

Delivering resilient communities through effective land use planning

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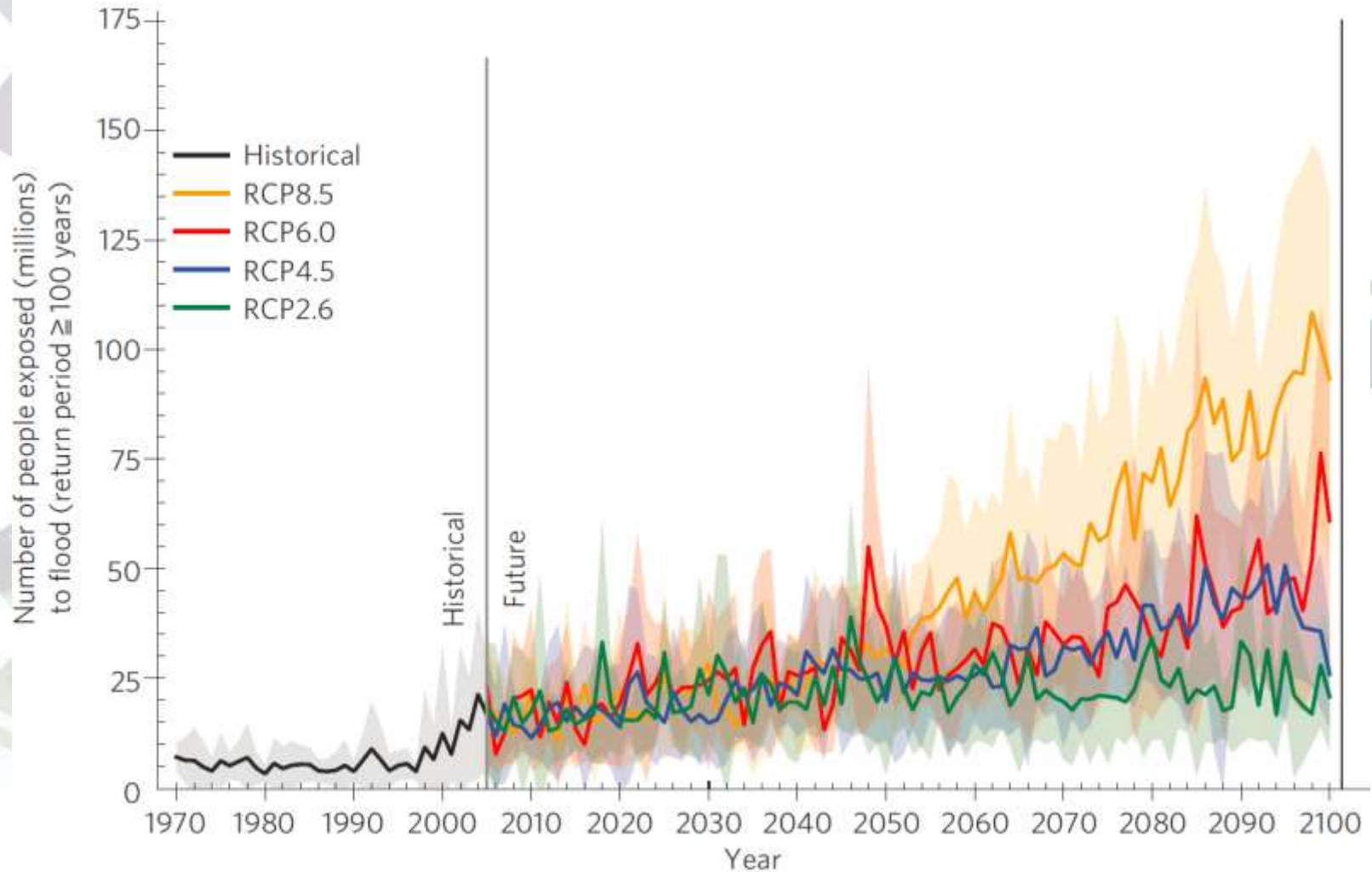
Overview

- Focus on the resilience of communities to flooding
- SEPA's planning advisory role on flood risk
- Emerging areas of research
- Future directions



