SCOTTISH BORDERS CLIMATE RESILIENT COMMUNITIES

Workshop 1 Report

HAWICK
1 WORKSHOP BACKGROUND

The Scottish Borders Climate Resilient Communities (SBCRC) project is a collaboration between University of Dundee, Scottish Borders Council, Southern Uplands Partnership, Tweed Forum, Scottish Association for Marine Sciences and the International Futures Forum.

The project is funded by the Joseph Rowntree Foundation (JRF). This was established by the Philanthropist Joseph Rowntree in 1904. The JRF seeks to understand the root causes of social problems and identify ways of overcoming them. It includes the Climate Just programme, which seeks to understand how communities in the UK can improve their resilience and responses to climate change with a particular emphasis on assisting those most disadvantaged by climate change. Low income households, for example benefit less from certain policy responses (e.g. subsidies for installing solar panels) and are the least responsible for carbon emissions (e.g. they use less energy, have less emissions associated with travel etc).

Projects under the Climate Just programme, including SBCRC, focus on how to enhance resilience of those most disadvantaged by climate change in communities. The SBCRC project is one of only two projects on resilient communities funded by the Climate Just programme in the UK.

1.1 AIMS AND OBJECTIVES OF SBCRC

Aim: To facilitate conversations between, and actions by, local authorities and communities to enhance resilience to climate change, with a particular emphasis on those most disadvantaged by climate change

Objectives:

1. Improve understanding of climate disadvantage
2. Develop or implement tangible products/ plans/ resources
3. Improve capacity of local communities to enhance resilience of those most disadvantaged
4. Enhance collaboration between communities and the local authority
5. Improve joining up of flood resilience actions/policy with other climate related issues
6. Improve links between local action and national policy for climate resilience
7. Test a process for enhancing community resilience for those most disadvantaged by climate change that can be applied elsewhere

1.2 WORKSHOP 1 AIMS AND OBJECTIVES:

(1) Begin to build links between communities, local authority and other organisations;
(2) Work towards understanding the consequences of climate change and identify groups most disadvantaged by climate change
(3) Identify some key ideas to involve local people and develop benefits as part of the Hawick flood prevention scheme design to deliver tangible local benefits
2 WORKSHOP DETAILS

Workshop 1 was held in Hawick high school assembly hall on the 29th Sept 2015 from 17:45 – 21:30. 25 people participated in the workshop.

3 STAGE 1 – EXAMINING THE CONSEQUENCES OF CLIMATE CHANGE

In small groups (4-5 people) participants discussed the potential consequences of climate change and how this may affect the community of Hawick. Each group discussion focused on a predefined consequence (e.g. emissions reduction, uncertain energy sources etc) and had an information sheet explaining the wider trends relating to each consequence (see appendix 1).

Results for each of the challenges were as follows:

3.1 EMISSIONS

<table>
<thead>
<tr>
<th>Consequence</th>
<th>Why/ Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction in energy use</td>
<td>Increased efficiency</td>
</tr>
<tr>
<td>Reduction in energy use</td>
<td>Transition to renewable energy sources for home and transport</td>
</tr>
<tr>
<td>Drop in energy use from private/ local renewable energy not reflected as a cost reduction.</td>
<td>Still need to pay installation tariff</td>
</tr>
<tr>
<td>Transport problems to access other parts of Borders from Hawick</td>
<td>There is a reliance on vehicles in the Borders. For example many households have two cars as necessity</td>
</tr>
<tr>
<td>Increase in renewable energy</td>
<td>Renewable energy infrastructure improves/increases</td>
</tr>
</tbody>
</table>

