



EAUC-Scotland Conference

The Elephants in the Room

Tuesday 26 November 2019
The Lighthouse, Glasgow



@EAUCScotland
#EAUCS2019



Adapting to the Changing Climate

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Adaptation Scotland

Stewart Miller, Sustainable Environment
Officer, University of Glasgow

Adapting to the Changing Climate



Anna Beswick

Programme Manager

Adaptation Scotland

Adaptation Scotland

supporting climate change resilience

Adaptation - Preparing for the inevitable



The Adaptation Scotland programme is funded by the Scottish Government and delivered by sustainability charity Sniffer.



Anna Beswick, Adaptation Scotland Programme Manager



Enabling organisations, businesses and communities to adapt to the impacts of climate change

Adaptation Scotland is a programme funded by the Scottish Government and delivered by sustainability charity Sniffer

1. Adapting organisations
2. Workshop session: Case studies and capabilities
3. Tools and resources

UNADAPTED

ADAPTING

ORGANISATIONAL
CULTURE & RESOURCES



EXAMINE
ORGANISATIONAL
STRUCTURE

IDENTIFY
RESOURCES

LEARN
ABOUT KEY
POLICIES &
LEGISLATION

DEVELOP
BRIEFING

TALK
about
ADAPTATION

IDENTIFY GOVERNANCE
OPTIONS

CHAMPIONS
ARE PROMOTING
ADAPTATION

SEEK
RESOURCES

INCLUDE ADAPTATION
IN ORGANISATIONAL
POLICIES & PROCEDURES

OPERATIONALISE
GOVERNANCE

KEEP
CHAMPIONS
ENGAGED

EMBED
ADAPTATION

UNDERSTANDING
THE CHALLENGE



LEARN ABOUT
CLIMATE
CHANGE

HOW MIGHT DECISIONS
BE AFFECTED BY
CLIMATE CHANGE

EXPLORE IMPACT OF
RECENT
WEATHER EVENTS

CLIMATE CHANGE
RISK ASSESSMENT

DEVELOP
STORYLINES,
NARRATIVES,
& SCENARIOS

MAINSTREAM FRAMEWORK
FOR CLIMATE CHANGE
RISK ASSESSMENT

CONTINUE SHARING
LEARNING, RESEARCH &
INNOVATION

ADOPT
ADAPTIVE
MANAGEMENT
CYCLE

IMPLEMENT
ADAPTATION
PATHWAYS

BROADEN
ENGAGEMENT

EXPAND JOINT
ACTION

PLANNING &
IMPLEMENTATION



CREATESCOPE
& PLAN

DEFINE CLIMATE
READY & VISION
OUTCOMES

HIGHLIGHT
ON-GOING WORK
& IMPLEMENT
QUICK WINS

DEVELOP AN ADAPTATION
STRATEGY & ACTION
PLAN

FORMALISE
PARTNERSHIPS

ENGAGE WITH
STAKEHOLDERS

IDENTIFY ACTIONS
WITH
PARTNERS

COORDINATE
COMMUNICATIONS

MAKE CONNECTIONS
& SHARE
PRIORITIES

IDENTIFY
POTENTIAL
INDIVIDUALS OR
ORGANISATIONS

WORKING
TOGETHER



ADAPTATION CAPABILITY FRAMEWORK

- An organisation has adaptation '**capability**' that determines its ability to deliver climate adaptation. This is multi-faceted, comprising four adaptation capabilities:

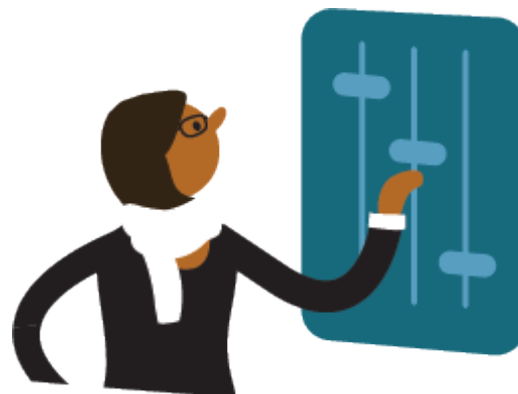




Organisational Culture & Resources

Key aspects include:

- ▶ **Resources** – you will need to commit resources to progress adaptation. These will vary depending on task, but include human, physical, financial, information and intellectual resources. Some of these can be allocated or developed internally, others will need to come from external sources.
- ▶ **Governance** – your organisation will have distinct structures, ways of making decisions and of delegating responsibilities. For adaptation to be effective it will need to fit with your overall governance arrangements but also have clear project governance that allows it to deliver change.
- ▶ **Leadership** – the support of senior leaders can accelerate adaptation in an organisation. It is also important to recognise and empower adaptation 'champions', individuals who can lead the way in your organisation. People at all levels can be these 'agents of change'.
- ▶ **Reflection & flexibility** – space needs to be made to try new approaches, to learn from experience, and to improve procedures, strategies and actions in response. There also needs to be flexibility to recognise that the landscape may change as adaptation progresses.



Question 1



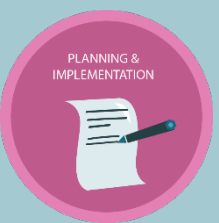
Understanding the Challenge

Key aspects include:

- **Knowledge** – build an understanding of climate change and different approaches to adaptation. This needs to be translated into your specific context, with the knowledge shared across your organisation. You will continue to learn and adjust as you make progress with adaptation.
- **Evidence** – you need an evidence base to inform decision-making in your organisation. As you progress you will develop evidence for long-term impacts under a range of possible futures – and make sure that you can use this to inform climate change risk assessment.
- **Research & innovation** – adaptation is still a relatively new as a process, especially where it is put into practice in the 'real world'. As part of a global community learning to adapt you have an opportunity to connect with external expertise to fill knowledge gaps and drive innovation.



Question 2



Planning & Implementation

Key aspects include:

- ▶ **Strategic approach** – you can help embed adaptation by aligning with the functions and purpose of your organisation. Set a clear vision and long-term outcomes to guide planning as you develop an adaptation strategy and action plan. Looking at the bigger picture will help make the most of opportunities.
- ▶ **Appraisal & prioritisation** – you want to identify robust, acceptable, efficient and effective measures that can be taken forward in an action plan. Develop an evidence-based appraisal process to select options that will help you achieve strategic adaptation outcomes.

- ▶ **Take action** – you learn by doing. From initial actions to a comprehensive programme, your organisation will build momentum by taking action. You also need to reflect, monitor and evaluate actions to ensure they are efficient and effective in achieving adaptation outcomes.



Question 3



Working Together

Key aspects include:

- **Networks** – you can achieve more by sharing and learning from others. Make the most of support available, and connect with peers, whether through adaptation-focussed or other professional networks. Engage with relevant groups, forums and partnerships where adaptation is appropriate within their remit.
- **Partnership** – collaboration can be essential to achieving adaptation outcomes. You may need to formalise partnership arrangements, either building upon existing arrangements or establishing a new partnership. Agree roles, responsibilities and funding allocations.

- **Engagement** – sustained engagement is an on-going commitment to involve a diverse range of stakeholders in communities, businesses and the third sector. Well-planned and inclusive engagement will allow for adjustment of your plans and is an opportunity for you to influence others.
- **Joint action** – the delivery of many adaptation actions will need to involve partners. Build collaborative relationships by taking action, from agreeing resources for initial activities to the co-financing for multi-year investment in a programme of adaptation action.



Adaptation Capability Framework – Supporting Resources



The Handbook

– introduction to climate change adaptation for Scotland's public sector.