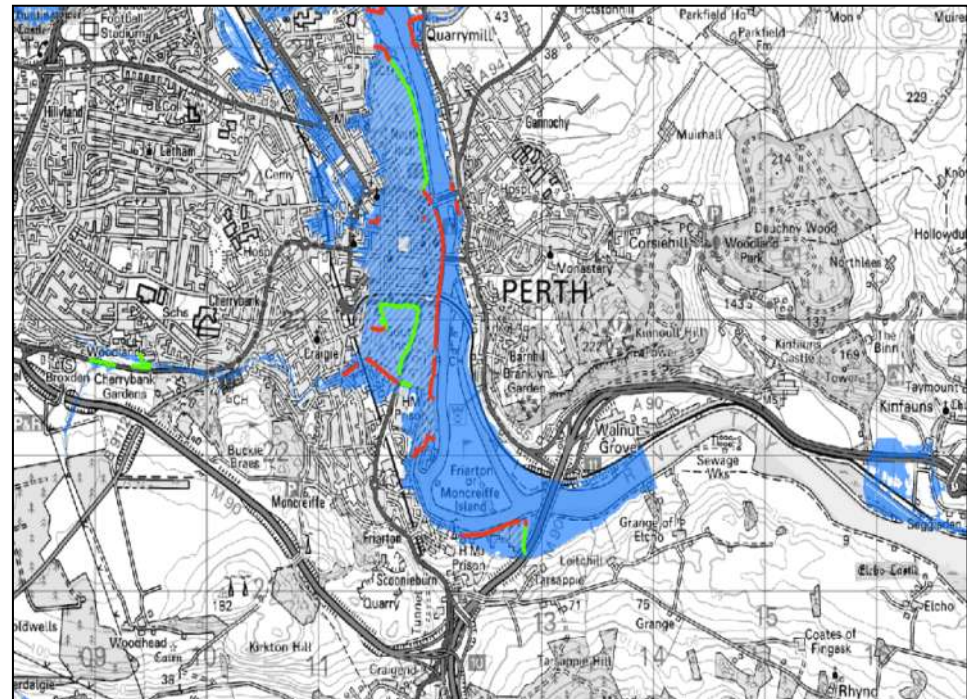
World population exposed to 1:100 year flood risk