3.2 UNCERTAIN ENERGY SOURCES

<table>
<thead>
<tr>
<th>Consequence</th>
<th>Why/ Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas and petrol price increase</td>
<td>Increase in fossil fuel reliance as uptake of renewables is slow/ not so fast</td>
</tr>
<tr>
<td>Wind turbines increase but with lack of benefits to local people</td>
<td>Renewable energy policies focused on large scale, private energy initiatives</td>
</tr>
<tr>
<td>Biomass uptake is low</td>
<td>Cost is too high</td>
</tr>
<tr>
<td>Biomass uptake is low</td>
<td>Reputation of industry/ technology not good</td>
</tr>
<tr>
<td>Negative impact on surrounding landscape</td>
<td>Increase in solar farms</td>
</tr>
<tr>
<td>Change in uptake of solar panels for houses</td>
<td>Cost of installation decreases as does subsidies</td>
</tr>
<tr>
<td>Insulation to improve energy efficiency in houses decreases</td>
<td>Easy wins achieved. For example in new build homes but older homes, which are more difficult remain less energy efficient</td>
</tr>
</tbody>
</table>
Group discussion
Examples highlighted in the wider group discussion to illustrate challenges linked to uncertain energy sources involved;
- Newcastleton community biofuel initiative was not successful as it required the whole community to switch, pipes to be installed into houses and it was championed by an outsider.
- Lockerbie community biofuel initiative successfully developed but may now be using higher grade wood as source.

3.3 STORMS AND FLOODING

<table>
<thead>
<tr>
<th>Consequence</th>
<th>Why/ Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>More flooding</td>
<td>More heavy rainfall</td>
</tr>
<tr>
<td>More flooding</td>
<td>More development on floodplain areas</td>
</tr>
<tr>
<td>Less development</td>
<td>Flood maps used by developers and insurers reduce development opportunities</td>
</tr>
<tr>
<td>Social infrastructure in Hawick damaged (e.g. schools)</td>
<td>Landslips and other extreme events</td>
</tr>
<tr>
<td>Physical infrastructure damages (roads)</td>
<td>Landslips and other extreme events</td>
</tr>
<tr>
<td>Local economy suffers</td>
<td>Damaged social and physical infrastructure</td>
</tr>
<tr>
<td>Damage to property and infrastructure</td>
<td>Higher insurance costs</td>
</tr>
</tbody>
</table>

Group discussion
- All have a common interest
- All challenges affect Hawick as a whole

3.4 FOOD PRICES

<table>
<thead>
<tr>
<th>Consequence</th>
<th>Why/ Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poorer health and increase in obesity</td>
<td>Low income and increase in food prices and poor diet by necessity</td>
</tr>
<tr>
<td>More allotments for local people</td>
<td>Increased local food production</td>
</tr>
<tr>
<td>More use of local land to produce food</td>
<td>Increased local food production</td>
</tr>
<tr>
<td>Supply chain of food more vulnerable</td>
<td>Food chain involving many stages/ people</td>
</tr>
<tr>
<td>Better links across local industry – e.g textile industry with food industry (whisky)</td>
<td></td>
</tr>
</tbody>
</table>

3.5 WATER AVAILABILITY

<table>
<thead>
<tr>
<th>Consequence</th>
<th>Why/ Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollution</td>
<td>Reduction in dilution and ability of rivers to self-clean leading to more chemicals and bacteria</td>
</tr>
<tr>
<td>More water saving and use of different plants by gardeners</td>
<td>Hose pipe bans</td>
</tr>
<tr>
<td>Poor yield of crops</td>
<td>Lack of water for irrigation and cost of water</td>
</tr>
</tbody>
</table>
### 3.6 Links across Challenges

The whole group discussions about the different challenges and potential impacts on Hawick highlighted the following key issues.

- Money and the local economy (for example tourism and food prices)
- Immediate impacts and slower impacts, for example from water availability
- Possible link between flooding and higher rainfall with dry periods when less water may be available
- Opportunities for renewables/biomass/solar development
- Opportunities for school in Hawick (which is next to the river) to help tell the story of the past industrial use of river whilst using the river in more modern ways

### 4 Stage 2 – Groups in Hawick disadvantaged by Climate Consequences

In this activity, participants explored who are most likely to be disadvantaged by particular consequences (the challenges) posed by climate change. Notes were added onto the sheets of the challenges about the particular groups in communities most affected.

