

1. Record Nr.	UNINA9910827689103321
Titolo	Quaternary environmental change in the tropics // edited by Sarah E. Metcalfe and David J. Nash
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , 2012
ISBN	9786613905666 1-283-59321-1 1-118-33631-3 1-118-33616-X 1-118-33617-8
Edizione	[1st ed.]
Descrizione fisica	1 online resource (450 p.)
Collana	Blackwell Quaternary Geoscience Series
Disciplina	551.6913
Soggetti	Paleoclimatology - Tropics Paleoclimatology - Quaternary Tropics Climate
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Quaternary Environmental Change in the Tropics; Contents; List of contributors; Preface; Acknowledgements; I: Global contexts; CHAPTER 1: Introduction; 1.1 Why the tropics matter; 1.1.1 Defining the tropics; 1.1.2 Importance of the tropics; 1.2 Development of ideas; 1.2.1 Early ideas about tropical environmental change; 1.2.2 The twentieth century revolution; 1.2.3 Advances in modelling; 1.3 Establishment of the tropical climate system; 1.4 Drivers of tropical environmental change; 1.5 The tropics as drivers of change; 1.5.1 The tropics and greenhouse gas concentrations 1.5.2 Impacts of low latitude volcanic eruptions 1.5.3 Dust emissions from the tropics and subtropics; 1.6 Extra-tropical forcing; 1.7 Organisation of the volume; Acknowledgements; References; CHAPTER 2: Contemporary climate and circulation of the tropics; 2.1 Introduction; 2.2 Diurnal and local processes; 2.3 Planetary context; 2.4 Regional circulation systems; 2.4.1 Jet streams; 2.4.2 Subtropical highs and trade winds; 2.4.3 Equatorial trough zone; 2.4.4 Monsoons; 2.4.5 Equatorial zonal circulations; 2.5 Climatic variability; 2.5.1 Southern

Oscillation and El Niño; 2.5.2 Indian Monsoon
 2.5.3 Northeast Brazil; 2.5.4 Sahel; 2.5.5 Timescales of variability; 2.6
 Concluding remarks; References; II: Regional environmental change;
 CHAPTER 3: Tropical oceans; 3.1 Tropical oceans in the global climate
 system; 3.1.1 Modern climatology; 3.1.2 El Niño-Southern Oscillation
 and its relatives; 3.1.3 Solar and volcanic radiative forcing of tropical
 oceans; 3.1.4 Tropical oceans and monsoons; 3.1.5 The tropical oceans
 as part of the global conveyor belt; 3.2 Reconstructing past ocean
 conditions; 3.2.1 Proxies for SST and SSS; 3.2.2 Reconstructing
 continental climate using marine archives
 3.3 Tropical oceans throughout the Quaternary
 3.3.1 Glacial-interglacial
 cycles; 3.3.2 Early Quaternary (the '41-kyr world'); 3.3.3 Mid-
 Pleistocene Transition; 3.3.4 Late Quaternary (the '100-kyr world'); 3.4
 The past 20 000 years; 3.4.1 The Last Glacial Maximum; 3.4.2 Glacial
 termination: an active role for the tropics?; 3.4.3 History of the
 equatorial Pacific and the state of ENSO; 3.4.4 The Holocene; 3.5
 Outlook; References; CHAPTER 4: Africa; 4.1 Introduction; 4.2 Potential
 climate forcing factors; 4.3 Mediterranean North Africa
 4.3.1 Contemporary climate and sources of palaeoenvironmental
 information; 4.3.2 Longer records; 4.3.3 The Last Glacial Maximum;
 4.3.4 The last glacial-interglacial transition; 4.3.5 The Holocene; 4.4
 The Sahara and the Sahel; 4.4.1 Contemporary climate and sources of
 palaeoenvironmental information; 4.4.2 Longer records; 4.4.3 The Last
 Glacial Maximum; 4.4.4 The last glacial-interglacial transition; 4.4.5
 The Holocene; 4.5 Equatorial Africa; 4.5.1 Contemporary climate and
 sources of palaeoenvironmental information; 4.5.2 Longer records;
 4.5.3 The Last Glacial Maximum
 4.5.4 The last glacial-interglacial transition

Sommario/riassunto

The global climate changes that led to the expansion and contraction of high latitude ice sheets during the Quaternary period were associated with equally dramatic changes in tropical environments. These included shifts in vegetation zones, changes in the hydrology and ecology of lakes and rivers, and fluctuations in the size of mountain glaciers and sandy deserts. Until recently it was thought that such changes were triggered by fluctuations in the distribution of polar ice cover. Now there is increasing recognition that the tropics themselves have