

**CLIMATE CHANGE ADAPTATION
REPORTING:**

**PRACTICAL EXPERIENCES FROM
THREE HARBOUR AUTHORITIES**

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Presentation overview

- Background
- Process/approach
- Key outcomes
 - preparatory actions
 - 'no regrets' actions
 - longer term actions
- Lessons learned
- Conclusions



Background

- Climate Change Act 2008 sets out 'reporting' requirements
- England and Wales Harbour Authorities with annual throughput >10 million tonnes cargo required to report on:
 - current and future climate change impacts
 - proposals for adaptation
- Experiences from Harwich Haven Authority; also Port of London Authority and Milford Haven Port Authority

Reporting guidance

- Harbour Authority functions potentially impacted by climate change
- Approach to assessment including identifying effects
- Potential risks to Authority's functions
- Actions required to adapt to change
- Key assumptions and uncertainties
- Proposals for monitoring and review

Approach: key challenges

- Identify relevant functions vs. comprehensive assessment
- Full range of climate change parameters vs. key parameters
- Complex range of climate change scenarios vs. simplified approach based on direction and rate of change
- Appropriate level of detail and methodology for risk assessment
- Proper engagement vs. climate scepticism

HHA climate change projections

- UKCP09 and MCCIP 2010-2011 report card
- Key parameters, 2090 estimates (HHA):
 - sea level rise (+0.9m; 'highly unlikely' +2.7m)
 - seasonal precipitation/flow (+30% winter / -30% summer); associated erosion/accretion changes
 - air (+ 4.0° C) and water (+ 3.0° C) temperature
 - wind and fog frequency/severity (+7% to +20% fog days)
 - increase in frequency/severity of extreme events
- Medium greenhouse gas emissions, 50% probability

Approach

- Workshop/meeting with key personnel
- Explore implications of 2090 projections (magnitude of change): if not significant, assumed interim projections also insignificant
- Review data requirements
- Identify potential short and longer term risks
- Prioritise; identify associated actions

Short term actions

- Raise awareness internally
- Identify data requirements, seek partnership opportunities, instigate monitoring
- Ensure effective long term data management
- (Continue to) future-proof new construction, assets, equipment
- Encourage (or require) applicants to 'future proof' proposals

Examples of 'no regrets' or win-win actions

- Reduce flood risk (e.g. improve monitoring, relocate assets currently in flood risk area)
- Contingency planning (extreme cold, heat, storm events, etc. causing loss of power or disrupting travel to workplace)
- Positive management of vegetation
- Raise awareness amongst (recreational) stakeholders

Possible long term actions

- Modify working practices (e.g. if extended periods of fog or high winds)
- React to changes in sedimentation
- Deal with consequences of increased aquatic / bankside vegetation growth (clearance; algal blooms; hull fouling; non-indigenous species)
- Modify assets or physical infrastructure (e.g. deal with flood risk, mooring arrangements, reduced clearance issues)
- Respond to increased tourism/waterborne recreation pressures; potential conflicts

Possible future opportunities

- Renewable energy (e.g. wind, solar power)
- Increased tourism and water-based recreation
- Reduced dredging requirement
- Changes in demand, cargo type, etc.



Lessons learned

- Too many climate change scenarios; too much detail – benefits of simpler starting point; use of 2090 projections
- Value of long-term datasets and importance of data management to future timely and cost-effective decisions on adaptation needs (sustainability; practicality; affordability)
- Importance of inter-dependencies (e.g. Thames at Teddington: water resources, flow)

Conclusions (personal reflections)

- Was reporting worthwhile? Yes
- Is the sector just 'paying lip-service'? Maybe
- And if so, does it matter? Probably not
- Why? Concrete adaptation measures not generally urgent

However:

- No excuse not to collect adequate data to inform future decisions
- Extreme events may prove to be more challenging than long term changes

Thanks for listening!