Results for each of the challenges were as follows:

#### 4.1 Emissions

<table>
<thead>
<tr>
<th>Who</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td>Farmers</td>
<td>Use of a lot of fuel for work</td>
</tr>
<tr>
<td>Young families</td>
<td>Increase cost and need to balance fuel cost with food costs</td>
</tr>
<tr>
<td>New build house owners</td>
<td>Building regulations reducing ventilation in houses (although more energy efficient) which causes health problems e.g. damp.</td>
</tr>
<tr>
<td>Tenants (private renters)</td>
<td>Short term and lack of control over energy efficiency of homes</td>
</tr>
<tr>
<td>Tenants (private renters)</td>
<td>So many 1 and 2 bedroom houses/ flats to rent in Hawick that there is a ‘race to the bottom’ where landlords lower rents to attract tenants and avoid additional property</td>
</tr>
</tbody>
</table>
4.2 **Uncertain Energy Sources**

<table>
<thead>
<tr>
<th>Who</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elderly</td>
<td>Low income elderly unable to cover costs of price increases</td>
</tr>
<tr>
<td>Low wage earners</td>
<td>Lack of money to heat or insulate</td>
</tr>
<tr>
<td>Renters</td>
<td>Can’t access subsidies to insulate properties to reduce energy costs</td>
</tr>
<tr>
<td>Essential transport users</td>
<td>Higher cost of transport</td>
</tr>
<tr>
<td>Schools</td>
<td>Installed biogas and other renewable energy sources but poor design has meant many have abandoned and returned to fossil fuel sources.</td>
</tr>
</tbody>
</table>

4.3 **Storms and Flooding**

<table>
<thead>
<tr>
<th>Who</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local business (including rural businesses)</td>
<td>Disruption to business</td>
</tr>
<tr>
<td>Low income renters</td>
<td>In flood zones</td>
</tr>
<tr>
<td>Everyone</td>
<td>Insurance premiums increase for all</td>
</tr>
<tr>
<td>Commuters</td>
<td>Reliance of cars to get to work</td>
</tr>
<tr>
<td>Farmers</td>
<td>Crops and livestock damaged by flooding and storms</td>
</tr>
</tbody>
</table>

4.4 **Food Prices**

<table>
<thead>
<tr>
<th>Who</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low income and unemployed</td>
<td>Food prices increase but available income remains low, reduced health (choices are more limited).</td>
</tr>
<tr>
<td>Ethnic groups</td>
<td></td>
</tr>
<tr>
<td>Disabled groups</td>
<td></td>
</tr>
<tr>
<td>Very young</td>
<td></td>
</tr>
<tr>
<td>Very old/ elderly</td>
<td></td>
</tr>
<tr>
<td>Time poor</td>
<td>Increased reliance on convenience food</td>
</tr>
<tr>
<td>Single households</td>
<td>Lower income to absorb price increases</td>
</tr>
</tbody>
</table>

4.5 **Water Availability**

<table>
<thead>
<tr>
<th>Who</th>
<th>Why</th>
</tr>
</thead>
<tbody>
<tr>
<td>Everybody</td>
<td>Water is used by all</td>
</tr>
<tr>
<td>Farmers</td>
<td>Reliance on water for crops/ livestock</td>
</tr>
<tr>
<td>Elderly in homes/sheltered accommodation</td>
<td>Increased strain on the service they provide</td>
</tr>
<tr>
<td>Emergency services</td>
<td></td>
</tr>
<tr>
<td>Equestrian business owners</td>
<td></td>
</tr>
<tr>
<td>Tourism businesses</td>
<td></td>
</tr>
<tr>
<td>Gardeners</td>
<td></td>
</tr>
<tr>
<td>Swimmers</td>
<td></td>
</tr>
<tr>
<td>New businesses (e.g. a distillery looking to set up in Hawick)</td>
<td>Availability/competition for water</td>
</tr>
<tr>
<td>Existing businesses</td>
<td>Availability/competition for water</td>
</tr>
<tr>
<td>People with limited incomes</td>
<td>Increase in price of water takes larger percentage of income</td>
</tr>
</tbody>
</table>

People in the workshop sharing views on climate challenges for Hawick from small group discussions

5 STAGE 3 — IDENTIFYING PATTERNS AND LINKS BETWEEN THOSE MOST DISADVANTAGED ACROSS THE CLIMATE CHALLENGES

This stage involved group discussions about disadvantaged groups identified for each of the climate consequences to identify any patterns across the climate consequences and disadvantaged groups. The groups then came back together to share ideas and thoughts and discuss any patterns with the whole group.

