



Climate Change

Introduction

In light of the COP26 global event in Glasgow, and the impact of climate change becoming ever more apparent across Scotland the UK, SCSN facilitated a workshop, to identify how climate change might affect community safety.

On Tuesday 19 October 2021, SCSN hosted and facilitated a 2-hour online workshop. Over 30 people attended from a spectrum of community safety organisations. Attendees included representatives from RoSPA, Scottish Fire and Rescue Service, Community Safety Partnership (CSP) Leads, SEPA, Neighbourhood Watch Scotland and the Scottish Flood Forum.

Structure

Prior to the workshop, SCSN identified 5 key impacts of climate change to explore in further detail with attendees. This was achieved through a rapid evidence review of policy documents, including the recent IPCC report on climate change (2021) and the UK Climate Risk Assessment (2021). The 5 areas identified and discussed in the workshop were (1) Increased Rainfall and Flooding, (2) Hotter Weather and Heatwaves, (3) Coastal Erosion, (4) Pests and Invasive Non-Native Species (INNS) and (5) Extreme Weather Events.

At the virtual workshop, participants were divided into 3 groups. Each group explored the above impacts of climate change in relation to (1) Home Safety, (2) Outdoor Safety and (3) Personal Safety. Splitting community safety into these 3 key areas enabled a broad, in-depth exploration of the potential impacts of climate change on different strands of community safety.

The workshop utilised 'Jam Board' as an interactive, real-time collaborative platform whereby all participants were able to share their thoughts and learn from each other,

simultaneously. The conversation was rich, creative and thought provoking, and practitioners shared their expertise in an open and relaxed environment. The findings of the workshop are summarised in the main body of this learning report. However, for reference and context, please read the below definitions of the 5 areas of climate change that were covered in the workshop, as well as brief definition of home safety, outdoor safety and personal safety.

Climate Change

The impact of climate change on Scotland and the UK can be viewed through 5 lenses; increased rainfall and flooding, heatwaves and hotter weather, erosion of the coastline, pests and INNS, and extreme weather events.



It is very likely that heavy precipitation events will intensify and become more frequent in most regions with additional global warming. Extended periods of heavy rainfall can have impacts, such as slope and embankment instability, flooding and effects on road and rail infrastructure.



Currently there are around 2000 heat related deaths per year in the UK, set to increase by 257% by 2050 where a summer as hot as in 2018 (joint hottest summer on record) for the UK could become normal summer conditions. It is anticipated that there will be more frequent / severe summer droughts which will affect public water supply and cause reduced water availability.



There are major implications for coastal communities due to flooding, in particular extreme coastal flooding from sea level rises and increased rainfall. It is anticipated that there will be increased loss of natural flood defences which will impact the flooding / erosion of coastal buildings.



There will be an increase in the capacity of existing UK mosquito species, able to transmit certain arboviruses that are harmful to human health. An increase in rats is expected, as well as flies, ticks, invasive garden ants, house flies, and mosquitos due to warmer, wetter weather and milder winters.



Human influence has increased the chance of compound extreme events, including increases in the frequency of concurrent heatwaves and droughts, compound flooding and successive storms. Over 50% of days could have a 'very high' fire risk in the peak months of the summer with increased chances of wildfire.

Community Safety



Definition of Home Safety

'Home Safety' refers to risks and potential dangers in and around a home which may cause bodily harm, injury, or even death to those residing in and around the physical structure of a home. Home safety includes a lot of things and can be divided into different categories. For example, slips, trips and falls, electrical safety, gas safety, product safety, fire safety and water safety. We already know the different kinds of issues that home safety faces at this point, but for the purpose of the workshop, we wanted to start thinking about how climate change might impact home safety in the coming years. For example, what does increased rainfall mean for home safety? What does higher temperature and warmer weather mean for home safety? What do increased numbers of pests mean for home safety? And what do extreme weather events such as successive storms, heavy rain and prolonged heatwaves mean for home safety?



Definition of Outdoor Safety

'Outdoor Safety' is undoubtedly an area that will be fundamentally affected by climate change. We have already begun to see this happening in Scotland with increases in flooding, fire and droughts from excessive heat, rainfall and storms. This is expected to increase, with coastal erosion also predicted to present significant risk in the near future too. When defining outdoor safety, we therefore think about risks and potential dangers to outdoor environments and activities. For example, might changes to our weather and natural environment bring higher risk to commonplace outdoor activities such as driving, walking and cycling? What are the increased risks to being outdoors in excessive heat? How will a rise in the numbers of pests and INNS manifest? How might infrastructure be affected and what could that mean?



