1. Record Nr. UNINA9910407729703321

Autore	Krishnan R
Titolo	Assessment of Climate Change over the Indian Region : A Report of the Ministry of Earth Sciences (MoES), Government of India / / edited by R. Krishnan, J. Sanjay, Chellappan Gnanaseelan, Milind Mujumdar, Ashwini Kulkarni, Supriyo Chakraborty
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2020
ISBN	9789811543272 9811543275
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (XXIII, 226 p.) : 89 illus., 85 illus. in color
Classificazione	SCI019000SCI026000SCI042000SCI092000
Disciplina	550
Soggetti	Physical geography Climatology Ecology Earth System Sciences Climate Sciences Environmental Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Chapter-1: Introduction -- Chapter 2: Temperature Changes in India -- Chapter-3: Precipitation Changes in India -- Chapter-4: Observations and modeling of GHG concentrations and fluxes over India -- Chapter-5: Aerosols & Atmospheric Trace Gases -- Chapter-6: Droughts and Floods -- Chapter-7: Synoptic Scale Systems -- Chapter-8. Extreme Storms -- Chapter-9: Sea Level Rise -- Chapter-10: Indian Ocean Warming -- Chapter-11: Climate Change over the Himalayas.
Sommario/riassunto	This open access book discusses the impact of human-induced global climate change on the Indian subcontinent and regional monsoon, the adjoining Indian Ocean and the Himalayas. It also examines the regional climate change projections based on the climate models used by the IPCC Fifth Assessment Report (AR5) and national climate change modeling studies using the IITM Earth System Model (ESM) and CORDEX South Asia datasets. The IPCC assessment reports, published every 6–7 years, provide important reference material for major policy decisions

on climate change, adaptation, and mitigation. While the IPCC assessment reports largely provide a global perspective on climate change, they offer limited information on the regional aspects of climate change. Regional climate change effects over the Indian subcontinent, especially relating to the Indian monsoon, are unique to the region, and in particular, the climate in this region is shaped by the Himalayas, Western Ghats, the Tibetan Plateau, the Indian Ocean, Arabian Sea, and Bay of Bengal. Climatic variations in this region are influenced by (a) regional-scale interactions between the atmosphere, ocean, land surface, cryosphere and biosphere on different time scales, (b) remote effects from natural phenomena such as the El Nino / Southern Oscillation, North Atlantic Oscillation, Indian Ocean Dipole, and Madden Julian Oscillation, and (c) human-induced climate change. This book presents policy-relevant information based on robust scientific analysis and assessments of the observed and projected future climate change over the Indian region.