- Groups that may be most affected by climate challenges in Hawick are;
Local businesses (those in Hawick and rural businesses in surrounding area). This includes existing businesses but also new businesses as employment is a key issue in Hawick.

- Young families and elderly who are in rented accommodation and on low incomes
- Transport users

- The group highlighted that disadvantage was not only about income. It is the combination of factors. For example in the discussion surrounding the challenge from energy elderly people on low incomes who are in rented accommodation were highlighted as a key group who may be particularly affected by climate change.
- Ownership and awareness are important to help improve the resilience of Hawick to climate change. For example the High school could be more involved as they are situated right next to the river.

6 STAGE 4 – NEXT STEPS LINKED TO THE DEVELOPMENT OF THE HAWICK FLOOD SCHEME

This stage involved group discussions about the Hawick Flood Scheme. The SBC project manager for this scheme outlined the plans so far and the opportunity to develop additional benefits within this scheme for Hawick. This would require the involvement of local people to identify and help develop these benefits. A key issue is the need to secure additional funding, much of which is not available to the SBC but is available to local community led applications.

The brief example of Freiburg, Germany was provided as an example of innovative ideas being put into action where small actions have together have provided significant local benefits, for example for young families.

Small group discussions then focused on one of two key issues to take forward the development of additional benefits linked to climate disadvantage in Hawick. The groups then came back together to share and elaborate on these ideas.

6.1 IDEAS TO INCREASE COMMUNITY INVOLVEMENT AND OWNERSHIP

Who?

- Involve derelict building owners to improve community
- Involve farmers to take excess water to prevent flooding in town and provide financial compensation
- Involve schools to increase pupils understanding of the effects of climate change and resilience for future generations and involvement
- Involvement of high and primary school, youth groups, scouts, guides
- Target schools – empower, give projects, educate
- Involvement of archaeology society
- Involvement of people outside flood area

How?
• Communication very important, must take the public with you to succeed
• Exhibitions have a low volume of interests/events don’t work well
• Cold call specific areas is high risk. You have to go to them with the information. You must go in pairs (health and safety).
• Use social media
• Attend existing events – e.g Rugby, Wilton lodge park
• Local voices (radio station for young people)?
• Community hydro scheme with fish pass and benefit back to community e.g via common good fund
• Need to use the right words when communicating. For example ‘resilience is not a good word for communication with local people
• Need good examples and stories for more effective communication to overcome negatively
• Need to use the media
• Personal experience is important to get people interested (e.g Mansfield green has experience of flooding) to stimulate involvement and not just during events
• Need target people differently and integrate them
• Branding is important – for example Vision 2021 or 2020 Vision
• Link now with the future, for example by involving children in developing and delivering benefits
• Apathy is a problem – need to take the issue to people e.g knock on doors which is successful with fire service

6.2 INNOVATIVE IDEAS TO PROVIDE ADDITIONAL BENEFITS FOR HAWICK

Considering links between urban and rural to manage water

• Big scale water storage linked to hydropower and drought management (also boating, fishing/amenity benefits)
• Modify existing reservoirs to allow water storage in rainfall events (assuming good quality weather forecasts will increase)
• Modify catchment upstream of Hawick to slow water flow downstream
• Upstream water storage for periods of oversupply, made available during periods of water shortage

Housing in the floodplain

• Consider moving poor quality housing from floodplains and rebuild quality housing in more appropriate place

Energy and heritage

• Use preparation phase (of Hawick flood scheme) to map/design lade system to allow maximum energy generation from river flow – Archimedes screw/water engines
• Hydro energy (with upstream storage/artificial lake) developed with farmers as an alternative source of energy for community and provide cheaper water
• Architectural heritage e.g reinstate water wheels. Job creation and money into Hawick from visitors
• Open up sluice gates/ old mill lade underneath Heart of Hawick area for water wheel restoration
• Biomass linked to district heating
• Capitalize on water excess to drive energy production e.g ground source pumps

