Sandy beaches ecosytems

|  |  |
| --- | --- |
| Summary of the assessed risk:  Increasing erosion/sediment loss related to storms, waves and SLR, as well as impacts of warming and acidification on species (migration, reduction in body size, mortality). Changes in beach morphology, dune scarping, vegetation loss, reduction in beach area and turtle nesting sites. Sandy beaches are highly dynamical systems (e.g. through sediment relocation and landward expansion), with a natural adaptation capacity including through the redistribution of species; however, human activities constrain this natural adaptation, in particular by restricting landward migration ('coastal squeeze'). [5.ES, 5.3.7, Table SM5.8a]  Database id: 67 ([link](https://climrisk.org/cree/ember/67)).  This ember is found in the following figure(s): Figure 5-16 of SROCC-Chapter5;  (as a rule, summaries are not listed here)  The ember diagram included in this document is based on the assessment provided in the IPCC report and supplementary material listed below, but it does not come from the IPCC; all additional information is provided in view of helping to understand this diagram and is also based on, or reproduced from, the same IPCC sources. Please read the disclaimer notice at the end of this document. |  |

# Transition: undetectable to moderate

|  |  |  |
| --- | --- | --- |
| min | 0.9 | *medium confidence* |
| max | 1.8 |

Within a low emission scenario, the risk is expected to become only slightly higher than present. [5.3.7]

# Transition: moderate to high

|  |  |  |
| --- | --- | --- |
| min | 2.3 | *low confidence* |
| max | 3.0 |

The risk of losing habitats for flora and fauna is expected to rise to a high level under a high emission scenario by the end of the 21st century [5.3.7]

# Specific references

5.3.3, 5.3.7, Table SM5.8a, Table SM5.8b

# Reference for the source data:

Bindoff, N.L., W.W.L. Cheung, J.G. Kairo, J. Arístegui, V.A. Guinder, R. Hallberg, N. Hilmi, N. Jiao, M.S. Karim, L. Levin, S. O’Donoghue, S.R. Purca Cuicapusa, B. Rinkevich, T. Suga, A. Tagliabue, and P. Williamson, 2019: Changing Ocean, Marine Ecosystems, and Dependent Communities.. In: *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 447-587. <https://doi.org/10.1017/9781009157964.007>  
Alternative direct download: [www.ipcc.ch/site/assets/uploads/sites/3/2022/03/07\_SROCC\_Ch05\_FINAL.pdf](https://www.ipcc.ch/site/assets/uploads/sites/3/2022/03/07_SROCC_Ch05_FINAL.pdf)

Bindoff, N.L., W.W.L. Cheung, J.G. Kairo, J. Arístegui, V.A. Guinder, R. Hallberg, N. Hilmi, N. Jiao, M.S. Karim, L. Levin, S. O’Donoghue, S.R. Purca Cuicapusa, B. Rinkevich, T. Suga, A. Tagliabue, and P. Williamson, 2019: Changing Ocean, Marine Ecosystems, and Dependent Communities. Supplementary Material. In: *IPCC Special Report on the Ocean and Cryosphere in a Changing Climate* [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)], url: [www.ipcc.ch/site/assets/uploads/sites/3/2022/03/SROCC\_Ch05-SM\_FINAL.pdf](https://www.ipcc.ch/site/assets/uploads/sites/3/2022/03/SROCC_Ch05-SM_FINAL.pdf)

# Disclaimer

The Embers Explorer project is not affiliated with the IPCC, is not approved or authorized by the IPCC, and is not an IPCC product. The figures presented herein are not IPCC figures, have not been subject to formal IPCC review processes and have not been endorsed by the IPCC. The IPCC does not assume any responsibility for their accuracy.

However, every effort is made to ensure that data resulting from IPCC assessments are accurately represented here, with due reference to sources.

An archive of the database on which this app is based is available on Zenodo ([doi.org/10.5281/zenodo.12626977](https://doi.org/10.5281/zenodo.12626977)) under the CC-BY 4.0 license. We have confirmed with the IPCC that this data can be distributed in this way.

[This file was generated by the Embers Explorer 1.4.0 on 2025-08-05.]