



Assessing climate risk in Greater Manchester (UK) and prioritising adaptation options: a step by step approach

Angela Connelly (The University of Manchester)*; Matt Ellis (Greater Manchester Combined Authority)*

Jeremy Carter (The University of Manchester); S.M. Labib (The University of Manchester)

www.resin-cities.eu







Three priority areas for GM

Safeguarding our future prosperity

Protecting the most vulnerable in society

Building the resilience of our essential infrastructure

..how to turn ambition into action?









Why risk assessments?

- Pays attention to the highest risks
- Helps to compare climatic with non-climatic risks
- Helps to illuminate different decision options
- Helps to develop tailored adaptation strategies





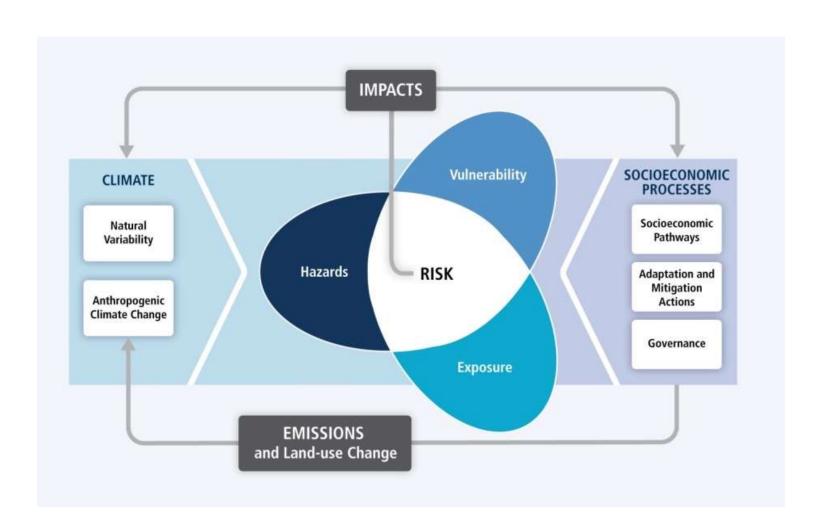


ROCHDALE SALFORD STOCKPORT TAMESIDE











MANCHESTER OLDHAM ROCHDALE

STOCKPORT TAMESIDE





Zooming Down

Step 1	High-level, non-spatial risk assessment	What are our most prescient hazards and highest risk infrastructure types?
Step 2	GM-level spatial risk assessment of transport infrastructure	What is the spatial pattern of risk X on infrastructure Y?
Step 3	Adaptation pathways approach to a particular site	In what way might this risk harm our wider plans and objectives for a site?





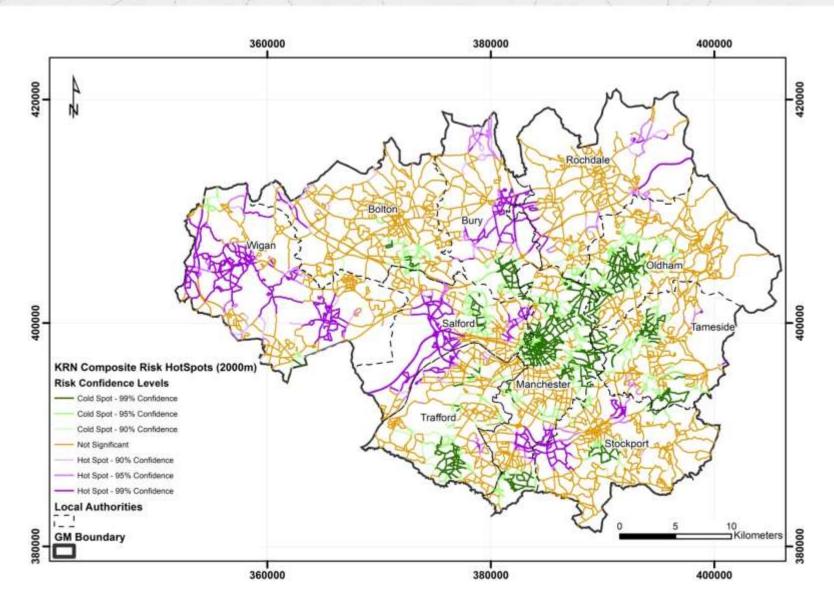


ROCHDALE SALFORD

STOCKPORT TAMESIDE

Flood risk to GM's Key Route Network Composite Risk Hotspots



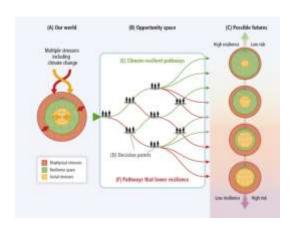






Zooming Down

Step 1	High-level, non-spatial risk assessment	What are our most prescient hazards and highest risk infrastructure types?
Step 2	GM-level spatial risk assessment of transport infrastructure	What is the spatial pattern of risk X on infrastructure Y?
Step 3	Adaptation pathways approach to a particular site	In what way might this risk harm our wider plans and objectives for a site?







