Record Nr. UNINA9910985895003321 Autore Pernet Fabrice Titolo Ocean Acidification: Understanding the Effects, Exploring the Solutions Pubbl/distr/stampa Versailles:,: Quae,, 2025 ©2025 Edizione [1st ed.] Descrizione fisica 1 online resource (122 pages) Collana **Enjeux Sciences Series** Altri autori (Persone) Gazeauédéric Disciplina 577.7144 Ocean acidification Soggetti Seawater - Carbon dioxide content Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Contents -- Introduction. Why a book on ocean acidification? -- What is ocean acidification? -- Machines, fossil fuels and people --Greenhouse effect and CO2 -- Some like it hot! -- The fate of anthropogenic CO2 -- How long have we been talking about ocean acidification? -- Just acidity! -- How is pH measured? -- How are other carbonate chemistry parameters measured? -- pH monitoring and the emergence of the term ocean acidification -- Scientific awareness -- Public awareness -- How is ocean acidity evolving? --How far has pH fallen since the Industrial Revolution? -- What pH values are expected by 2100? -- Has the ocean ever been acidified? --Does the current period have an equivalent in the geological past? -- Is ocean acidification a homogeneous phenomenon on the scale of the global ocean? -- How do pH and carbonate parameters vary in the ocean? -- How does pH vary over time? -- How has pH evolved in different regions of the ocean? -- How will pH evolve in different regions of the ocean? -- What are the biological impacts of acidification? -- Physiological impacts of CO2 enrichment -- Animal tolerance to CO2 enrichment -- Impacts of ocean acidification on calcifying organisms -- Larval stages, more sensitive than juveniles and adults -- Impacts on behaviour

Carbon dioxide CO2 emissions, resulting from the combustion of fossil fuels by human activity, reinforce the greenhouse effect and cause

Sommario/riassunto

climate disruption. While public awareness of this global problem is growing, ocean acidification, described as "the other CO2 problem", is still considerably unknown. In this book, the authors answer ten key questions on the biogeochemical basis of acidification, on past, current and future trends, on the impact on marine organisms and humans, and finally on remediation measures. It draws its answers from fields as diverse as biogeochemistry, ecology, physiology, evolution, aquaculture and fisheries, economics and sociology.