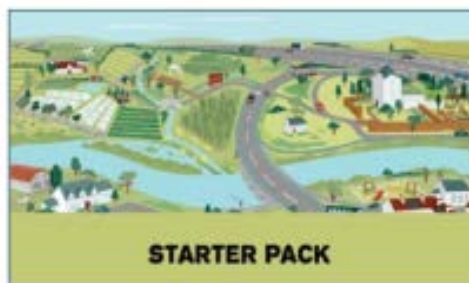
Interactive Adaptation Capability Framework

– access detailed task information, resources and case studies.



Online training modules

– develop adaptation skills and expertise.



Starter pack

– for organisations and individuals who are new to adaptation.



Benchmarking tool

– assess progress and plan adaptation work.



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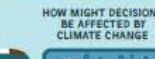
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www.adaptationscotland.org.uk



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Adapting to the Changing Climate



Stewart Miller

Sustainable Environment Officer

University of Glasgow



University
of Glasgow

Climate Change Adaptation at the University of Glasgow

Stewart Miller – Sustainability Officer

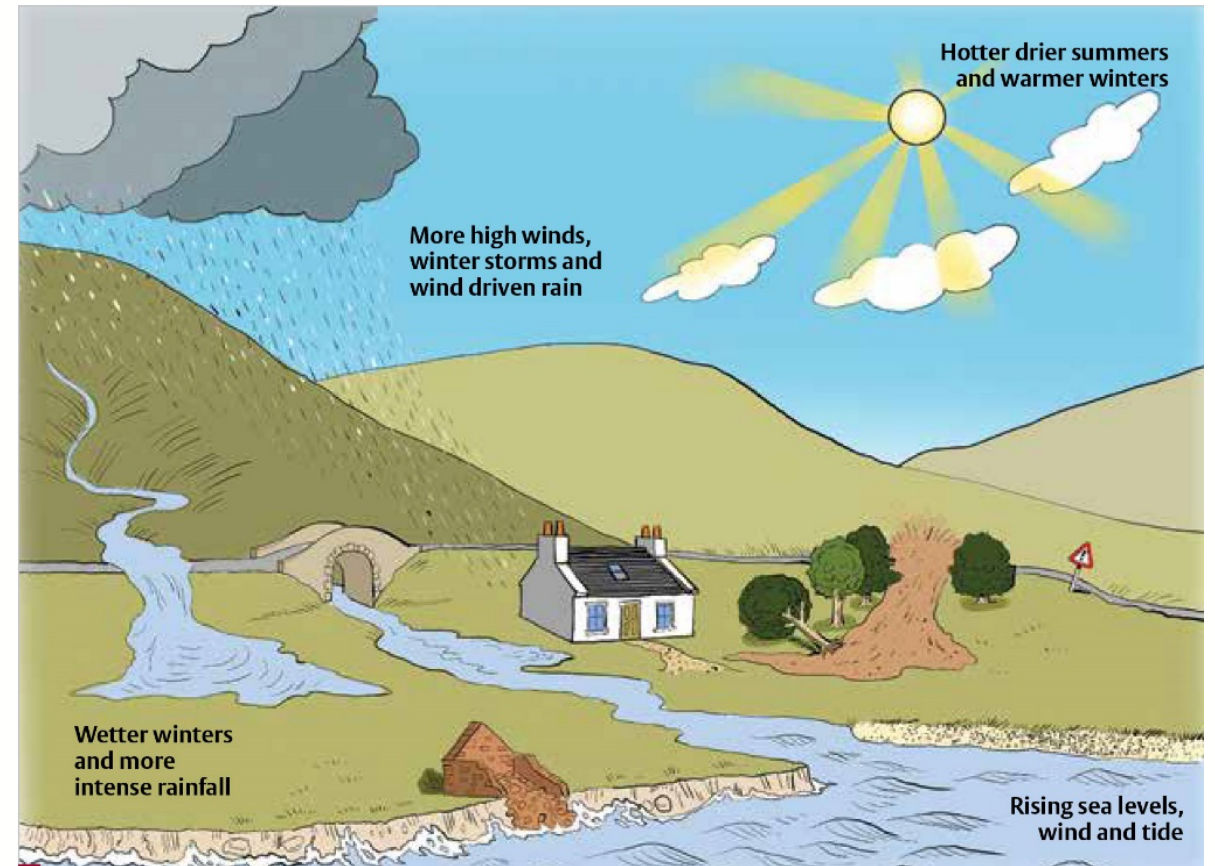
**WORLD
CHANGING
GLASGOW**





Future climate change in West of Scotland

- Hotter and drier summers
- Milder and wetter winters
- Sea levels rising
- Increased frequency of summer heat waves and droughts
- Increased frequency of extreme rainfall events and storms
- Reduced occurrence of frost and snow



*Future climate change in Scotland
(adapted from Historic Environment Scotland, 2016)*



Future climate risks for Glasgow City Region

- Climate risk and opportunity assessment (<https://www.crc-assessment.org.uk/>)
- ~70/80 risks identified under 6 themes:
 - Infrastructure;
 - Built Environment;
 - Society and Health;
 - Economy, Business and Industry;
 - Natural Environment; and
 - International, Cross Cutting and Adaptive Capacity
- 15 risks/opportunities relate directly to our estate





Future climate risks for University of Glasgow Estate

- Built Environment:
 - risk to our estate from flooding
 - risks to building fabric from moisture, wind and driving rain
 - specific risks to historic environment, with respect to the above
