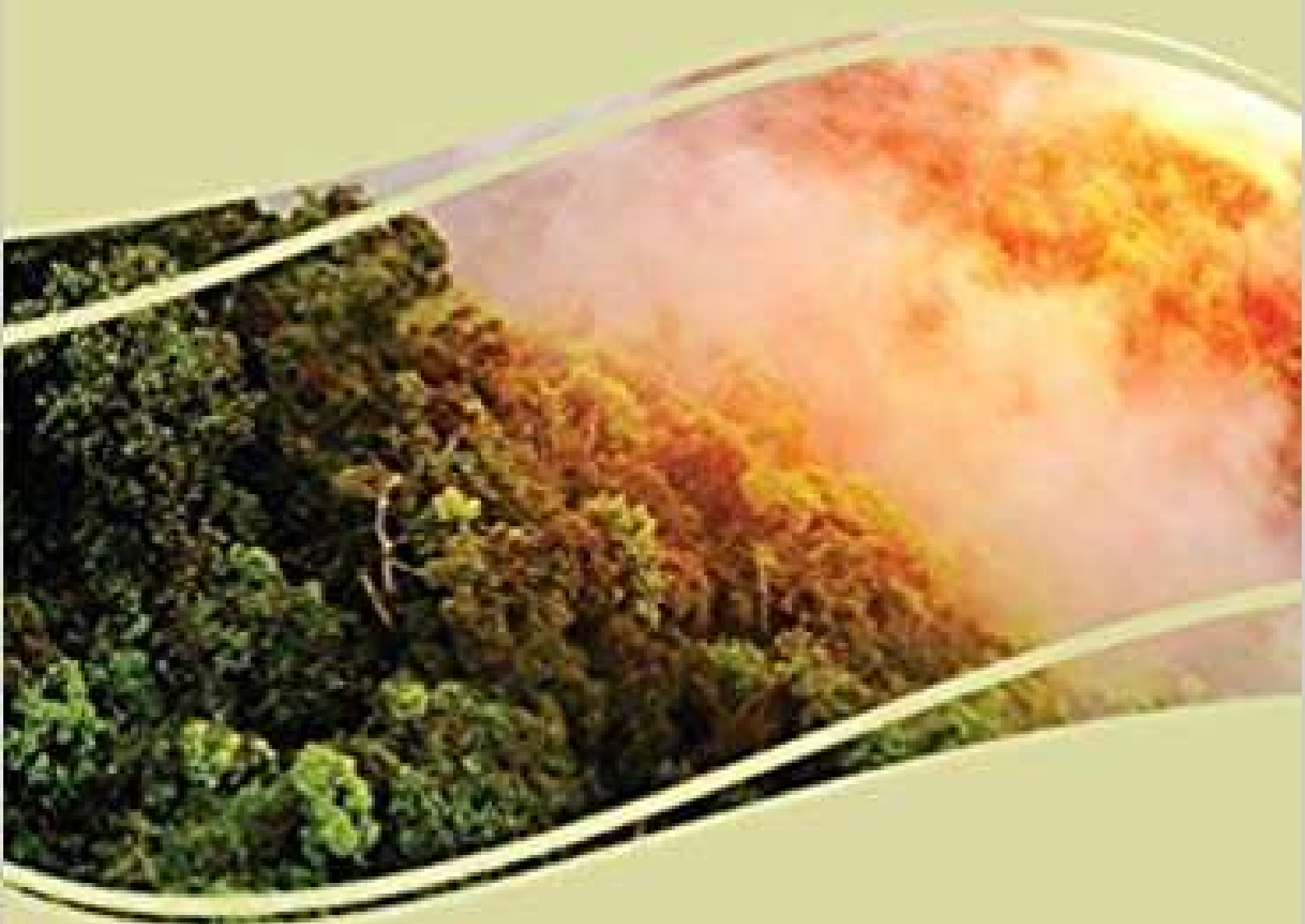


Handbook of Research on

The Conservation and Restoration of Tropical Dry Forests



Rahul Bhadouria, Sachchidanand Tripathi,
Pratap Srivastava, and Pardeep Singh



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ABSTRACT

Around 1.6 billion people in the world are directly dependent on forests for food, fodder, fuel, shelter, and livelihood, out of which 60 million are entirely dependent on forests. Forests silently provide us with ecosystem services such as climate regulation, carbon sequestration, harbouring biodiversity, synchronizing nutrient cycling, and many more. Tropical Dry Forests (TDF's) occupy around 42% of total forest area of the tropics and subtropics and facilitate sustenance of world's marginalized populations. Change in vegetation composition and distribution, deflected succession, carbon sequestration potential, nutrient cycling and symbiotic associations would affect TDF at ecosystem level. At species level, climate change will impact photosynthesis, phenology, physiognomy, seed germination, and temperature-sensitive physiological processes. In order to mitigate the effects of climate change, specific mitigation and adaptation strategies are required for TDF that need to be designed with concerted efforts from scientists, policy makers and local stakeholders.

INTRODUCTION

Forests are complex ecosystems that have a delicate balance of biotic and abiotic components that interact, influence, modify and adapt to each other. The term forest is a very widely used but an ill-defined term and globally there are around 800 ways in which forests have been defined (Lund, 2012). The Food and Agricultural Organization (FAO) defines forest as a 'land spanning more than 0.5 ha with trees higher than 5m and a canopy cover of more than 10%, or trees able to reach these thresholds *in situ*' (FAO, 2010). According to the Intergovernmental Panel on Climate Change (IPCC) forest is defined as vegetation type that is dominated by trees, and is defined in different parts of the world according to the variation in biogeophysical conditions, social structure and economics of the region (IPCC, 2014). Of the many parameters used to define forests such as type of vegetation, physiognomy, species composition, canopy cover is considered to be an important parameter. The way a country defines its forests largely

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