MESSAGE

सत्यमेव जयते

प्रकाश जावड़ेकर
Prakash Javadekar

मंत्री / Minister
पर्यावरण, वन एवं जलवायु परिवर्तन,
सूचना एवं प्रसारण और भारी उद्योग एवं लोक उद्यम
Environment, Forest and Climate Change,
Information & Broadcasting and Heavy Industries & Public Enterprises
भारत सरकार / Government of India

I am happy to note that Indian Council of Forestry Research and Education (ICFRE) is bringing Forest Sector Report India (FSRI), 2019. Through this report there is an effort made to present latest data on various facets of forestry and allied areas; contemporary and vulnerability issues in the forestry sector including forest fires, encroachment; diversion of forestry land for non-forestry purposes; offences committed in forests like poaching; illegal felling of timber; climate change; role of some international forestry organizations; etc. have been highlighted. Detailed information about the trade and industry, namely, export and import of wood in rough, sawn wood, veneers, plywood, wood charcoals, resin, bamboo, particle board makes FSRI 2019 quite informative. Besides, the detailed information on State Forest management, people and forests, production and utilization of timber, major NTFPs and bamboo, conservation of forests, wildlife and biodiversity, various funding sources in forestry sector, key research findings of national and state forestry organizations and capacity developments for forestry personnel are also included.

I wish that the FSRI 2019 shall be helpful in planning and operational functions of the Ministry, its institutions and other central and state organizations.

Date: 30.12.2019

(Prakash Javadekar)

|| प्लास्टिक नहीं, कपड़ा सही ||

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बाबुल सुप्रियो
Babul Supriyo
केन्द्रीय राज्य मंत्री
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Union Minister of State
Ministry Environment, Forest and Climate Change
भारत सरकार / Government of India

Forests and Tree cover nearby one fourth of the geographical area of India, provide fodder for livestock, non-timber forest products, timber for domestic use, fuel wood for energy, raw material for industrial requirements, etc. Besides providing habitats for animals and livelihood for humans, forests also offer watershed protection, prevent soil erosion and mitigate climate change. They have a crucial role for the development of social, cultural and economic life of more than 400 million Indians. After the oceans, forests are source of Carbon Sequestration.

It is heartening to know that ICFRE is bringing out the second Forest Sector Report India (FSRI) 2019 with the support of MoEF&CC, GoI. It contains data on multiple forestry parameters from 2010-2011 onwards. The information presented in the report would be useful in formulation of investment and policy decisions and planning of development programmes in forestry. I hope that the report will be a useful source of information and would go a long way in contributing towards trends in forestry statistics.

I take this opportunity to congratulate the Director General, ICFRE and his team for this informative publication. I would also like to appreciate the officials of MoEF&CC for providing financial and other supports to ICFRE. I hope, the future collaboration between the Ministry and ICFRE will bring out more such reports.

(Babul Supriyo)

MESSAGE

सी. के मिश्रा
C. K. Mishra

सचिव
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Secretary
Environment, Forest and Climate Change
भारत सरकार / Government of India

The livelihoods of the people living close to forest and within the forests are linked to the forest ecosystem. Forests are an important contributor to the rural economy in these regions as people depend on a variety of forest products for food, fodder, agriculture, housing and an array of marketable minor forest products. Forests are not only a source of subsistence income for millions of poor households, but also provide employment to the poor. Widespread poverty and lack of other income generating opportunities often make these people resort to over-exploitation of forest resources. These forest dependent communities have been empowered and given occupation and habitation rights along with community rights over forest produce. They have also been given responsibility for conservation of forests. It becomes imperative for the policy makers, planners and the managers to know about availability of resources and the extent of the rights given to the people for better planning and research.

It is indeed a pleasure to know that ICFRE has undertaken the task of publishing periodic forest sector reports of the country. Forest Sector Report India 2019, the second in the series, presents data on various facets of forestry and allied areas collected from several Ministries of Government of India, State Forest Departments and a host of other governmental and non-governmental organizations. The report provides forestry sector data at one place for policy making and strategy-formulation. I believe it provides useful information to the stakeholders.