MANCHESTER OLDHAM ROCHDALE SALFORD STOCKPORT TAMESIDE





Bolton Town Centre: A potential window of opportunity?







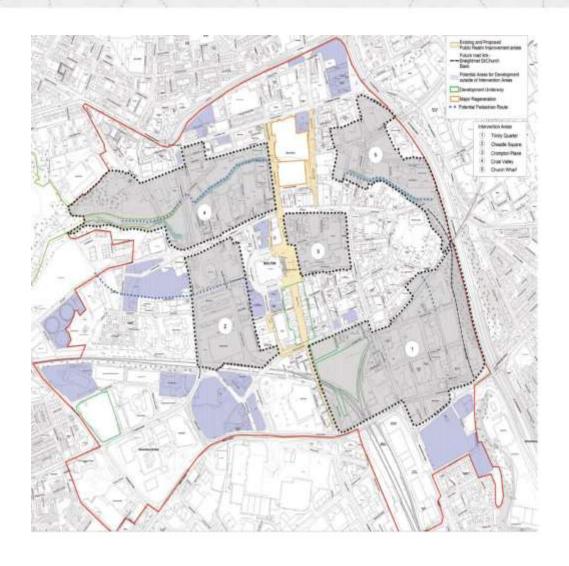


ROCHDALE SALFORD STOCKPORT TAMESIDE



Bolton Town Centre: A potential window of opportunity?





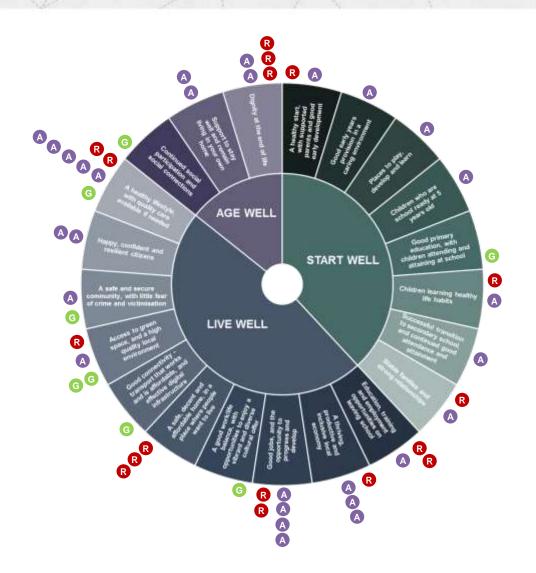




ROCHDALE SALFORD STOCKPORT TAMESIDE







Joined-up ambitions

- Risk assessments can help to advance the agenda
- Risk assessments give added granularity in terms of selecting priorities
- Increasing resilience helps to realise wider ambitions

But.....



BURY

MANCHESTE OLDHAM ROCHDALE SALFORD STOCKPORT TAMESIDE







Our question to you...

What do you need to move into *implementation* / action?









STOCKPORT TAMESIDE







References

Connelly, A., Carter, .J, Handley., J., Hincks, S. 2018 (forthcoming) Enhancing the practical utility of risk assessments in climate change adaptation. *Sustainability: Special Issue on Climate Resilient Urban Development*

Mendizabal, M., Abajo, B., Martinez, J.A., Gutierrez, L., García-Blanco, G., Feliu, E., 2016. Transition Model. This project has received funding from the European Union's Seventh Programme for Research, Technological Development and Demonstration under Grant Agreement No. 308497 (Project RAMSES).

Reeder, T., Ranger, N., 2011. How do you adapt in an uncertain world? Lessons from the Thames Estuary 2100 project. World Resources Report, Washington D.C.

Rosenzweig, C., Solecki, W., 2014. Hurricane Sandy and adaptation pathways in New York: Lessons from a first-responder city. Glob. Environ. Change 28, 395–408. doi:10.1016/j.gloenvcha.2014.05.003

Wise, R.M., Fazey, I., Stafford Smith, M., Park, S.E., Eakin, H.C., Archer Van Garderen, E.R.M., Campbell, B., 2014. Reconceptualising adaptation to climate change as part of pathways of change and response. Glob. Environ. Change 28, 325–336. doi:10.1016/j.gloenvcha.2013.12.002

Figure References

Slide 2: The EcoCities Project (www.adaptingmanchester.co.uk). Source: Authors

Slide 3: The IPCC AR5 conceptual framework with risk at the centre. Source: IPCC, 2014

Slide 5: Flood risk to GM's Key Route Network. Source: Authors

Slide 6: Climate resilient pathways diagram. Source: IPCC 2014; Adaptation Pathways Process. Source: Technalia

Slides 7 + 8: Bolton Town Centre. Source: The Environment Agency

Slide 10: Greater Manchester Strategic Priorities. Source: The Greater Manchester Strategy (2017). Courtesy of: Greater Manchester Combined Authority





CONTACT:

Email: resin@iclei.org

Website: www.resin-cities.eu

Twitter: resin



The sole responsibility for the content of this publication lies with the authors. It does not necessarily represent the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.

