Processo de seleção 2020_2

Como parte do processo de seleção leia o texto, analise e interprete as figuras abaixo e responda:

Marine biodiversity plays an important role in providing the ecosystem functions and services which humans derive from the oceans. Understanding how this provisioning will change in the Anthropocene requires knowledge of marine biodiversity patterns. Here, we review the status of marine species diversity in space and time. Knowledge of marine species diversity is incomplete, with only 11% of species described. Nonetheless, marine biodiversity is clearly under threat, and habitat destruction and overexploitation represent the greatest stressors to threatened marine species. Claims that global marine extinction rates are within historical backgrounds and lower than on land may be inaccurate, as fewer marine species have been assessed for extinction risk.
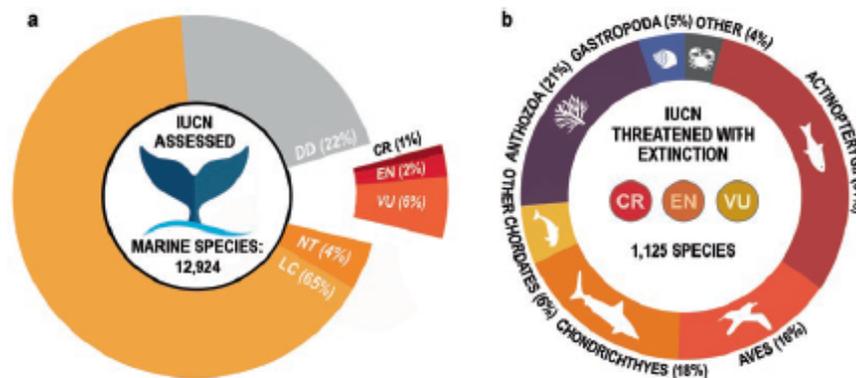
Fig. 4.1 (a) The conservation status of 12,924 IUCN-assessed marine species. Only 10,142 are in a category other than data deficient, an inadequate level of assessment (IUCN 2018). This represents 4.2% of currently described marine species (WoRMS Editorial Board 2018, 15 April 2018), and only between 0.5 and 3.3% of the estimated total marine species. Of the assessed species, 11% are either critically endangered (CE), endangered (EN), or vulnerable (VU), and are thus considered threatened with extinction. (b) Taxonomic distribution of marine species threatened with extinction, as defined by being classified CR, EN, or VU. Of these assessments, 64% are species from well-described groups (Webb and Mindel 2015). Furthermore, 64 of 88 recognized marine groups (groups as per Appeltans et al. 2012) had no IUCN assessed species (Webb and