



STRENGTHENING CLIMATE RESILIENCE IN COASTAL AREAS

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The importance of coastal zones



- Coastal zones host important ecosystems
- Coastal ecosystems provide valuable services

90% of world's fisheries depend on coasts throughout their life



- High population density
- 40% of the world's population
- 20% of the global land surface

75% of the largest urban agglomerations are located in coastal zones



- Fisheries and aquaculture
- Coastal tourism
- Shipping

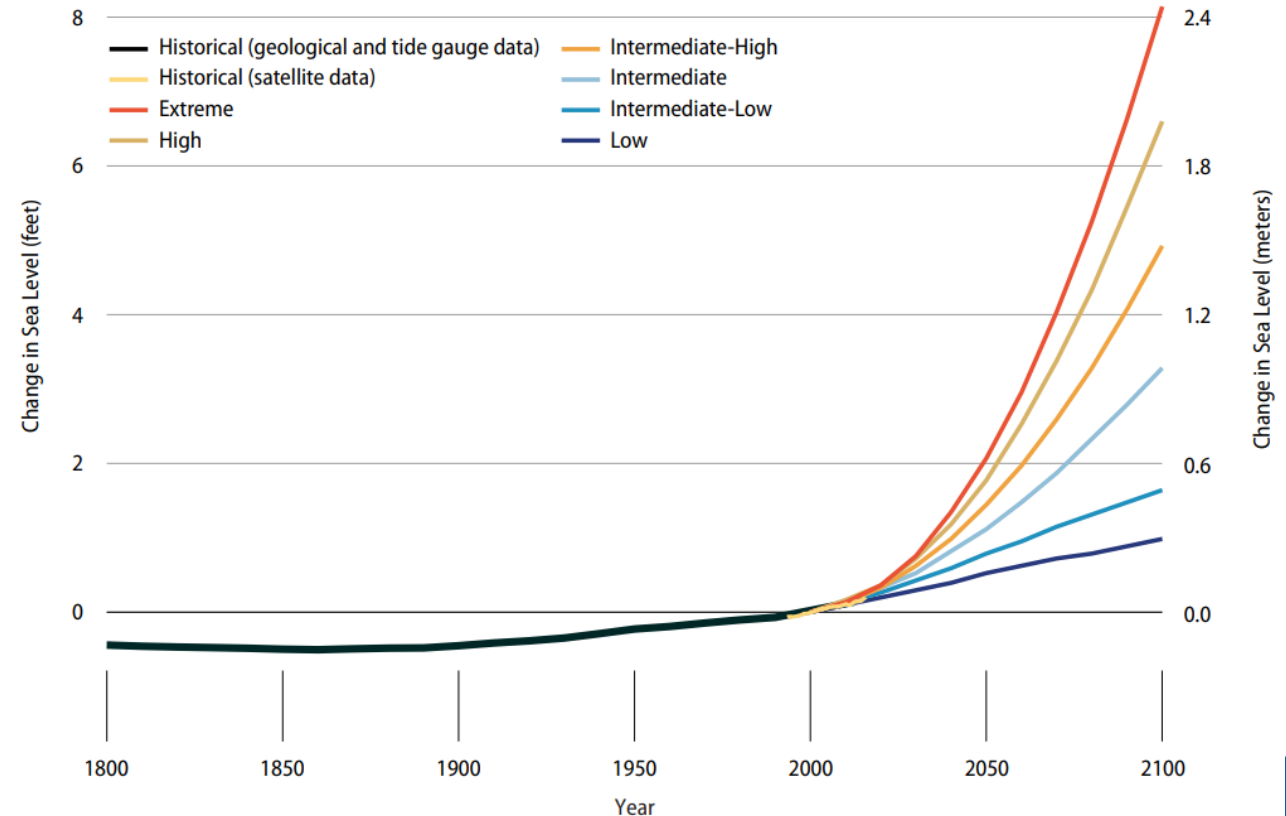
85% of tourism income in the USA



The impacts of climate change in coastal zones

- **Sea-level rise** will intensify coastal flooding. By 2100, floods will affect 360 million people
- **Ocean warming** will affect coastal ecosystems (coral reefs and mangroves) that are essential for biodiversity and support the livelihoods of many coastal communities
- **Extreme storms** might become more intense in some regions. In the past 20 years, storms have killed over 200 000 people and generated economic losses of USD 1.4 trillion

