

डॉ. हर्ष वर्धन  
**Dr. Harsh Vardhan**



भारत सरकार  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्री  
**GOVERNMENT OF INDIA**  
**MINISTER OF ENVIRONMENT, FOREST &**  
**CLIMATE CHANGE**



## Message

I am pleased to know that the Indian Council of Forestry Research and Education, an autonomous body of the Ministry of Environment, Forest and Climate Change, is publishing an account of its activities in the form of Annual Reports.

The Council is a leading organization mandated to conduct research in the field of forestry and environment. Achievements of the research during the year are documented in these Annual Reports. The synergetic and pragmatic approach of the Council has shown its benefits in terms of the opulent outputs which are aptly presented in these reports. The current report marks a substantive improvement in understanding the critical role played by forests in our lives.

The Council and its institutes have done commendable works in developing improved germplasm of many forestry species and have released 47 high performing and disease resistant clones with an envisaged production gain of more than 20%. It has carried out significant studies on climate change and initiated a long term study to assess the effect of global warming. The Council has also done studies on indigenous knowledge of folk medicines and documentation. Excellent work on distribution, assessment and growth of Sandalwood is also worth mentioning. ICFRE is actively working on DNA markers, barcoding and high density genetic linkage maps. The Council has taken studies on thermal modification of wood for value addition to plantation timbers.

I am also aware that ICFRE has extended networking with a number of organisations to achieve greater outreach and cooperation through MoU's. The Council also endeavours to transfer and disseminate the technologies developed to the intended target groups including farmers, State Forest Departments, Industries, rural poor and unemployed youth by publications of targeted literature, organizing workshops, interactive meetings, symposia, seminars, trainings, awareness programmes, creating awareness through radio and TV talks, running extension programmes through Van Vigyan Kendras and tree growers mela.

It is a matter of pleasure that ICFRE is publishing Annual Report 2016-17 comprising of various activities performed during the year in the field of forestry research, education and extension.

I congratulate the council for bringing out this annual report and hope that this will be of immense use to the users by providing the entire spectrum of work of ICFRE at one place. I wish the Council all the success.

Dated: 09.03.2018

**(Dr. Harsh Vardhan)**





डॉ. महेश शर्मा  
**Dr. Mahesh Sharma**



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भारत सरकार

**MINISTER OF STATE (I/C) OF CULTURE  
MINISTER OF STATE FOR  
ENVIRONMENT, FOREST AND CLIMATE CHANGE  
GOVERNMENT OF INDIA**



## Message

Environment is the utmost concern throughout the globe and I firmly believe that forests can play pivotal role in saving the environment, if managed scientifically. The arduous efforts of Indian Council of Forestry Research and Education, Dehradun, an autonomous council under the MoEF&CC, are significant in promoting environmental amelioration. The Council has been spearheading with a mission to generate, preserve, disseminate and promote knowledge, technologies and solutions for addressing issues related to Forests and Environment and to facilitate management of these resources on a sustained basis for benefit of the human kind through Research, Education and Extension.

The Council has contributed considerably to the forestry research, education and extension in the country. The Council has been vibrant and vigilant and continuing to perform people-centric forestry research and development for enabling Indian forestry sector not only sustainable, but also climate-resilient.

During the year, ICFRE has taken concerted efforts to face the challenges in the field of forestry research including release of high yielding varieties of *Melia*, *Eucalyptus*, *Casuarina* and *Rauvolfia*, studies on inter-specific variation in carbon sequestration, documentation of tribal/traditional knowledge system, studies on shifting cultivation and also on wood substitutes that are commendable and worth appreciating. I wish this Council success in its endeavours.

**(Dr. Mahesh Sharma)**

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SECRETARY  
GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE



## Message

The Annual Report of the Indian Council of Forestry Research and Education (ICFRE) for the year 2016-17 is a document of its accomplishments during the year. The ICFRE is functioning tirelessly for the holistic development of forestry research, education and extension in the country as an autonomous body of the Ministry of Environment, Forest and Climate Change.

The thrust of current forestry research is aimed at reducing pressure on natural resources by increasing productivity through genetic & silvicultural improvement and extension of technologies.

The Council through its Institutes located in different regions of the country and specializing in selected domains is functioning relentlessly towards achieving its mandate. In the process, it has made significant contributions in the fields of conservation of forest, environmental amelioration, climate change negotiations and livelihood generation which are suitably documented in the Annual Report 2016-17.

I am confident the Annual Report will provide the experts, policy makers and law makers adequate information on the activities and achievements of the council.

  
(C. K. Mishra)

Place: New Delhi

Dated: 22<sup>nd</sup> February, 2018

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सिद्धान्त दास  
SIDDHANTA DAS



वन महानिदेशक एवं विशेष सचिव  
भारत सरकार  
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय  
DIRECTOR GENERAL OF FOREST & SPL. SECY.  
GOVERNMENT OF INDIA  
MINISTRY OF ENVIRONMENT, FOREST AND  
CLIMATE CHANGE



## Message

Indian Council of Forestry Research and Education (ICFRE) is a leading research organization in the forestry sector known for noteworthy contributions in the field of forestry research, education and extension. The Council has a pan-India presence through its nine research institutes and five centers. These institutes and centers are conducting studies in various aspects of forestry, environment and climate change. These efforts are aimed to deliver useful outcomes to state forest departments and other stakeholders. ICFRE is also imparting forestry education and developing forestry curricula at various levels to accelerate the pace of capacity building and to provide expertise in different fields of forestry research.

The Council is striving to disseminate the outcomes of research to various stakeholders/end-users through a variety of extension programmes with active participation of State Forest Departments and other institutions like SHGs, JFMCs, Village Panchayats etc. These programmes are successful in transferring the benefits to the people in a number of ways such as skill upgradation and enhancement in livelihoods.

All its activities are concisely presented in its Annual Reports. The present edition of ICFRE Annual report 2016-17 is a document which successfully provides an overview of its important activities during the year.

I applaud the strenuous efforts of team ICFRE and hope that the report will pave the way for effective research and extension in forestry.

  
(Siddhanta Das)



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