Mindel 2015). The "other chordates" category includes Mammalia, Myxini, Reptilia, and Sarcopterygii, and "other" category includes Polychaeta, Insecta, Malacostraca, Maxillopoda, Merostomata, Hydrozoa, and Holothuroidea. These were grouped due to low species availability. Data extracted from IUCN (2018)
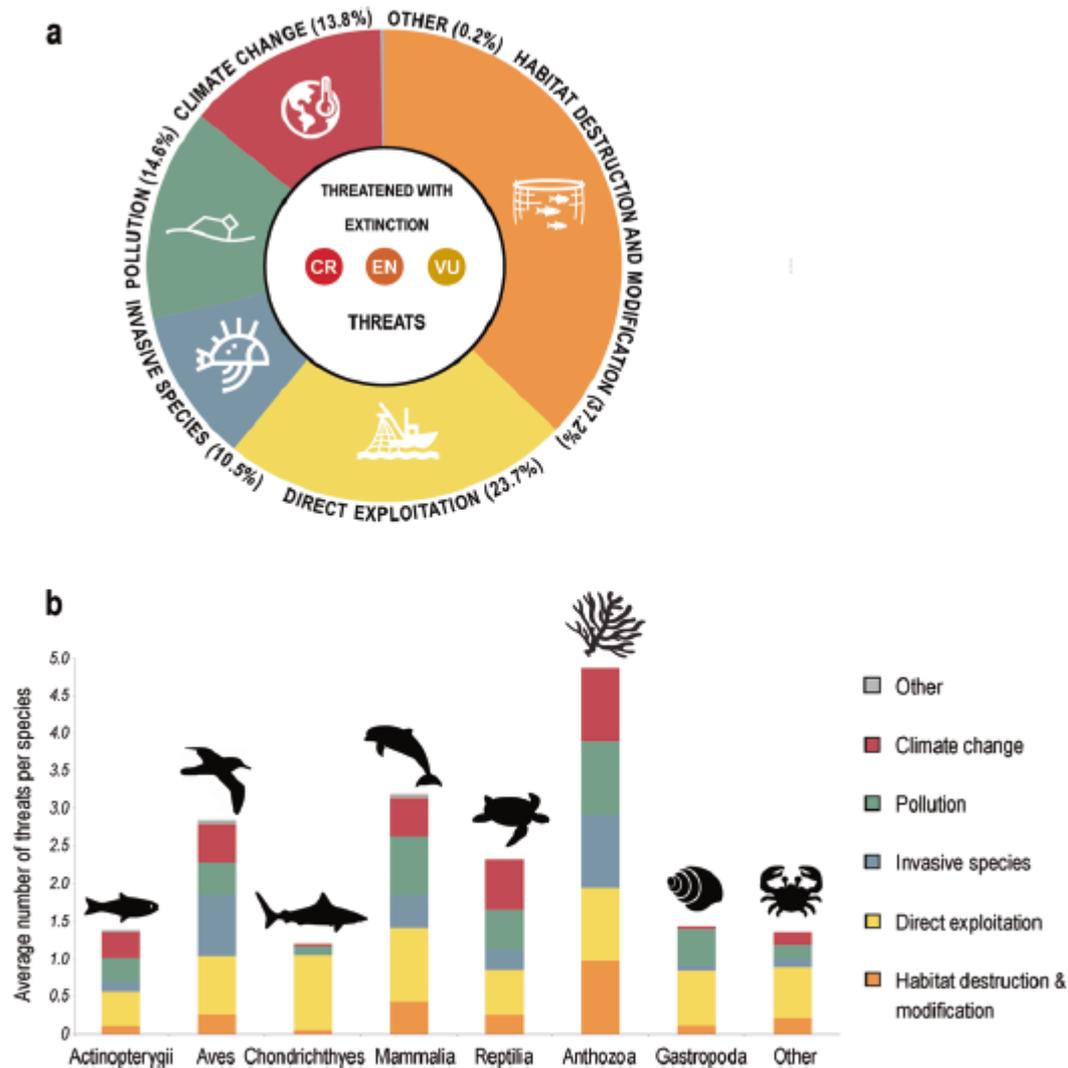
Fig. 4.3 (a) Relative importance of various anthropogenic stressors to species threatened with extinction (critically endangered (CR), endangered (EN) or vulnerable (VU)). (b) Average number of anthropogenic stressors affecting species threatened with extinction for various taxonomic groups. Several taxonomic groups with a low number of species threatened with extinction were pooled under "other" for visualization purposes ("Myxini," "Sarcopterygii," "Polychaeta," "Insecta," "Malacostraca," "Maxillopoda," "Merostomata," "Hydrozoa," and "Holothuroidea"). Colors indicate the percentage contribution of the different anthropogenic stressors. Data extracted from the IUCN Red List database of threats (IUCN 2018). Details on data compilation are provided in the Supplementary Material B

Discuta o relacionamento geral da perda de diversidade marinha com os processos de transformação dos oceanos induzidas pelo Antropoceno (de acordo com Luypaert et al. 2020) Como os fundamentos de diferentes áreas da oceanografia podem contribuir com essa discussão. Para complementar sua resposta, indique possíveis ações, em cada uma das seis atividades, que governos, empresas e o resto da humanidade podem tomar para diminuir os efeitos das mudanças globais.

Referência: LUYPAERT, Thomas et al. Status of marine biodiversity in the Anthropocene. In: **YOUMARES 9-The Oceans: Our Research, Our Future**. Springer, Cham, 2020. p. 57-82.