 - increased use of green spaces due to warmer weather
 - increased maintenance requirements of green space due to warmer weather
 - opportunity to reduce heating demand to buildings and the need for increased cooling demand in buildings from rising temperatures





Future climate risks for University of Glasgow Estate

- Natural Environment:
 - risk to species and habitats due to inability to respond to changing climatic conditions
 - risk to soils from increased seasonal aridity and wetness
 - risk of land management practices exacerbating flood risk
 - risk to urban, historic and semi-natural woodlands from pests and disease and rising temperatures





Future climate risks for University of Glasgow Estate

- University Community:
 - risk to health and wellbeing from high temperatures
 - risk health from changes in air quality
 - risk business from reduced employee productivity due to infrastructure disruption
 - risk business from disruption to supply chains and distribution networks
 - risk business operations from water scarcity





Future climate risks for University of Glasgow Estate

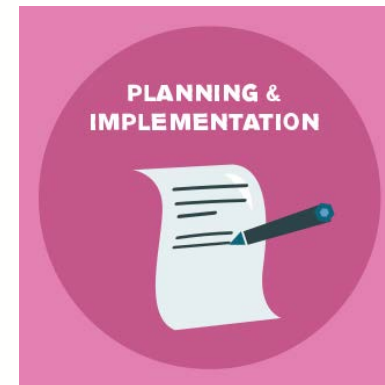
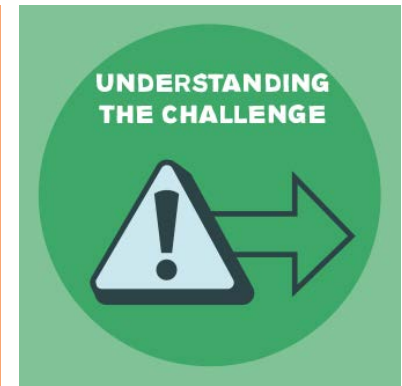
- Climate risk and opportunity assessment (<https://www.crc-assessment.org.uk/>)
- ~30 risks identified related to infrastructure
- Road and rail network, airport, sewer network, electricity, gas and water supply, IT
- Little/no agency over city-wide infrastructure; use your soft power to influence change





How to develop your own adaptation plan

- Adaptation Scotland
 - Adaptation Capability Framework
- EAUC
 - Adapting universities and colleges to a changing climate: Making the case and taking action
- Top tip - highlight crossovers and co-benefits
- Top tip - work in partnership; you can't build resilience in isolation





University
of Glasgow

University of Glasgow - Climate Change Adaptation Plan

(<https://www.gla.ac.uk/myglasgow/sustainability/climatechageadapt/>)