**Business development**
• Whiskey production can attract other industries to increase jobs and employment for all
• Consider incorporating water sport facilities – kayaking/ slalom/ white water sports/ training facilities for fire brigade
• Leisure activities/ recreational activities – job creation and tourism

**Wider green initiatives for people of Hawick**
• Reallocate land for allotments and green infrastructure (green areas which rely on natural instead processes more than man-made structures)
• Use flood scheme as a catalyst for other green projects to help disadvantaged – e.g land for allotments/ energy efficiency/ renewables/ biomass

**Policy issues – spatial planning**
• Issue – current land use planning focuses on 1:200 year flood risk assessment. What do we do with areas at risk between 1:75 and 1:200 flood risk – revise land use planning?

Small group discussion to examine community ownership and ideas for delivering community benefits as part of flood scheme)
6.3 **Next Steps**

Finally, the whole group discussed next steps to help bring more people in and develop ideas to deliver benefits from the flood scheme.

- **Field visits** - Field visits to see examples of similar flood schemes where benefits have been incorporated into the design. This is important to help stimulate ideas and see opportunities and what to avoid/what could have been done better (learning). There will also be a lot of disruption (potentially 2 years) so it is important to understand this and the benefits from this. Possible locations suggested included Selkirk (although this is a very different scheme) and Inverness. 5-6 local people expressed an interest in a field visit.
  
  **ACTION:** Esther to discuss options with Shirley Mushet (SBC Hawick Flood Scheme project manager) to progress as part of this project.

- **Workshops** - Continuing the conversation involving local people, council and other relevant organizations through workshops is useful to help identify and develop benefits from the flood scheme. There was widespread interest in a second workshop (probably in December).
  
  **ACTION:** Esther to coordinate as part of this project (including a doodle poll to identify a date for the next workshop).

- **Funding sources** - Additional benefits from the flood scheme will require community led funding applications. It is therefore useful to know what the potential sources of funding may be. E.g LEADER Fund is well aligned with design project timescales (2014-2020 and then 2021–2026).
  
  **ACTION:** Ewan Doyle (SBC) to collect this information and include in next workshop.

- **Improving the involvement of local people** – all agreed that there is a need to bring in more local people to help identify and develop ideas. This includes the Hawick Flood group (NB two members attended the first half of the workshop) as an important local group.
  
  **ACTION:** All to bring other people to next workshop to include more local people in the discussions.

- **Involvement of schools** – this was identified as important by the group to develop and implement ideas.
  
  **ACTION:** Esther, Graeme Pritchard (SBC Community learning and development), Marion Short (Community council chair) (and possibly Duncan Taylor and Andy Jones who work in local schools) to work together to include schools and take this forward.
Feedback (Hawick Workshop 01-29/09/2015) – Summary

Participants (25) Completed feedback forms (13)

Pre workshop info?
Good.
Very Good 1, Good 11, Neutral 1

Venue and facilities?
Very Good and Good.
Very Good 5, Good 6, Neutral 2

I enjoyed the workshop?
Most participants strongly or mildly agreed.
Strongly agree 7, Mildly Agree 5, Unsure 1

The workshop met my expectations?
Most participants strongly or mildly agreed.
Strongly Agree 6, Mildly Agree 4, Unsure 2, Mildly Disagree 1

I sometimes found it difficult to follow what was being talked about?
Mostly participants strongly or mildly disagreed that they found the discussion in the workshop difficult to follow, however some were unsure or did find the discussions difficult to follow.
Strongly Agree 1, Mildly Agree 1, Unsure 2, Mildly Disagree 4, Strongly Disagree 5.