Definition of Personal Safety

'Personal Safety' concerns the welfare of the self or the health – physical and mental – of an individual. It's a general, basic overview and a useful perspective, helping us

understand what changes in our environment might mean for citizens in more personal, intimate ways. Climate change will unquestionably impact the personal safety of our citizens, across all our communities. Weather extremes and climate change will have consequences for social mobility, job opportunities, health and access to services, public and personal transport, community cohesion and behaviours, and fundamentally shift the way we live our lives and interact with each other. The question we're keen to ask is; to what degree will increased rainfall, hotter and drier summers, erosion, pests and other climate extremes influence us? What can we do to prepare and mitigate against the adverse effects? Are there opportunities in the coming changes and things we can embrace or invest in now?

Workshop findings

Increased Rainfall and Flooding



Impact on Home Safety

People's **physical health** and wellbeing are at great risk from flooding in their home. People are in immediate danger of being trapped in their homes with rising flood water and gathering debris. There is also higher risk of **illness and disease** from dirty and contaminated water entering homes during flooding. There can be a long-term impact of **damp in homes** which impacts people's health and wellbeing over time. Flooding can also cause extensive damage to the internal and external fabric of homes which might lead to **long-term structural damage** and a lack of essential repairs, whilst also having an impact on home insurance premiums and affordability. This puts people with lower incomes most at risk of **financial insecurity** following floods. Lack of home insurance might lead people to try to make their own repairs too. This could put them at higher risk of **DIY accidents** or pressure people into purchasing cheaper and more unsafe replacements for lost possessions, or DIY equipment and materials (i.e., homemade sandbags to prevent further flooding). Flooded gardens can lead to cracked patios and paths which can pose as an **increased trip hazard**, particularly for older people who are already at higher risk of falls. In terms of **electrical safety**, flooding can cause power cuts and so people are at higher risk of falling over in the dark. In addition, there is potentially an increased fire risk in homes, as people

tend to use candles as a source of light during the power-cuts. Lastly, flooding in homes puts increased demand and **pressure on emergency services**, as well as making it more difficult for them to access homes due to floods.



Impact on Outdoor Safety

When looking at the impact of increased rainfall and flooding, participants identified that **water-based accidents/harm and risk of drowning** were two of the most concerning issues that face community safety, especially for vulnerable people such as the elderly and very young. The dangers of **fast-flowing water, flooding of homes and dangerous debris** were highlighted in particular as related hazards. It was also discussed that flooding and excessive rainfall could cause **damage and instability to infrastructure** such as roads, buildings and utilities, and will increase the likelihood of associated unintentional harms, such as accidents on uneven grounds, electrocution and falling debris. **Pressure on drains and sewage** was given a particular mention, as this could lead to contamination. **Landslips and unstable banks** are also very likely after excessive rainfall, leading to dangerous debris on blocked roads and rail. This will cause **disruption to transport**, often **cutting off communities** from essential resources and emergency services. **Farmland, crops and animals** may well also be adversely affected from such extreme weather events. Finally, the potential for communities to suffer **disempowerment** after floods through **isolation, disruption, displacement and lack of amenities** was widely acknowledged.



Impact on Personal Safety

Participants looked to how increased rainfall might affect personal safety in our communities. The group identified a number of areas for consideration, including the **adverse impacts on public and private transport**; increased risks of aquaplaning, regular road closures and diversions - perhaps some routes becoming impassable - road surface damage with cracks and buckling, and increased insurance premiums for residents living in high-flood-risk areas, meaning some people will be disproportionately penalised financially for changes in the weather and environment. Heavy, frequent rainfall could **restrict or deny disabled access** in many communities. This will contribute to **poor mental health** amongst the most vulnerable; increased anxiety, depression, isolation which – particularly for those receiving and dependent on care – will be felt most acutely. Access in and out of homes, and around communities will likely be limited too, resulting in **decreases in physical health**; citizens unable to leave home or visit parks and facilities for exercise. In turn, this will begin to change the makeup and **behaviours of our communities**, some for good; greater localised neighbourly welfare checks and increased civic engagement, more offers of support and solidarity, but some for ill; shared communal spaces become less accessible or even unused, groups stop meeting in public places, neighbourhoods become fragmented, isolated and alone, and physical health in the longer-term declines due to inactivity. Finally, investment and employment are likely to decrease in frequently flooded, high-risk areas. Companies are likely to take flight and move away, taking jobs and opportunities with them. This presents **significant economic risk**, directly impacting personal wellbeing and financial safety for individuals and families; mental health and purchasing power, to buy food, medicine, access to transport, exercise, social activities and more, all negatively impacting personal safety.



