



MAWAC-ENA WORKSHOP

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2025 Update - Water in London and the Response to Climate Change

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Introduction & Context

Evolving Climate Urgency

Climate change impacts in London have accelerated, requiring updated strategies and reassessments since 2015.

Public Engagement Growth

Post-pandemic public awareness has increased, with 84% concerned about water pollution in the UK.

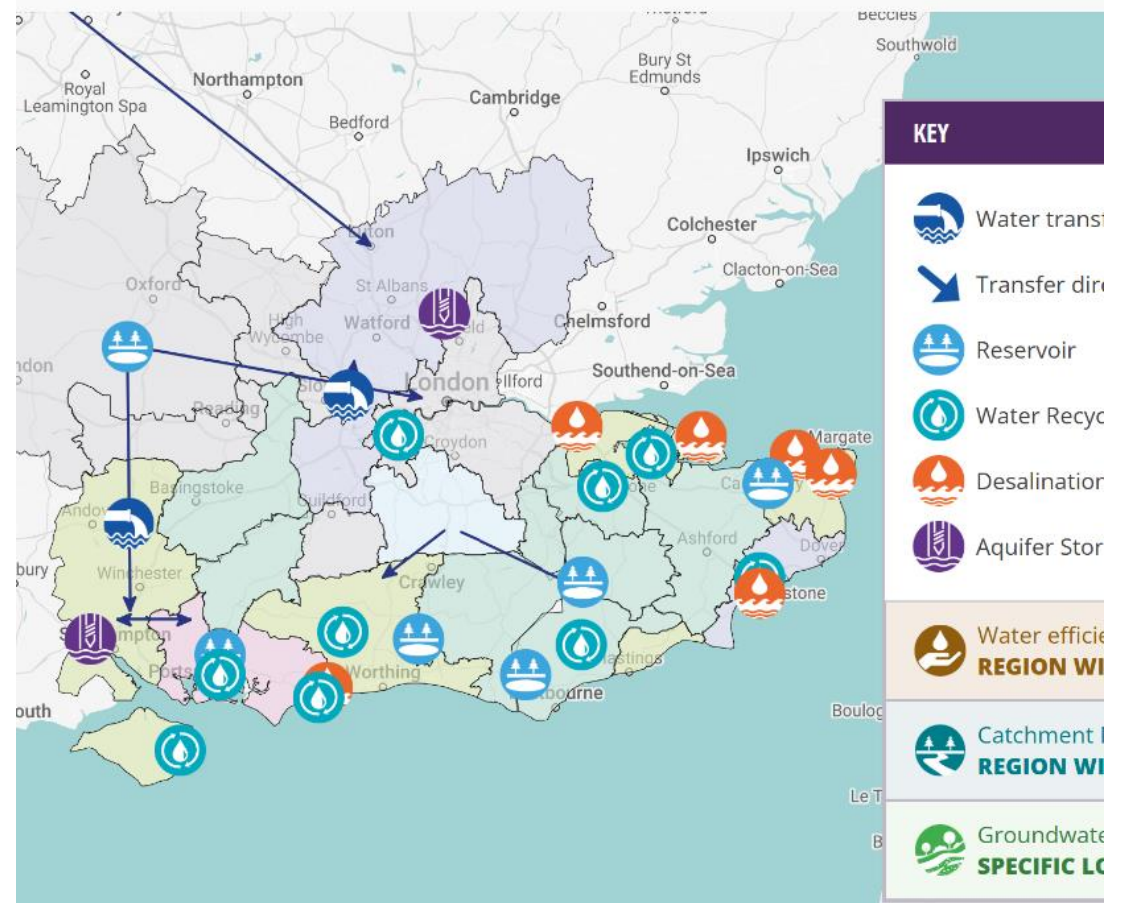
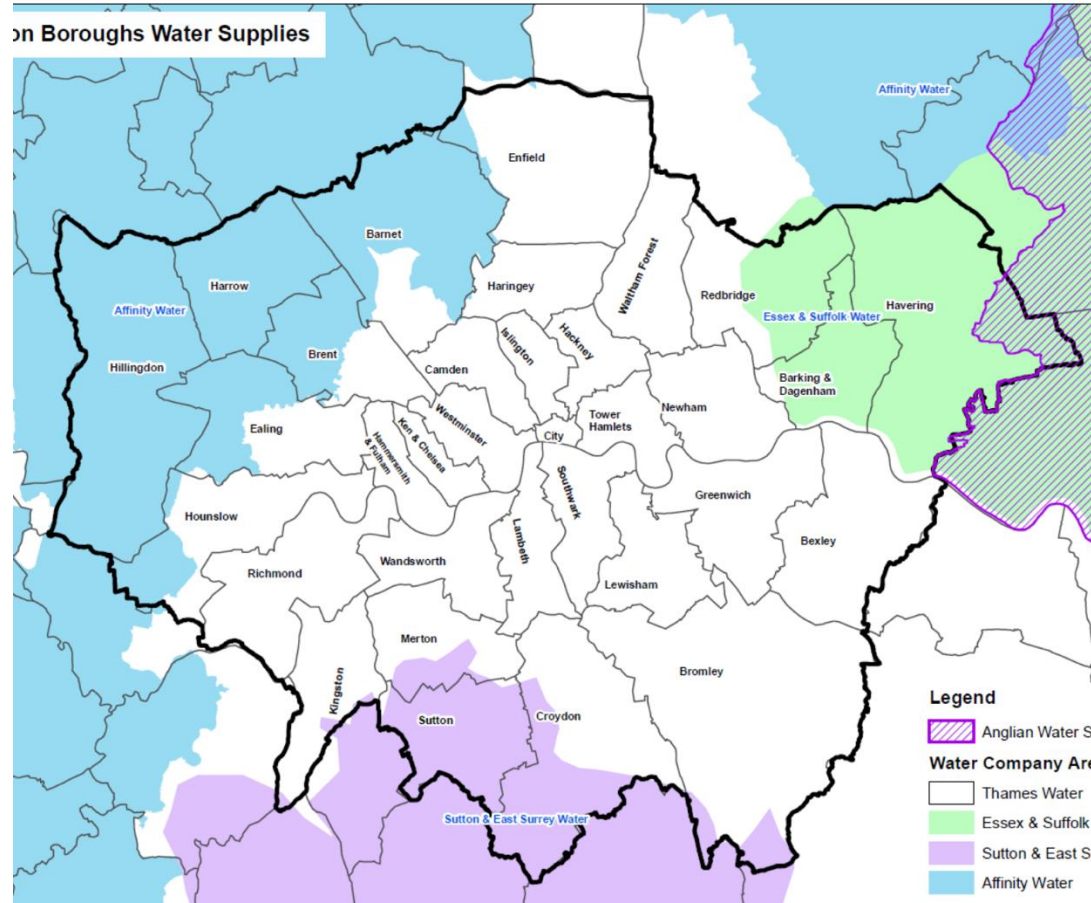
Complex Water Governance

