



An adaptation pathway in action: Monitoring in the Thames Estuary 2100 Plan

Presentation 2, slide 21

Indicator

Sea level



- Observations of mean sea level, high and low water levels, tidal range, land level change
- Climate change projections of future mean sea level and mean high water spring tide



Deadlines -
when thresholds will be reached, when decisions will be required, and when interventions need to happen

Data and information analysed

Extreme water levels



- Analysis of tide gauge data
- Climate change projections of future extreme water levels
- Design safety margins (freeboard) for uncertainty of wave height, and other factors



Deadlines
Design of defences and barriers
Operating rules for flood barriers

River (fluvial) flows

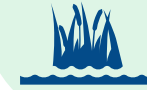


- Observations of daily, annual and seasonal flows at gauging stations
- Climate change projections of future flows



Management of flood risk upstream of the Thames Barrier
Design of defences and barriers

Habitat



- Aerial surveys and analysis of changes in area of Natura 2000 intertidal habitat
- Projections of future habitat loss from coastal squeeze
- Natural capital and biodiversity net gain



Targets for compensatory habitat creation to ensure no net loss of valuable intertidal habitats

Erosion and deposition



- Data from whole river surveys and site specific surveys of the intertidal and subtidal zone to calculate trends in erosion and deposition



Costs of delivery
Design and refurbishment of defences
Habitat creation programmes

Which aspects of the Plan does this inform?



Indicator

Condition of flood defences



Barrier operations



Social, cultural and commercial value of the estuary



People, property, critical infrastructure and policy



Public and institutional attitudes to flood risk



Data and information analysed

- Condition grade ratings for flood defence assets from visual inspections

- Actual number of barrier closures and reasons for them
- Reliability of barriers
- Forecasting accuracy

- Number of health, education, community facilities
- Number of heritage sites and legal protection
- Commercial value of cargo movements and tourism

- Existing population and development statistics
- Future population and development projections
- Government policies, flood resistance and resilience in local planning strategies

- Surveys of institutional attitudes to flood risk
- Surveys of public attitudes to flood risk

Which aspects of the Plan does this inform?

Prioritising and planning for maintenance, repair and replacement

Update cost estimates in the economic case review

Deadlines for raising flood defences (to manage barrier closure numbers)

Impacts on shipping and recreation

Opportunities to enhance value through design

Local flood risk management options

Ability to deliver the Plan (positive or adverse effects)

Availability of funds

Engagement

Ability to deliver the recommendations in the Plan

Where to find out more: [Thames Estuary 2100 Monitoring review key findings](https://www.thames.gov.uk/2100-monitoring-review-key-findings) bit.ly/te2100