I appreciate the efforts of Director General, ICFRE, his staff and officers of the Ministry for bringing out a meaningful publication. I convey my thanks to all the Ministries and Departments for contributing information.

(C. K. Mishra)

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सिद्धान्त दास
Siddhanta Das

वन महानिदेशक एवं विशेष सचिव
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय
Director General of Forest & Special Secretary
Environment, Forest and Climate Change
भारत सरकार / Government of India

Statistics plays an important role in providing information and knowledge inputs for policy formulation, implementation, analysis and assessing impacts of decisions. Further, collection of data with high integrity and their efficient analysis are key to mid-course corrections. Forest statistics helps in varied scientific pursuits including management, regeneration, conservation, sustainable development and livelihood.

I am happy to know that the ICFRE is bringing out the second Forest Sector Report India 2019. The report is based on collection, collation, validation and compilation of data on scores of forestry parameters. I am sure that the publication will benefit the people having interest in forestry including planners, policy-makers, researchers and field staff. In my opinion, it will also help to improve the primary concerns of Ministry, such as, implementation of policies and programmes relating to conservation of the country's natural resources including its lakes and rivers, biodiversity, forests and wildlife.

I appreciate the efforts of ICFRE for publishing a useful report and hope for more such publications in future.

(Siddhanta Das)

FOREWORD

महानिदेशक
भारतीय वानिकी अनुसंधान एवं शिक्षा परिषद्,
देहरादून
Director General
Indian Council of Forestry Research and Education,
Dehradun

सत्यमेव जयते

डॉ. सुरेश गैरोला, भा.व.से.
Dr. Suresh Gairola, IFS

कुलाधिपति, व.अ.सं. विश्वविद्यालय
Chancellor, FRI University

Statistics not only provides a foundation for policy, planning and management but also form a basis for optimal utilization of scarce resources. The prevalent system in the 19th century encouraged compilation of forestry statistics in India by publishing the journal 'The Indian Forester', many booklets, pamphlets and reports at regular intervals. The foresters were well-versed in using statistical tools in official writings and memoranda while describing the forest extent, losses, timber extraction, trade, crime or any attribute that could be presented numerically.
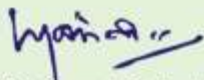
The Council is discharging its responsibility of managing forestry statistics at national level, as mandated by Government of India, by publishing *Forestry Statistics India*' (FSI) regularly since 1988. An attempt has been made to consolidate statistical information related to forestry sector through publication of the *Forest Sector Report India* (FSRI) in 2010. The present *FSRI 2019* comprises ten chapters covering the data for the period from 2010-2011 to 2018-2019. New chapters, *viz.*, Trade and Industry, Vulnerability and Mitigation and the Contemporary Issues in the Forestry Sector have been added for the first time to the report that will improve understanding of important current variables.

I appreciate the sustained efforts of Sh. Arun Singh Rawat, Deputy Director General (Admin.), ICFRE, Sh. Raman Nautiyal, Retd. Scientist-E and Dr. Girish Chandra, Scientist-C in producing this report. The inputs from Nodal Officers (Statistics) of ICFRE institutes are invaluable for bringing out the publication in time. The financial support from the MoEF&CC, GoI is acknowledged. I would also like to thank the state forest

departments and their nodal officers, other governmental and non-governmental organizations for furnishing the information and responding to queries. The contribution of the experts, namely, Dr. SPS Kushwaha, Dr. YP Singh and Dr. VRS Rawat is thankfully placed on record.

This publication will be useful for anyone interested in getting holistic information about forestry sector in India. I hope that this report will provide reference points to all stakeholders for planning their future activities related to management and development of forestry sector.