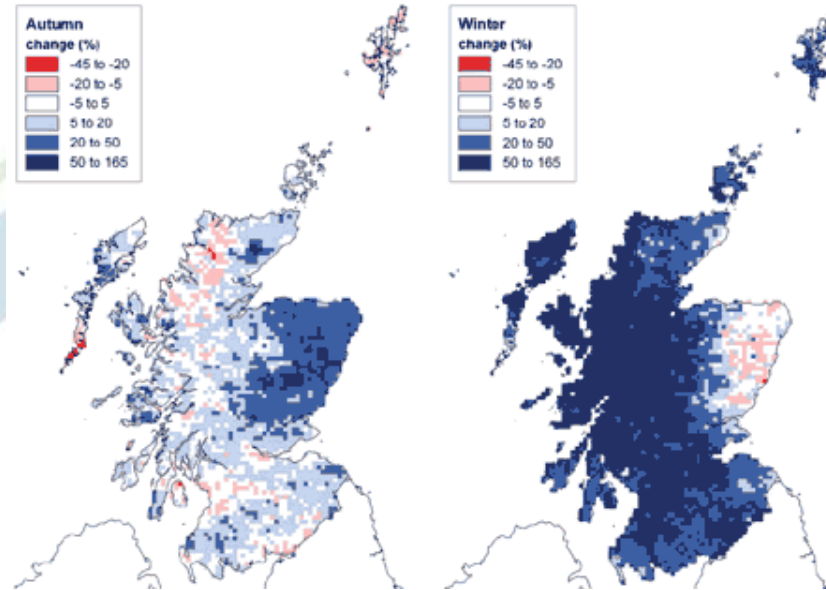
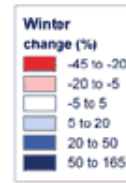
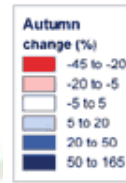
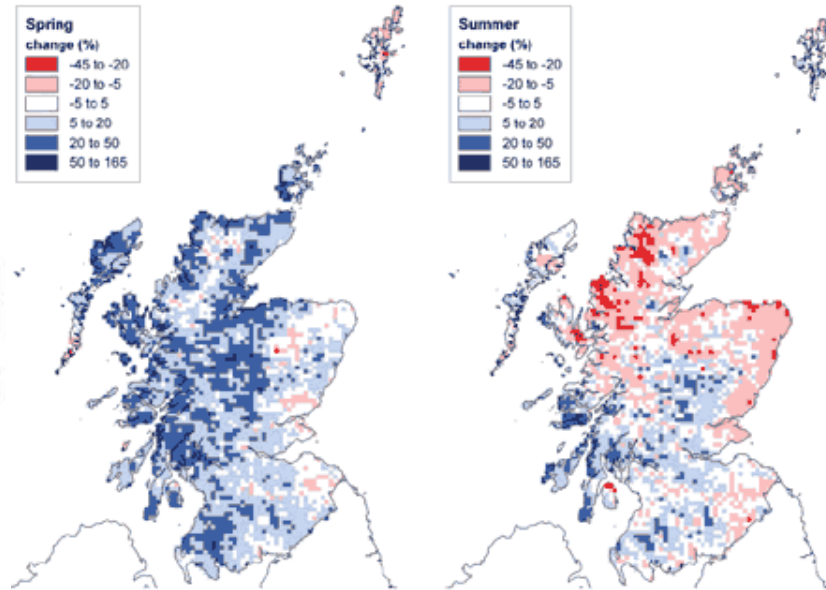
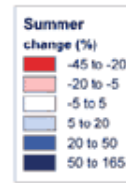
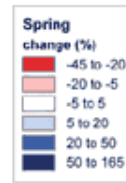
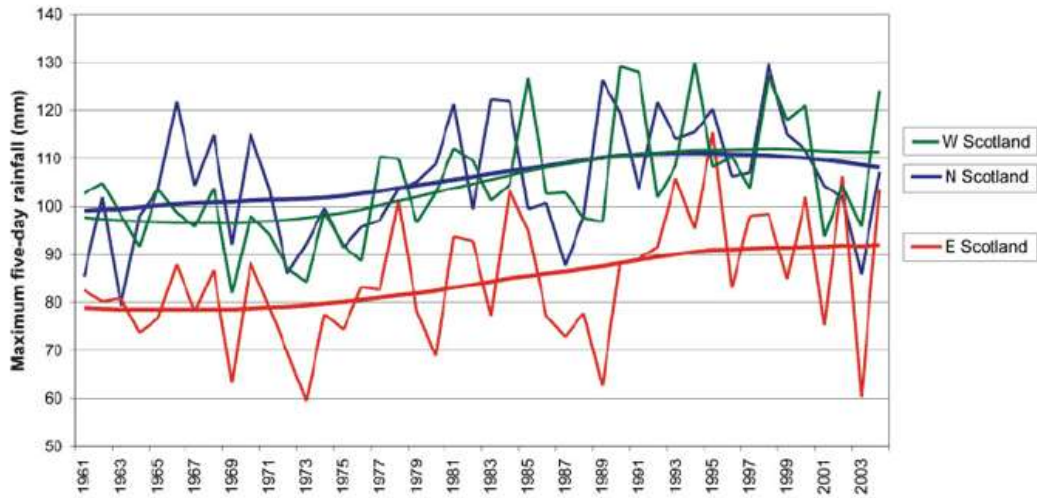
(IPCC 5th Assessment Report: March 2014)



Scotland

- National Flood Risk Assessment identified 125,000 properties are at risk of flooding within Scotland
- Average annual damages to homes, businesses and agriculture is estimated to be between £720 million and £850 million
- Doesn't include impacts of personal stress and health impacts of flooding





Current Trends: Precipitation

Source: Handbook of Climate Trends Across Scotland (SNIFFER, 2006)

“ We will do everything in our power to help Scotland address climate change to ensure its environment, economy and communities flourish ”



Acting as a key climate change leader and adviser

Helping Scotland to adapt

Working with Scottish business

Being an exemplar and educator

Our climate challenge
Helping to deliver a resilient, low carbon Scotland
SEPA's 2014-2018 Climate Change Plan

http://www.sepa.org.uk/climate_change.aspx



“The land use planning system is a priority area for adaptation action, because it is a primary mechanism for determining how vulnerability to climate change can be managed, particularly in towns and cities”