I met new people?
Most participants strongly or mildly agreed that they met new people at the workshop, although one participant strongly disagreed with this.
Strongly Agreed 9, Mildly Agreed 3, Strongly Disagreed 1

I learnt something new from the workshop?
Mostly participants agreed that they had learnt something new in the workshop, although a few were unsure and one strongly disagreed with this.
Strongly Agreed 7, Mildly Agreed 2, Unsure 3, Strongly Disagreed 1

In your own words, what did you learn?
Issues (impact of climate change)
- Status of Hawick flood project
- Many links to regeneration e.g. innovative flood prevention scheme can also positively impact on tourism.
- Increased my knowledge about the local area
- Aspects of flood prevention work
- Social diversity in Hawick
- Countless information regarding the environment, flooding and climate change in general
- Got good local ideas and analysis of issues
- Thinking more broadly about the social and economic implications of climate change

**People**

- Attitude to ideas within community
- Made new local contacts
- There are many willing people in the community who have innovative ideas and vision
- Other peoples take on how to improve resilience [people and issue]
- A wider picture of community work
- Desire amongst Hawick community to work together for greater good
- It was good to hear others talking about climate change and bringing ideas on how things might develop
- Made new contacts
- An understanding of local community interest
- A better understanding of the role and involvement of other agencies

**Other:**

- Hawick in relation to other Border communities e.g Peebles/ Selkirk

**Process**

- Not so much on detail but more on enthusiasm from the presenters
- Learnt a few more ideas on how to improve on communication

**In your own words, what were the strengths of the workshop?**

**People**

- A good mix of people

**Content and Structure**

- Well structured/ contents of sessions
- Plenty of food!!
- A wide number of participants
- Innovation
- Energy/ Enthusiasm
- The facilitator was very good/ good leadership
- Good time keeping
- Local knowledge of Hawick/ Expertise
- Grounded ideas
- Space to talk/ dialogue/ there was a good degree of interaction
- Very clear instructions and format/ Very well administered by Esther and managed by Esther and Ioan/ the format got everyone involved/ broke down barriers/ clear communication of what was involved in the different tasks

**In your own words what could be improved in the workshop?**
People

- More attendees, especially folk from Hawick/ more people encouraged to attend/ ideas how to include wider members of the community/ more participants/ encourage more people to attend/ more attendance from local people

Content and structure

- No one mentioned broadband connections which I am surprised by
- Some illustrations of what could be achieved/ better detail/ more visuals/ practical views of what other towns/ cities or villages have implemented particularly to improve architectural heritage and leisure activities to enhance the image of Hawick.

Other feedback/comments?

- Too long a session
- Language barriers e.g ‘resilience’
- Looking forward to next meeting
- A good start to the process
- Some solid foundations to take forward to next stage
8 APPENDICES

8.1 APPENDIX 1 — INFORMATION PROVIDE TO HELP FACILITATE SMALL GROUP DISCUSSIONS ON CONSEQUENCES OF CLIMATE CHANGE EXAMINED IN GROUP DISCUSSIONS

1. Emissions

Human induced emissions of greenhouse gases are the highest in history which has driven increases in atmospheric carbon dioxide, methane and nitrous oxide. Emissions of these GHG continue to increase. Increasingly local and national policies are being developed to reduce GHG emissions.

Reducing emissions is a significant climate change challenge.

QUESTION:

WHAT ARE THE DIFFERENT CONSEQUENCES OF CHANGES IN EMISSIONS OF GHG FOR HAWICK AND WHY?


- Total emissions for the top 10% of earners is 16,143 kg of CO2, whereas for the bottom 10% it is 5026 kg CO2.
- Mean private vehicle emissions for the top 10% of earners is 4598 kg CO2, whereas for the bottom 10% it is 605 kg CO2.
- With current climate change mitigation policies the average energy bill of the top 10% of earners will change from £1519 to £1337. Whereas for the bottom 10% of earners the change will be from £994 to £925.
- The reduction in average energy bill will be 12% for the top 10% of earners, whereas it will be 7% for the bottom 10%.
2. Uncertain energy sources

Despite increasingly evidence and widespread agreement across society human induced GHG emissions are altering the global climate the development and delivery of climate policy faces many challenges. This adds to the uncertainty already surrounding global energy supplies. With more extreme weather conditions energy sources also may become increasingly important. Energy sources are therefore an important climate challenge.

