European rivers in a changing climate: Adapting to flood risk

Adequate adaptation can greatly reduce future flood impacts.

A mix of different measures is the best strategy to maximise benefits.

Annual population exposed EU & UK*

Annual economic losses (billions €)

EU & UK*

Present | 1.5 °C | 2 °C | 3 °C
---|---|---|---
Without adaptation | 7.8 | 24.1 | 33.1
With adaptation† | 8.6 | 9.6 | 47.8

* Global warming projections assume population and economy of year 2100

"last resort" option: high costs, low social acceptance

"back-up" solution, damage is only partially reduced

can increase floods downstream, stimulates development in flood-prone areas

Additional benefits of restoring floodplain ecosystems, but may require large portions of land

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