Date: 27.11.2019

(Dr. Suresh Gairola)

PREFACE

Deputy Director General (Admin.)
Directorate of Administration

भारतीय वानिकी अनुसंधान एवं शिक्षा परिषद्

Indian Council of Forestry Research and Education
(पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय, भारत सरकार की एक स्वायत्त परिषद्)
(An Autonomous Body under the Ministry of Environment, Forest and Climate Change,
Government of India)

सत्यमेव जयते

अरूण सिंह रावत, भा.व.से.
Arun Singh Rawat, IFS

India is the 7th largest country in the world with 2.4% of the world's geographic area and 1.8% of forest in contrast with 17.5% of the world's total population. Around 400 million inhabitants depend upon forests for subsistence and livelihoods, due to which there is an immense pressure on this scarce natural resource that leads to its degradation. Various produce like NTFPs, fodder, unrecorded removal of forest produce, fuel-wood, etc. contributes to the livelihoods. It is estimated that more than 24% of the total geographic area of India is under forest and tree cover.

Maximum damage to the forests of India started in early 1800s when the large scale felling of trees was done to provide resource for construction. This was accelerated due to the two world wars. With the formulation of working plans for forest management and evolution of forest management and conservation strategies, the efforts have resulted in halting the forest degradation and contributed to the conservation of forests. Presently, the forest departments under the state governments prepare working plans in accordance with the working plan code formulated and notified by the central government. Various acts and policies like the Wildlife Protection Act, Forest Conservation Act, Biodiversity Act, etc. have been formulated and implemented for forest protection and conservation. Additionally, schemes like JFM and Participatory Forest Management which focuses on forest management with the participation of the dependent population has also been effective in the process.

The present FSRI 2019 consists of 10 chapters. Forest management at the state level with details about SFDs, FDCs and ADCs is presented in Chapter 1. Chapter 2 provides the data on forest villages, forest fringe villages, involvement of people in forest management for forest conservation and utilizations. The impact of FRA 2006 on implementing the provisions for IFR and CFR is also given. In Chapter 3, the forest

resources, production and utilization of timber, major NTFPs and bamboo is given. This chapter also provides the forest cover and recorded forest area and the impact of 20-Point Programme. To see the international trade of India, the import and export of important wood products is given in Chapter 4. The status of conservation of Forests, Wildlife and Biodiversity is provided in Chapter 5. The main sources of funding of the forestry sector with details are presented in Chapter 6. Chapter 7 focused on research and development in the forestry sector. In order to develop skills, knowledge and the ability, various institutional and individuals capacity development programs are provided in Chapter 8. Vulnerability and mitigations with focus on forest fires, encroachment, diversion of forest land for non-forestry purposes, various offences committed in forests like poaching, illegal felling of timber, etc. is given in Chapter 9. The last chapter consists of some contemporary issues in the forestry sector. I feel that the report will benefit researchers and students interested in improvement of research through the practical knowledge of applied statistics. This report will also be useful for administrators, researchers and planners in the field of forestry research and management. Other important parameters shall be identified and incorporated in the future publications.

Finally, I express my deep sense of gratitude to the Ministry of Environment, Forest and Climate Change (MoEF&CC), GoI for funding support and kind permission in bringing out the present report. The help rendered by Mrs. Bharti, Inspector General of Forest (IGF), SU Division, MoEF&CC is gratefully acknowledged. Sh. Rohit Tiwari, DIGF, SU Division provided continuous support and been associated throughout the preparation of this publication. The invaluable technical and administrative support given by Dr. Suresh Gairola, Director General, ICFRE is heartily acknowledged.

I would like to place on record my appreciation to the State Forest Departments, Forest Survey of India, Wildlife Institute of India, Indira Gandhi National Forest Academy, Directorate of Forest Education, Ministry of Statistics and Program Implementation, GoI, Indian Institute of Forest Management and other organizations who have contributed by providing data and their technical support during the finalization of this report. I extend my thanks and appreciations to the Scientists and Technical Officers of Division of Forestry Statistics, namely, Sh. Raman Nautiyal, Dr. Girish Chandra, Sh. Anoop Singh Chauhan and Sh. Sudershan Singh for their continuous effort during finalization the report. The contributions from the directors of the ICFRE institutes, their nodal officers and Dr. Sarita, Resident Director, Van Vigyan Bhawan to this report are highly appreciated.

Date : 27th Nov., 2019   (Arun Singh Rawat)

ACKNOWLEDGEMENT