London's water governance involves four major companies with overlapping jurisdictions, complicating unified policies.

Opportunities for Adaptation

London's diversity and innovation provide strong foundations for advancing climate adaptation initiatives.

Case Study: Water Resources



Observed Changes & Current Risks



Increasing Temperatures and Heatwaves

London's temperature has risen 1.2°C since pre-industrial times causing extreme heatwaves and major disruptions.

Water Stress and Consumption

Water consumption surged by 50% while reservoir levels dropped to their lowest in 30 years, stressing supply.

Flooding and Climate Risks

Severe flooding from storms compounded risks, inundating thousands of properties and highlighting climate vulnerability.

Economic and Health Impacts

Heat and pollution cause economic losses of £1bn annually and pose serious health risks to Londoners.

An aerial photograph of a large reservoir, likely the Thames Tideway Tunnel project. Several large, rectangular floating solar panels are visible on the water's surface. In the background, a city skyline is visible under a blue sky with scattered clouds. The foreground shows a grassy bank with some trees and a path.

Progress on Solutions

Water Resources Management Plans

WRMP24 guides London's 50-year plan to halve water leakage and reduce daily consumption to 110 litres per person by 2050.

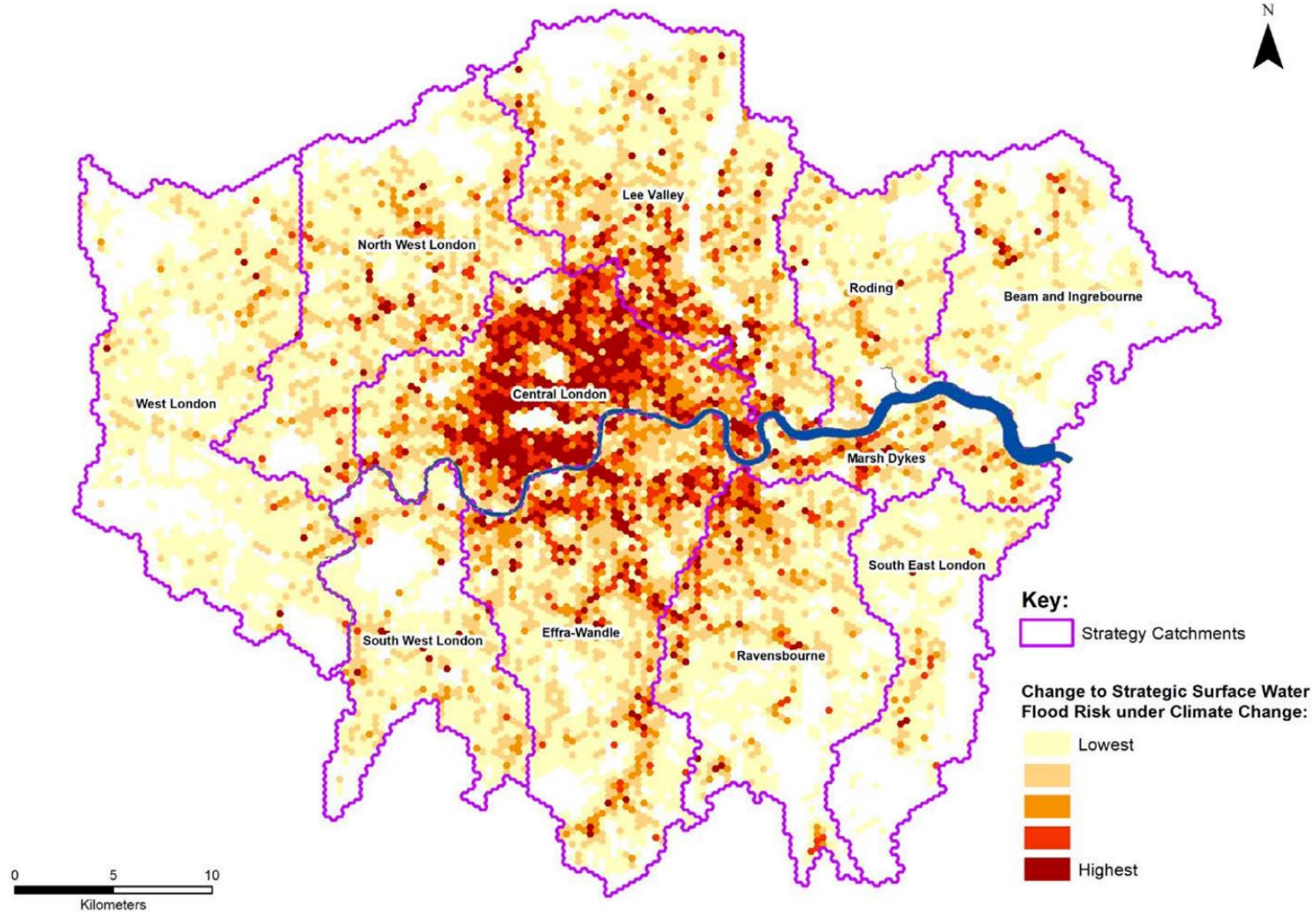
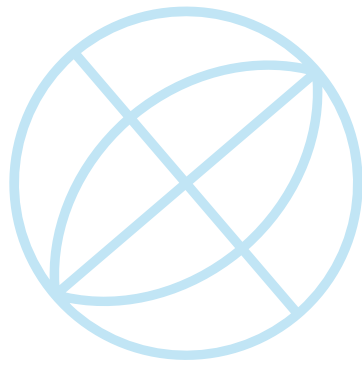
Surface Water and Flood Management

New strategies introduce catchment partnerships and nature-based flood management focusing on vulnerable communities.

