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Nota di contenuto	Title Page; Contents; Preface; Understanding Carbon Cycling in Northern Peatlands: Recent Developments and Future Prospects; Section I: Large-Scale Peatland Dynamics and Carbon Cycling; Nonlinear Dynamics of Peatlands and Potential Feedbacks on the Climate System; Issues Related to Incorporating Northern Peatlands Into Global Climate Models; Upscaling of Peatland-Atmosphere Fluxes of Methane: Small-Scale Heterogeneity in Process Rates and the Pitfalls of "Bucket-and-S; Sensitivity of Northern Peatland Carbon Dynamics to Holocene Climate Change; Direct Human Impacts on the Peatland Carbon Sink Section II: Near-Surface Processes of Peatland Carbon CyclingNorthern Peatland Vegetation and the Carbon Cycle: A Remote Sensing Approach; Plant Litter Decomposition and Nutrient Release in Peatlands; Microbial Community Structure and Carbon Substrate Use in Northern Peatlands; Partitioning Litter Mass Loss Into Carbon Dioxide and Methane in Peatland Ecosystems; Section III: Methane Accumulation in, and Loss From, Peatlands; Methane Accumulation and Release From

Deep Peat:

Noninvasive Field-Scale Characterization of Gaseous-Phase Methane Dynamics in Peatlands Using the Ground-Penetrating Radar
MethoMethane Dynamics in Peat: Importance of Shallow Peats and a Novel Reduced-Complexity Approach for Modeling Ebullition; The Stable Carbon Isotope Composition of Methane Produced and Emitted From Northern Peatlands; Laboratory Investigations of Methane Buildup in, and Release From, Shallow Peats; Physical Controls on Ebullition Losses of Methane From Peatlands; Section IV: Water and Dissolved Carbon Transfers Within and From Peatlands

Dissolved Organic Carbon Production and Transport in Canadian Peatlands
Hydrological Controls on Dissolved Organic Carbon Production and Release From UK Peatlands; The Role of Natural Soil Pipes in Water and Carbon Transfer in and From Peatlands; Improving Conceptual Models of Water and Carbon Transfer Through Peat; Water Relations in Cutover Peatlands; The Influence of Permeable Mineral Lenses on Peatland Hydrology; Index

Sommario/riassunto

Published by the American Geophysical Union as part of the Geophysical Monograph Series, Volume 184. *Carbon Cycling in Northern Peatlands* examines the role that northern peatlands play in regulating the atmospheric carbon budget. It summarizes current research in four interconnected areas: large-scale peatland dynamics and carbon cycling; plant and microbial dynamics and their effect on carbon fluxes to the atmosphere; methane accumulation in, and loss from, peatlands; and water and dissolved carbon fluxes through peatlands. The volume highlights include

A thorough assessment