Sea-level rise scenarios, 1800-2100



Source: USGCRP (2018)



The human drivers behind the increasing risks

- **Urban development and land use changes**
 - Ecosystem loss, land subsidence, saline intrusion, water pollution
- **Exploitation of coastal resources**
 - Overexploitation of fisheries, corals, mangroves, etc. causing erosion and ecosystem degradation
- **Human activities on the coast and upstream of river basin**
 - Excessive freshwater extraction; Alter sediment supply (e.g. land clearing, mining); water pollution





Urgent policy action is needed

Coastal adaptation can significantly reduce climate risk using a combination of *protection*, *accommodation* and *retreat* strategies

- **Coastal ecosystem protection** can reduce damage costs by 2-3 orders of magnitude.
- **Nature-based solutions** can significantly help reduce flood damage while also delivering other benefits, e.g. for climate mitigation, biodiversity, or tourism.

An estimated 35% of people exposed to coastal flooding globally benefit from NbS storm surge protection (coral reefs, wetlands)





OECD practices highlighted in National Adaptation Plans

Nearly all OECD countries have information provisions

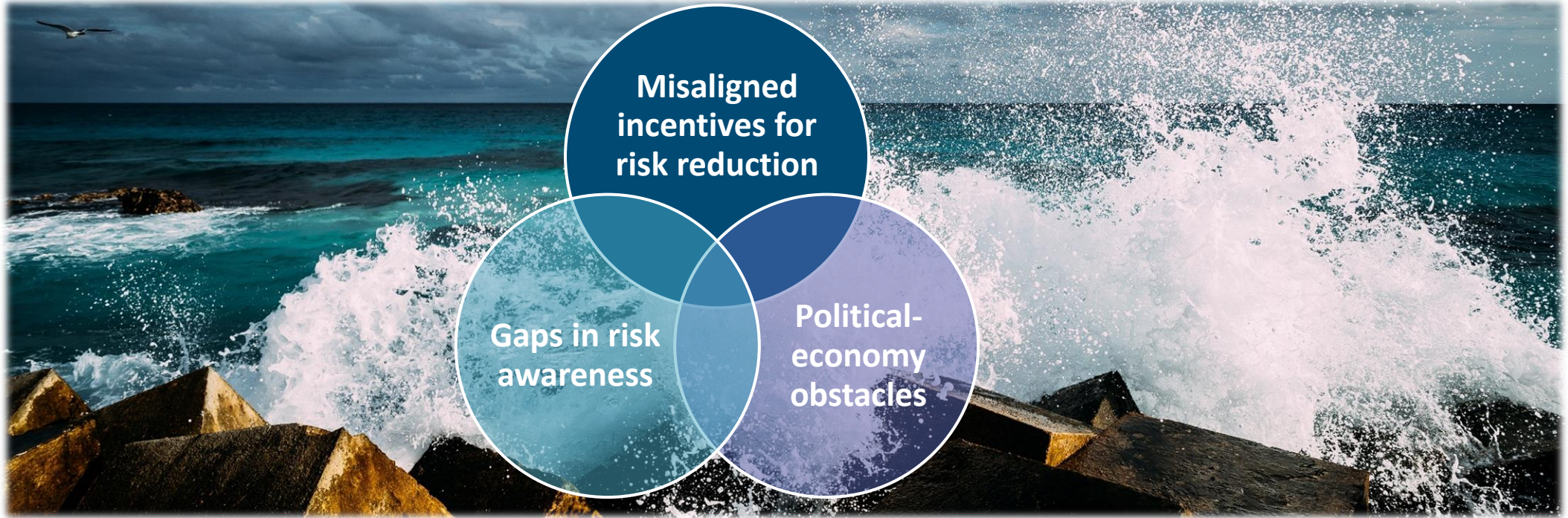
- Climate projections
- Combined them with socio-economic information
- Communicating risk information

About half refer to their regulatory and economic instruments

- Land-use planning
- Building codes and standards
- ICZM
- Risk-based insurance schemes
- Property risk disclosure