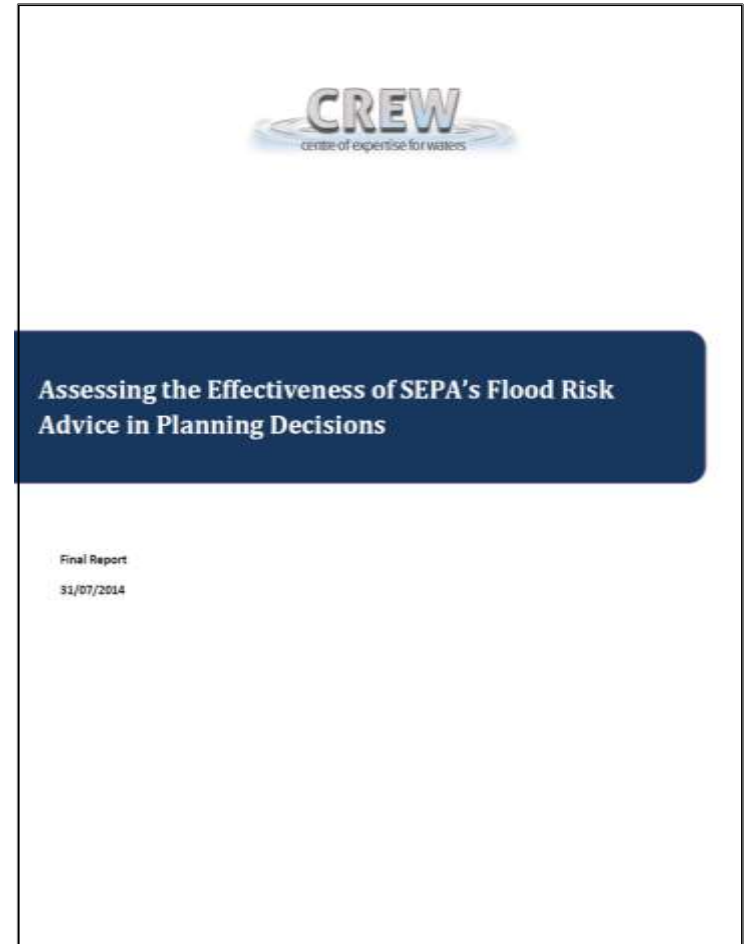
How well is Scotland preparing for climate change? (Adaptation Sub Committee Report to the Scottish Government, 2011)

SEPA's planning liaison role

- Duty to provide flood risk advice to planning authorities under S72 of the Flood Risk Management (Scotland) Act 2009
- Statutory consultee for development plans
- From September 2013 – September 2014 we responded to:
 - 4332 planning application consultations; and,
 - 190 development plan consultations
- Avoidance of flood risk is key principle of our advice within the context of Scottish Planning Policy (Scottish Government, 2014)
- Duty under the FRM(S) Act 2009 to reduce overall flood risk
- Public body duties under the Climate Change (Scotland) Act



- Is our advice making a difference on the ground?
- CREW commissioned research in 2013
- Undertaken by Dundee University
- Reported July 2014
- Analysis of our advice to planning authorities on planning applications during 2012 and our engagement during the preparation of the Perth and Kinross LDP

