

1. Record Nr.	UNINA9910366649803321
Autore	Zheng Chongwei
Titolo	21st Century Maritime Silk Road: Wave Energy Resource Evaluation [[electronic resource] /] / by Chongwei Zheng, Jianjun Xu, Chao Zhan, Qing Wang
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2020
ISBN	981-15-0917-4
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (xix, 170 pages) : illustrations
Collana	Springer Oceanography, , 2365-7677
Disciplina	551.46
Soggetti	Oceanography Hydrology Marine sciences Freshwater Renewable energy resources Climate change Coasts Hydrology/Water Resources Marine & Freshwater Sciences Renewable and Green Energy Climate Change/Climate Change Impacts Coastal Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Introduction -- Research progress of wave energy evaluation -- Temporal-spatial distribution of wave energy in the Maritime Silk Road -- Climatic trend of wave energy in the Maritime Silk Road -- Short- term forecast of wave energy in the Maritime Silk Road -- Long-term projection of wave energy in the Maritime Silk Road -- Wave energy assessment and proposal in the Sri Lankan waters -- Dataset construction of wave energy resources in the Maritime Silk Road -- Prospects of wave energy evaluation.
Sommario/riassunto	This book focuses on the evaluation of wave energy in the Maritime Silk Road. Firstly, it compares wave energy and other main energy sources,

and then discusses the various disadvantages. It also presents the current research and the difficulties of wave energy evaluation, and systematically analyzes the climatic characteristics of the wave energy, including the temporal–spatial distribution and climatic trend of a series of key factors (e.g. wave power density, availability, richness, stability, energy direction, energy storage). It then describes the design of a short-term forecasting scheme and a long-term projection scheme of wave energy suitable for the Maritime Silk Road, to serve as a plan for the daily operation and long-term development of wave energy. Further, it highlights the wave energy analysis and decision-making in the context of the remote islands and reefs, using Sri Lanka as a case study. Lastly, it presents the first wave energy resource dataset for the Maritime Silk Road. This book is one of a series of publications on the 21st century Maritime Silk Road (shortened as “Maritime Silk Road”) that covers the characteristics of the marine environment and marine new energy, remote islands and reef construction, climate change, early warning of wave disasters, legal escort, marine environment and energy big data construction, contributing to the safe and efficient construction of the Maritime Silk Road. It aims to improve our knowledge of the ocean, and so improve the capacity for marine construction, enhance the viability of remote islands and reefs, ease the energy crisis and protect the ecological environment and improve the quality of life of residents along the Maritime Silk Road, as well as to protect the rights, and interests of the countries and regions participating in the construction of the Maritime Silk Road. This book is a valuable reference resource for decision-makers, researchers, and marine engineers working in the related fields.
