bachelor's Degree Level Vocational Programmes will be developed on Wood Science and Technology in tune with University Grant Commission (UGC). The practical skills will be imparted

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Surendra Kumar, IFS

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- through KVK, IWST and through On-the-Job (OJT) in relevant wood based industries.
- The collaboration will provide better outreach of ICFRE/IWST to other Universities.

The parties are desirous of working and co-operating with one another and joining their respective expertise, knowledge and resources in forging a strategic alliance to develop an exchange program in the fields of wood science and technology as may be needed for strengthening the teaching –learning activities.

Now, therefore, the above two parties hereby agree to establish and conduct mutually agreed upon co-operative and collaborative programs and/or activities, in the area of Forestry particularly, Wood Science and Technology.

1 Areas of Co-operation and Collaboration: The parties agree to establish and conduct programs and activities related to training and education within the area of Advanced Wood Science and Technology. Specific details of each shall be mutually developed, discussed and agreed upon in writing by both the parties prior to the initiation of the activity. Any additional activity shall form appendices to this Memorandum of understanding. Potential areas of co-operation/collaboration include

1.1 Establishment of Kashath Vigyan Prasar Kendra (KVPK): KVPK will be established at UOU Campus at Teenpani, Haldwani. The main objectives will be as follows:

- It will act as a Centre for demonstration of latest environment friendly technology in wood and biomass based sector through KVPK
- To impart advanced training in Wood Science and Technology
- To promote Wood Science and Technology applications and its relevance through education
- Outreach Activity
- Promotion of cooperation for Research and Development in energy sector particularly on biomass based energy and Agro-forestry based timber.
- IWST Technologies to be disseminated to the collaborative Universities & public.

1.2 Training / Education: Certificate on Wood Science and Technology may be developed for which UOU will do Certification and IWST will impart education/training in various areas such as processing of timber, use of alternative timber to the students of UOU etc. IWST has state of the art wood working training centre, which can provide quality training to the workers of wood based industries and handicraft artisans of Uttarakhand. The cost of training will be borne by UoU.

Support from various funding agencies will be explored by UoU to carry out such trainings. Therefore, IWST may be able to provide training for such persons identified by UOU either in the University premises or in IWST or in other locations identified and sponsored by UOU. UOU may consider starting of a Diploma/Certificate course in Wood Technology. Education & Training in Wood Science & Technology will gain maximum impetus. Collaboration of this kind is desirable in R& D, Extension and Education.

UOU will prepare the study material and conduct this vocational course in

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collaboration with IWST

1.3 Use of alternative woods such as Acacia, Eucalyptus by the artisans: Many plantation grown and lesser known timber species have been studied by IWST for their various properties and processing to find the value addition. Non-availability of primary timbers like Teak has necessitated use of locally available alternative timber species. These alternative species can substitute primary timbers with the aid of proper processing techniques. The same knowledge will be shared with artisans/ carpenters, wood based industries and different corporations of Uttrakhand through UOU. For this purpose IWST would take projects/studies with the support of UOU for identifying the properties of various trees found in Uttrakhand to suggest alternative timbers/wood for various wood based industries and other wood using traditional sectors.

1.4 Use of improved seedlings for plantations species and Bamboo: The Institute has developed macro and micro propagation techniques of important species including bamboo. The technology has great potential in enhancing the productivity and meeting the requirement of agroforestry practices and enhancing livelihood resources of farmers.

IWST has developed for the first time in India a new wood plastic composite material. IWST is also doing pioneering studies on few other issues related to enhancing durability and life of wood such as chemical modification of wood. These are valuable from the point of view of green economy in the present times of climate change and suitable for adoption.

- 2 Implementation of Collaborative/Co-operative Programs and Activities:** Specific details of any co-operative/collaborative activities to be conducted will be described and agreed upon in writing. These details will include the specific activities to be conducted, responsibilities of the co-operating parties; personnel who will participate; source, allocation and amount of resources, schedules, implementation procedures and other details.
- 3 Support and Resources:** The amount and source of resources and other requirements for co-operative activities will be intimated as and when required. The Parties may jointly or individually seek funding and other support from third parties for the conduct of collaborative programs and/or activities. This MOU does not obligate the parties to provide funds and /or resources from their own or other sources unless agreed in writing. ICFRE/IWST will not have any legal or financial obligation which can become a constraint or burden on ICFRE/IWST.
- 4 Duration, Termination and Modification of MOU:** This MoU shall take effect when signed by both the parties and will remain in effect for an initial period of five years and may be renewed by mutual agreement in writing for an additional period. This MoU may be terminated by either party with a six months written notice of intent to terminate. Any modification shall require a written approval of either the parties or their designees.
- 5 Arbitration:** That any difference or divergence derived from the interpretation or application of the present instrument shall be resolved by the parties amicably. However, in case the dispute remains unresolved, it shall be referred to an

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Arbitrator, to be appointed by mutual consent of both the parties subject to Bangalore/Haldwani Jurisdiction. The decision of the Arbitrator shall be final binding upon both the parties concerned.

- 6 **IPR:** All the intellectual property rights of any product (s) developed by collaborative research shall belong to both parties and single party can have exclusive rights if mutually agreed upon.

In witness whereof, Registrar, UOU and, Director, Institute of Wood Science and Technology (IWST), have here into respectively signed the agreement on the day and the year first above written.

For UOU

Registrar
Uttarakhand Open University,
Haldwani, Nainital

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Witnesses

- 1.
- 2.

For IWST

Surendra Kumar 06/01/2016, IFS
Director
Institute of Wood Science and Technology
18th Cross, Malleshwaram
Bangalore - 560 003
INSTITUTE OF SCIENCE AND TECHNOLOGY
MINISTRY OF ENVIRONMENT, FORESTS & CLIMATE CHANGE
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Seal

Witnesses
1.
(N. Mohan Kumar)
2.
(PANKAJ K. AGARWAL)