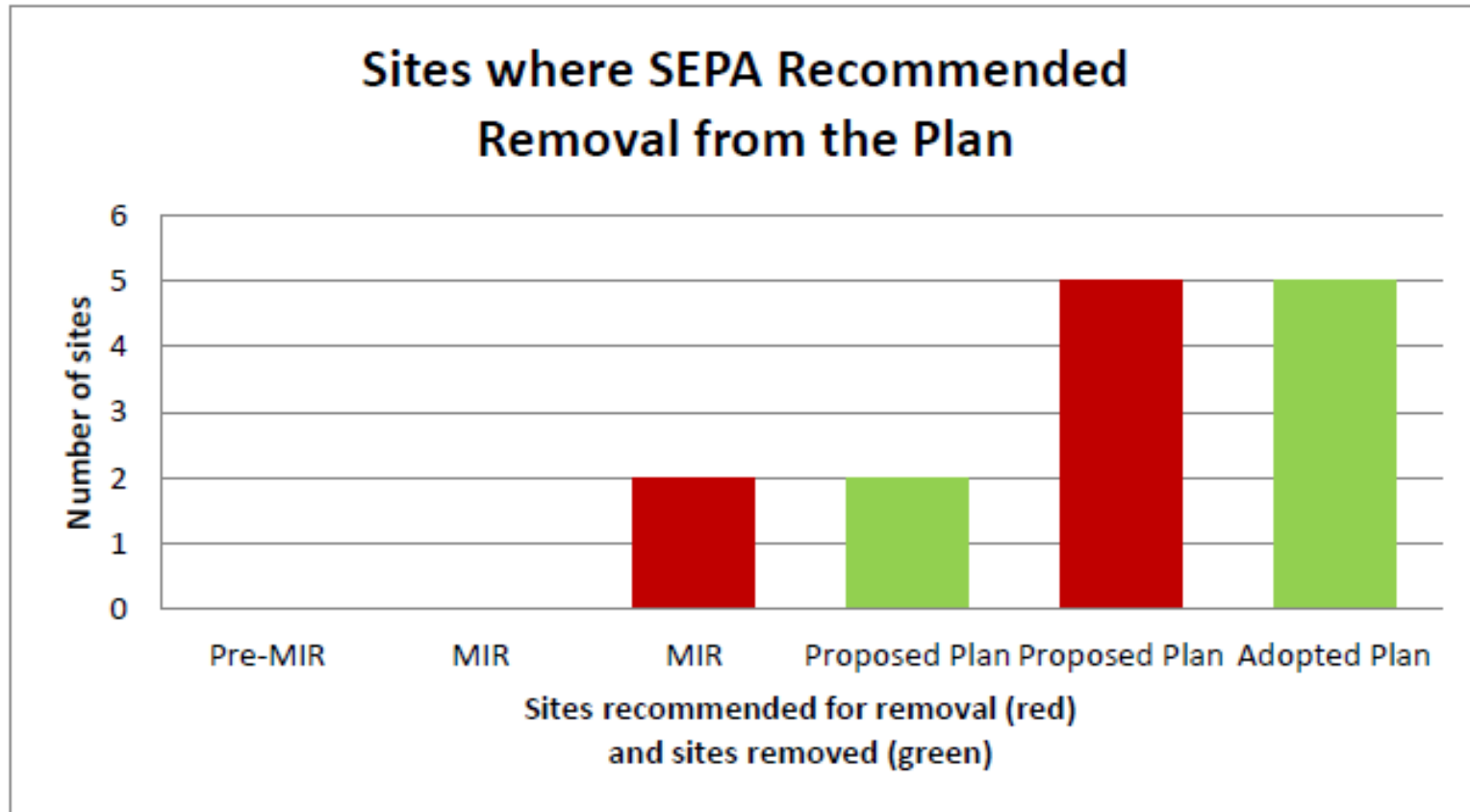


Findings – development management

Table 5. Extent to which Decisions reflected SEPA’s advice in terms of the final decision

