Climate change threatens Europe's coasts

NO-ACTION SCENARIO

Global warming is driving sea-level rise and intensifies coastal storms, resulting in more frequent flooding. If no action is taken, coastal flood impacts will be severe.

130 Gt of CO_2eq emissions*

year 2100
HIGH EMISSIONS

SEA LEVEL +85 cm
[47 cm – 198 cm]

2.2 million
PEOPLE EXPOSED
per year

239 billion €
ECONOMIC LOSSES
per year

NOW

100 thousand
PEOPLE EXPOSED
per year in present

1.4 billion €
ECONOMIC LOSSES
per year in present

170-fold increase in economic losses
22-fold increase in exposed population

MITIGATION AND ADAPTATION SCENARIO

Mitigation means limiting sea level rise by reducing emissions. ***Adaptation*** includes all measures to protect coastal communities through nature-based and engineered physical measures.

25 Gt of CO_2eq emissions*

year 2100
WITH MITIGATION

SEA LEVEL +51 cm
[21 cm – 84 cm]

552 thousand
PEOPLE EXPOSED
per year

12 billion €
ECONOMIC LOSSES
per year

NOW

Raising flood defenses will cost up to 2 billion € per year

95% reduction of economic losses
73% fewer people exposed

*CO_2eq is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential, by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential (definition from Eurostat).

For more information, including assumptions of the modelling framework used, see: JRC PESETA IV project https://ec.europa.eu/jrc/en/peseta-iv

European Commission