**Preface**

The major concerns of Indian agriculture, presently, is deterioration of natural resources in terms of land degradation, low water productivity, soil health deterioration, abiotic stresses including climatic aberrations affecting farm productivity & profitability. The situation is getting further compounded with the recent climate change impacts on agriculture. Sustainable management of natural resources is, therefore, vital as agricultural development with positive growth and long term sustainability cannot thrive on a deteriorating natural resource base as evident from loss of soil organic matter (SOM), accelerated soil erosion, deterioration of soil physical, chemical, and biological health, poor input (water & nutrient) use efficiency, groundwater pollution, declining water tables, salinization & waterlogging, loss of biodiversity including ecosystem services. To have a holistic solution to these emerging problems, it is imperative to identify region specific natural resource management issues so that these are addressed through appropriate technological interventions in an integrated, synergized and cohesive manner to sustain higher agricultural productivity and ecosystem sustainability.

It is a fact that the relationships amongst soil, water, crop productivity and environmental sustainability are symbiotic and it is difficult to get the maximum impact of one without the other. Although issues of efficient management of natural resources are addressed through various activities under sustainable agriculture, conservation agriculture, precision agriculture, climate resilient agriculture, organic and ecological agriculture, the real challenge is to take up these measures in mission mode by way of formulating comprehensive policy interventions for sustainable intensification of agriculture in the country to meet food, nutritional and environmental security.

Presently, the NRM technologies are implemented in isolation through different developmental schemes/programs being run by different Ministries/agencies. Since these technologies are interdependent, the impact of these technologies are not achieved fully as per expectation. The compilation will facilitate convergence of relevant programs/schemes for implementation of NRM technologies in a comprehensive manner to have positive impact on Indian farming to a great extent.

**Foreword**

Agricultural intensification is must for achieving food, nutritional, environmental and livelihood security in India without harming the environment and conserving natural resources for future generations. Accordingly, there is need to identify region specific NRM issues and develop agricultural land use planning accordingly so as to exploit full potential of land and water resources.

Developing eco-system based NRM technology packages is essential to address various NRM issues in a holistic manner for sustainable crop production in the country. This will facilitate convergence of natural resource related activities/components of different schemes/components, being run by different Government Departments in isolation, to have greater impact in sustaining higher agricultural production in the country.

The E-book will help to formulate comprehensive strategies to address various NRM issues in different agro eco-region of the country in a holistic way for appropriate policy interventions in district level agricultural planning. Besides, this publication will serve as an important resource book for researchers, policy makers, farmers, environmentalists, students, and all those who care for the natural resources, ecosystems and environment. and food

I congratulate the authors for their diligent efforts in bringing out this comprehensive E-book which is very timely and pertinent.

**Acknowledgement**