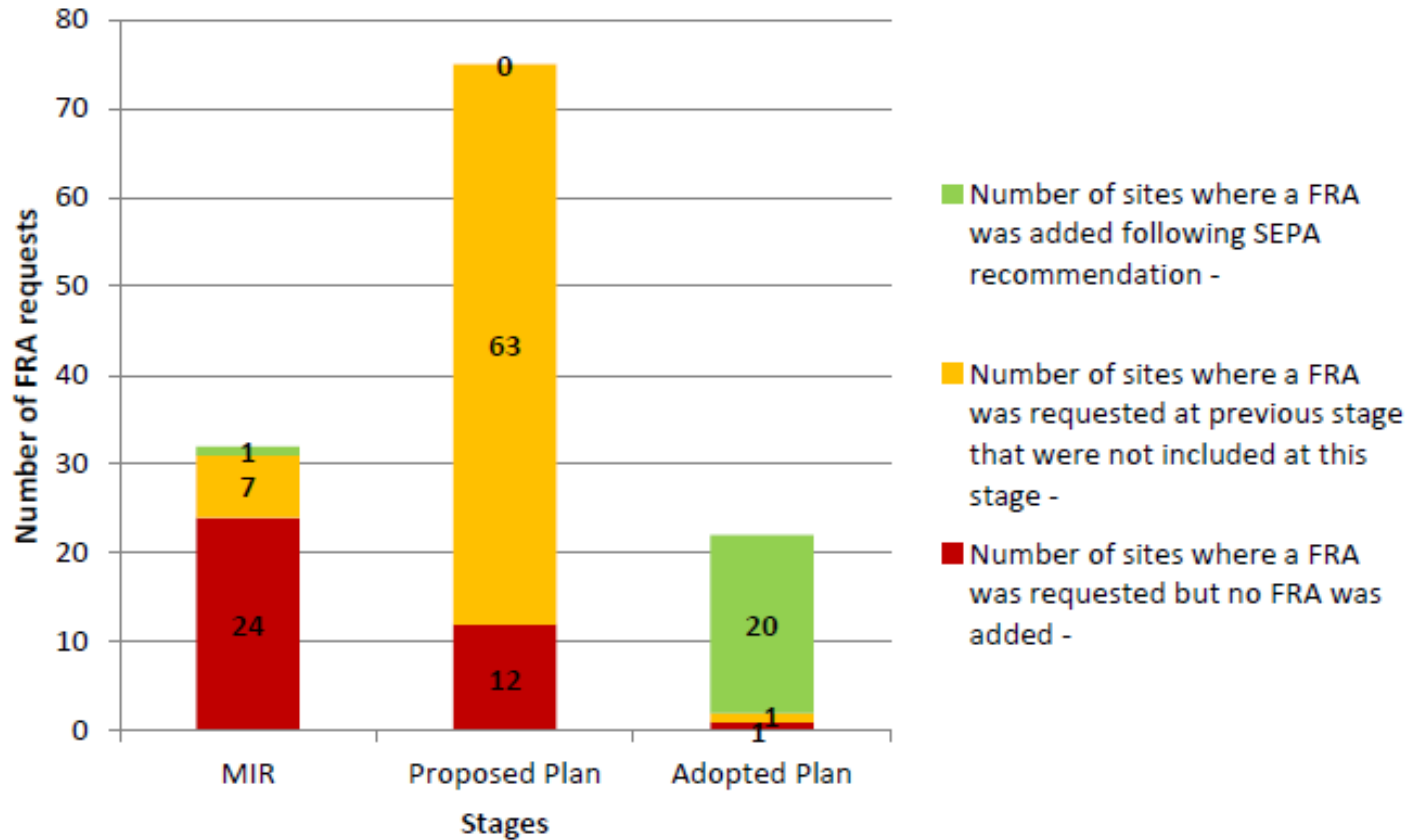
SEPA Flood Risk Advice Effectiveness against the LPA's Decision	Number of Decisions by Indicator	% share
Planning applications in which SEPA gave flood risk advice where the conditions (attached to permission) or reasons (for refusal) reflect SEPA's flood risk advice	174	33
Planning applications in which SEPA gave flood risk advice where the conditions (attached to permission) or reasons (reasons for refusal) did not reflect SEPA's flood risk advice	28*	5
Planning applications in which SEPA gave unconditional flood risk advice	251	47
Planning applications in which SEPA gave flood risk advice but no decision has been made or no notice been made available	76	14
Total	528	100

Findings – development planning



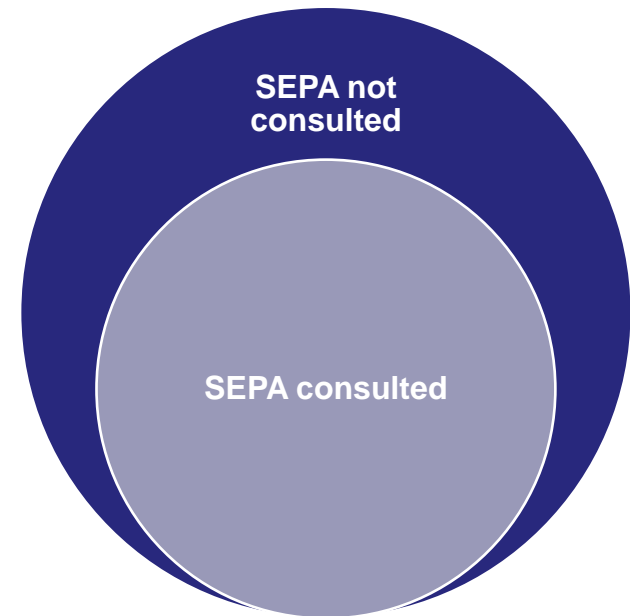
Findings – development planning

FRA Requested as a Development Requirement by SEPA



Limitations of research to date

Only part of the picture – not consulted on every application that may affect flood risk within Scotland