Challenges and Future Needs

Despite progress, London faces challenges in funding, staffing, and regulatory reform for climate resilience in water management.

Case Study: Surface water management



Effectiveness & Gaps



Water Leakage Reduction

Thames Water reduced leakage by 20% since 2017/18, aiming to halve losses by 2050 with regulatory support.

Smart Meter Deployment

Over 1 million smart meters installed, targeting 15 million by 2030 to manage water demand effectively.

Flood Defence and Drainage

Thames Barrier protects against tidal flooding; sustainable drainage funded with £1.5 million and ten mitigation actions launched.

Challenges and Barriers

Fragmented governance, limited funding, and inadequate climate adaptation integration hinder progress and impact.



Lessons Learned

Increasing Climate Impacts

Climate change has intensified extreme weather events, exceeding prior expectations, causing widespread urban challenges.

Interconnected Urban Risks

Failures in one urban system can cascade, highlighting the need for integrated risk management and infrastructure resilience.

Governance and Resource Challenges

Fragmented agency responsibilities and limited resources hinder effective water management requiring governance reform.

Public Engagement and Adaptation Investment

Engaging the public and viewing adaptation as an investment are vital to build trust and avoid costly underpreparedness.

Forecasts to 2035



Increasing Heatwaves and Economic Impact

More frequent heatwaves are expected, raising heat-related deaths and reducing London's GDP by 2-3% annually by 2050s.

