

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

 = 100,000 people

Annual population exposed EU & UK*



Annual economic losses (billions €) EU & UK*

7.8

24.1

8.6

33.1

9.6

47.8

8.6

Present

1.5 °C

2 °C

3 °C

Without adaptation With adaptation¹

¹Adaptation only considers retention basins

* Global warming projections assume population and economy of year 2100

RELOCATION
 **1.2€ saved**
for each € spent



“last resort” option: high costs, low social acceptance

RETENTION BASINS
 **3.3€ saved**
for each € spent



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

DYKES HEIGHTENING
 **2.4€ saved**
for each € spent



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

FLOOD PROOFING
 **5.2€ saved**
for each € spent



“back-up” solution, damage is only partially reduced