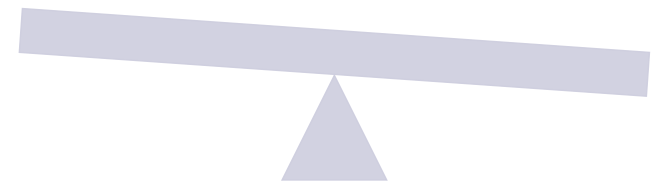


Limitations of research to date

Constraints

Opportunities

Processes at work?



Future directions: 1. Adaptation Sub Committee

River and coastal flooding is one of the key risks identified for Scotland by the Climate Change Risk Assessment (2012)

UK ASC: – independent evaluation of the Scottish Climate Change Adaptation Programme (SCAPP) to report in September 2016 and second CCRA Evidence Report to report in January 2017

SCAPP objective B3: Increase the resilience of buildings and infrastructure networks to sustain and enhance the benefits and services provided

“The evidence base on land-use planning policy could be strengthened by building on this [CREW] study”

Lord Krebs (ASC Chair) letter to Dr. Aileen MacLead MSP (Minister for Environment, Climate Change and Land Reform) 7 January 2015

Future Directions 1: Adaptation Sub Committee

Research proposal

- Assessment of the implementation of land use planning policy in Scotland to increase the resilience of buildings and infrastructure to flood risk
- CxC, CREW, Scottish Government
- Gain a better understanding of the trends in the number of properties being built in the flood plain
- Review of the 14 adopted local development plans within Scotland and sample of planning applications from these authorities
- Probe how they made decisions and applied national policy
- Report March 2016

Future directions 2. support for planning authorities

Adapting to climate change: a review of support for planners in Scotland (Adaptation Scotland, 2013)

Findings:

- Lack of information and practical guidance to inform adaptation policy implementation.
- Need for clarity on the actual risks and impacts and the ways in which land use planning can take account of these risks in plan and decision making processes
- No existing guidance which could be used by planners in a Scottish context
- Limited information or guidance on climate change adaptation at a range of scales relevant to development planning, masterplanning and development management, and for different scenarios (e.g. urban, peri-urban, coastal)

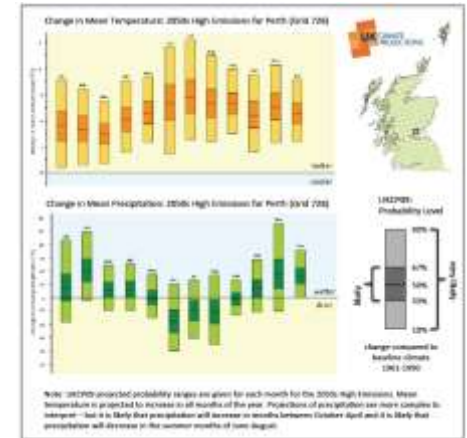


Issues

- Interpretation of UKCP09
- Risk assessments

How can visioning help planners?

- Accessible
- Useful for public engagement and consultation
- Integrate into overarching vision for development plans





UPLANDS

CITY

INDUSTRIAL

SUBURBS

COASTAL

LOWLANDS

Unadapted

Adapting

City Centre



Suburban



Industry / Infrastructure



Uplands / Highlands



Lowlands



Coastal / Island

Unadapted

Adapting

City Centre



Suburban



Industry / Infrastructure



Uplands / Highlands



Lowlands



Coastal / Island

Where next?

- Making some progress in relation to flood risk and land use planning but...
- More research required to address the recommendations made in the 2013 Adaptation Scotland Report on support for planners
- Visioning work is a start
- Need to mainstream climate resilience into sustainable place making agenda
- Innovative solutions to communicate issues to all stakeholders and foster public engagement to identify solutions