QUESTION:
WHAT ARE THE DIFFERENT CONSEQUENCES OF UNCERTAIN ENERGY SOURCES FOR HAWICK AND WHY?

- Reliance on imported energy is expected to increase increasing the risk of disruptions (Russia/ Middle East).
- Reliance on fossil fuels continues to increase.
- Energy demand and cost continues to increase.
- Alternative supplies from renewable sources continue to be developed.
- Subsidies and taxes to help transition to other sources of energy remain uncertain.
- Somewhere between 4 and 5.5 million people in the UK live in fuel poverty – defined broadly as a situation where a household spends more than 10% of its income on fuel costs.

3.  **Storms and Floods**

As global temperature continue to rise there has been an increase in rainfall intensity. Climate change has also been linked to more frequent winter storms (low pressure events from the Atlantic) and cold winter extremes are predicted to continue linked to disruptions occurring in the global weather cycle. More frequent and/ or severe winter storms and flooding over the next few decades is a challenge linked to climate change.

- Rainfall intensity in Scotland has increased by 7% since 1961
- Across Scotland the trend of more severe rainfall days, particularly in the autumn and winter is predicted to continue.
- Scottish Borders an increase of 10% in autumn and winter rainfall is predicted by the 2020s.
- In parts of Scotland the flow of water over the land from heavy rainfall my increase by 25% a year by 2050.
- This leads to more frequent and severe flooding from rivers and from the land.

**QUESTION:**

WHAT ARE THE DIFFERENT CONSEQUENCES OF MORE WINTER RAINFALL AND STORMS FOR HAWICK AND WHY?

4. Food prices

Temperature and rainfall are both important factors in food production. As global temperatures increase, rainfall patterns change and more extreme weather increases this may have huge impacts on food production globally. As our climate continues to change the risk to our food supply also increases.

QUESTION:
WHAT ARE THE DIFFERENT CONSEQUENCES OF CHANGING FOOD PRICES FOR HAWICK AND WHY?

- Global food demand may continue to increase by another 60% by 2050.
- The risk of shocks to food production is increasing from a 1-in-100 year risk to a 1-in-30 year or more by 2040.
- Our food production is often concentrated to a small number of regions of the world. Extreme weather in two or more areas leads to more extreme shocks.
- Food shocks lead to in season instability, price spikes and long term changes in food systems.
- Inflation of food price is one consequence in more affluent areas of the world.

5. Water Scarcity

As global temperatures have increased greater variability in temperatures and rainfall patterns have occurred. Linked to this has been the likelihood of more extreme hot temperatures and localised periods of low rainfall. Water availability over the next few decades is a challenge linked to climate change.

**QUESTION:**
WHAT ARE THE DIFFERENT CONSEQUENCES OF MORE WATER SCARCITY FOR HAWICK AND WHY?

Water is becoming increasingly scarce due to increasing temperatures, rainfall variability and demand.

- Since the 1960’s summers rainfall has decreased in the east and south of Scotland.
- Rainfall in the Scottish Borders could decrease in the spring by up to 9% by 2020’s.
- Water availability is likely to be more severe in consecutive dry years.
- Water sanitation may be affected as pollutants and water borne diseases need dilution to safe levels.
- Water companies are already moving away from flat rate fees to new charging models that bill customers steadily higher prices according to how much water they use.

8.2 APPENDIX 2 — PEOPLE WHO JOINED THE WORKSHOP

Total – 25

- SEPA (local and national representatives) (2)
- Local residents/ Hawick Resilience Group (3)
- Local resident s/ Hawick Flood group (2)
- Local residents (5)
- Hawick Fire Service (4)
- Elidon Housing (Director) (1)
- Southern Uplands Partnership (NGO) (1)
- Scottish Borders Council - Hawick flood protections scheme project (2)
- Scottish Borders Council – Community learning and development (1)
- Scottish Borders Council – Emergency Planning (1)
- Scottish Borders Council – Ecology/ land use (1)
- Scottish Borders Council – Housing and Energy (1)
- Scottish Borders Council – Policy (1)

9 FURTHER INFORMATION

If you would like further information about this workshop please contact:

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