Remaining barriers to strengthen climate resilience



National governments



Local governments



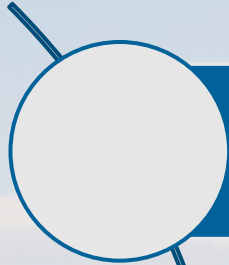
Property developers



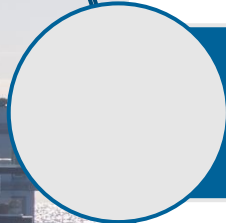
Property owners



What leads to successful adaptation? – Key takeaways for national governments



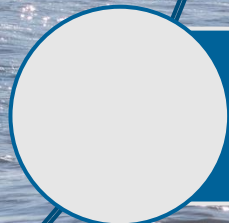
Engage stakeholders early and substantively



Plan for the future & prevent lock-in to unsustainable pathways



Align actors' responsibilities, resources and incentives

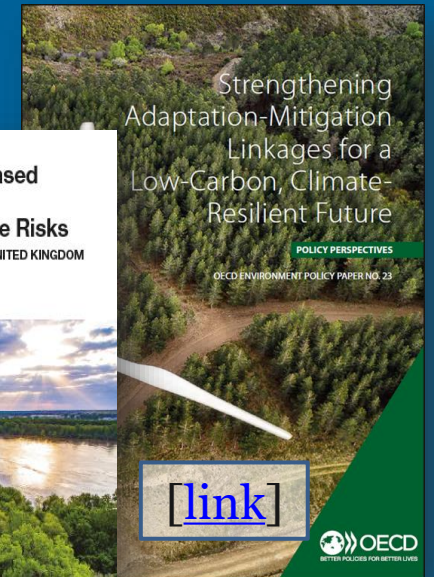
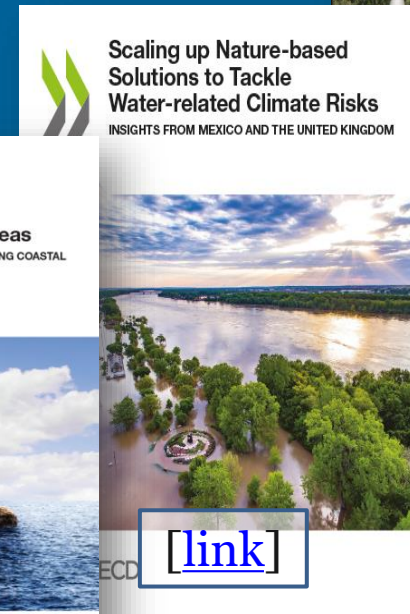
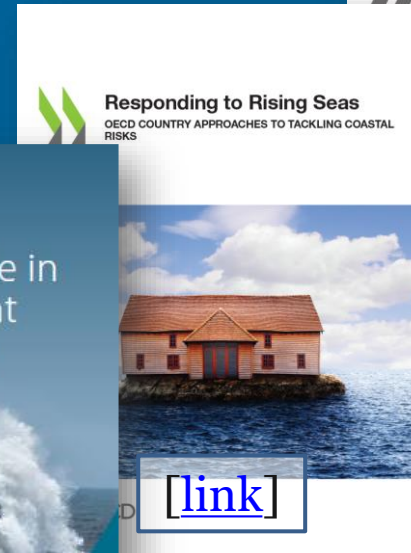
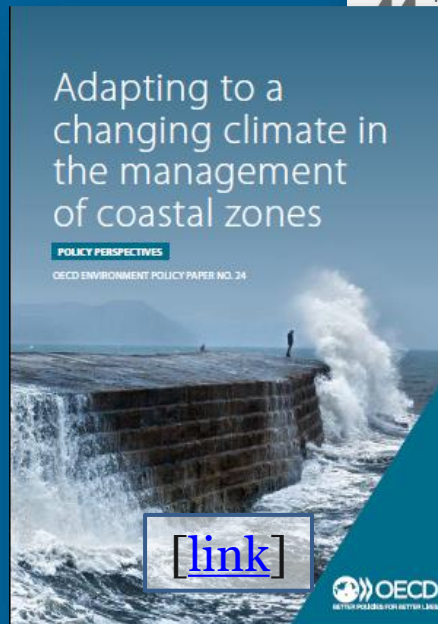


Explicitly consider distributional and equity implications of policies





Thank You



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<https://www.oecd.org/climate-change/theme/resilience/>