Water Scarcity and Demand Growth

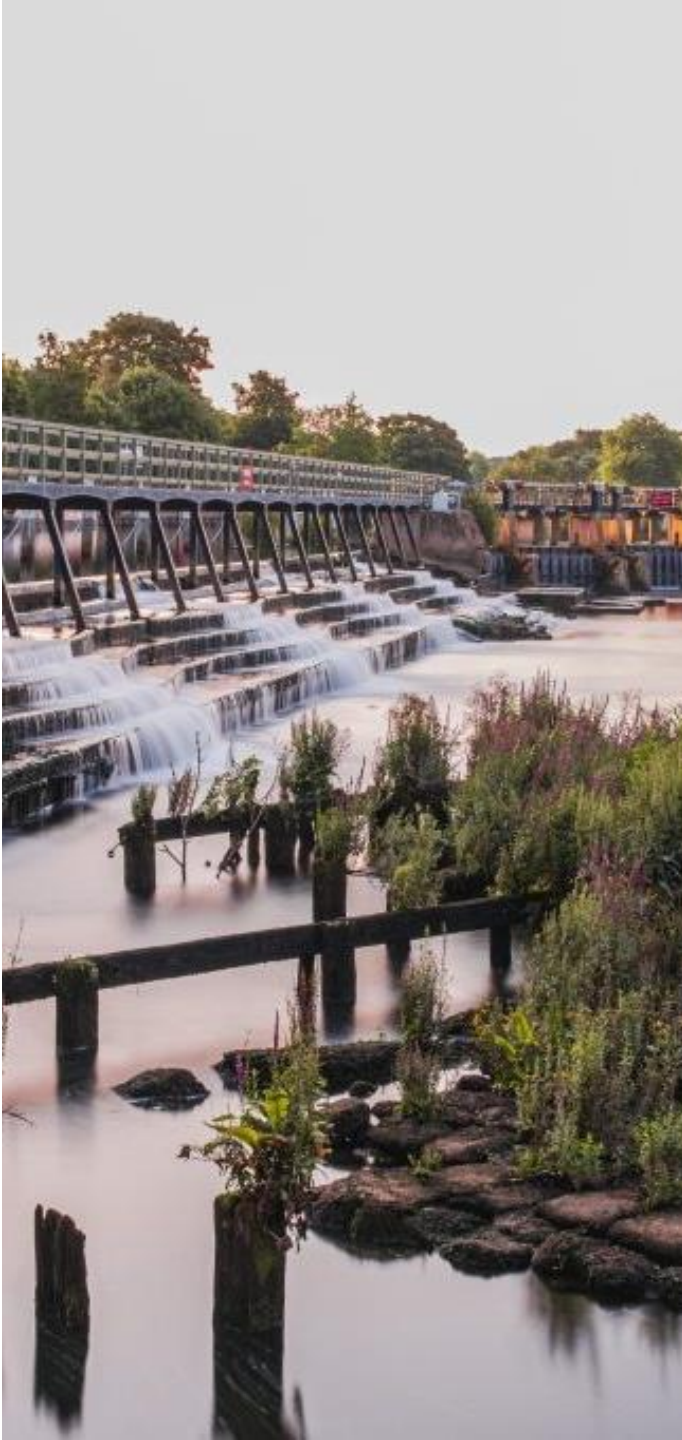
Thames Water forecasts a need for 1 billion extra litres daily by 2050; national shortages could reach 5 billion litres without action.

Flood Risks and Sea Level Rise

Wetter winters and intense storms heighten flood risks; sea levels in the Thames Estuary may rise 1.15m by century end.

Population Growth and Infrastructure Pressure

Growing housing needs with 880,000 new homes add pressure, demanding robust adaptation strategies for water infrastructure.



Challenges & Solutions

Infrastructure and Flood Mitigation

London addresses water supply gaps with projects like Teddington River Abstraction and SESRO reservoir while managing flood risks.

Water Recycling and Demand Management

Water recycling gains importance, alongside reducing consumption to 110 litres daily using smart meters and efficiency standards.

Governance and Funding Initiatives

Governance reforms and a £100 million fund support climate resilience, innovation, and coordinated water service management.

Strategic Vision and Challenges

London's adaptation strategy by 2030 requires coordinated action to overcome megacity challenges and ensure solution success.

London vs Other Megacities



Strategic Water Management

London has a history of detailed strategic planning for water management despite fragmented governance structures.

Infrastructure Innovations

Key infrastructural advances like the Thames Barrier help London manage flooding and water risks proactively.

Governance Challenges

London faces governance complexity with multiple agencies and limited regulatory powers hampering coordination.

Climate Adaptation Goals

London leads in setting national targets for water demand reduction and flood risk mitigation despite funding constraints.

Thank you for your attention



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Water Security Management
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