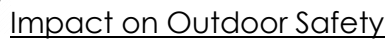
Heatwaves and Very Hot Days



Impact on Home Safety

The majority of homes in the UK don't have air conditioning or effective ventilation. Many homes are at risk of **overheating**. This puts people and domestic pets at risk, with elderly people most at risk of needing **hospitalisation** from overheating. People living in urban areas are even more at risk, due to the '**heat island effect**', a phenomenon whereby multiple environmental factors interact, resulting in an even hotter temperature within urban areas and homes. During heatwaves, people may decide to leave their homes, to seek others areas to cool down (e.g. lakes, shores and rivers), potentially **displacing accidents** from the home into outdoor environments instead. There is also a risk of more young **children falling from windows**, as windows will be left open in the hotter weather. Open windows also put properties at greater risk of **theft** and break-ins. In terms of garden safety, people may be at greater risk **of sunburns and skin cancer**. In addition, **burns** from outdoor fires, BBQs and over-heated outdoor surfaces could become more commonplace. There is potential for an increase in the number of **gardening accidents**, as well as more ticks in gardens due to warmer weather, putting people at greater risk of Lyme disease. **DIY accidents** could also become more frequent, whereby people take on household repairs / renovations (e.g. solar panels, air conditioning and ventilation), tackling complicated DIY tasks that they are not equipped or trained for (e.g. wrong tools and poor knowledge). Increased risk of wildfires is a threat to homes, wildlife and the environment. **Water shortages and drought** are a very real threat to areas of the UK and can put a strain on emergency services, in particular the fire service. A couple of workshop participants suggested that home safety visits could include assessment of **ventilation** in homes, and also perhaps a working from home safety assessment too.



[illegible]

Heatwaves are more frequent today than they have ever been, since modern records began, and this trend is forecast to increase. Hotter, more intense days in Scotland will have significant impacts on our communities, including our personal safety. For a country typically used to overcast, cold, wet weather, increases in temperature will present unique, unfamiliar challenges. For example, **homes designed for insulation and preserving heat will have to be adapted to help ventilate and cool** householders, particularly the older and more vulnerable. The same requirements will apply to **public transport, shared spaces and facilities, all needing modernised** to be able to maintain lower, safer temperatures with climate control. There will need to be **improved education and encouragement for use of sunscreen and time spent in the shade**, to prevent heat stroke and sunburn. **Hotter days will influence behaviours** too. People will spend more time near to or in water, leading to **increased risks of injury and drowning**. Parks and open spaces will become more desirable which – in turn –

may add burden and pressures on local authorities, responsible for cleaning and maintaining popular public spaces. This will stress local services, as demand for facilities like play parks increases. In rural areas, **risk of wildfire will also increase**, due to hotter, drier landscapes. Upsurges in visitors camping and participating in leisure activities will add to the need for education and awareness raising, highlighting personal responsibility and civic duty. But **there will be opportunities in a hotter Scotland too**, for the green economy and renewables sector, bringing jobs and businesses to communities, and with them new training and skills, money and support.



Erosion of Coastline



Impact on Home Safety

Damage to homes and coastal communities from erosion puts people at increased risk of **homelessness**. Coastal erosion presents danger to human safety as housing is put at greater risk of extreme flooding, particularly the properties more exposed to damage from **wind and tide**. Risk of flooding can result in homes becoming more **expensive to maintain** and protect against flooding, due to location. People may undertake their own repairs, putting **people** at greater risk of DIY accidents. Second homes and **holiday homes** in coastal areas may be more at risk of coastal flooding, as people stay there less often and more sporadically, and may be less aware of the risks in the local landscape as it changes. People may find it more difficult to sell their property, due to long-term, **irreversible damage** to their home. Negative economic impacts to the area could follow flooding and housing damage, with **less visitors** and tourists coming to the area. Segments of the community could be torn apart following devastation to homes, and this could result in an increased risk of **antisocial behaviour**. There is a risk of limited access to gas, water and electricity following extreme coastal flooding. Increased risk of power cuts may lead to more people using candles in the home, increasing **fire risk** as well as potential for **falls** in the home in the dark.

Immediately following extreme coastal flooding, **emergency / community services** access may be very difficult, putting people and the community's immediate health and life at risk.



Impact on Outdoor Safety

The biggest risk to outdoor safety from the erosion of the coastline was felt to be the **danger and damage to homes and amenities**, from flooding and landslide, some of which will be irreparable. Other damage included was to infrastructure, such as **utilities, drainage and roads** - which could leave communities **cut-off and isolated** - impacting the most vulnerable. Natural assets and areas of beauty may be lost or compromised, leading to loss of livelihoods and tourism. People might be displaced and forced to leave, affecting **community cohesion and mental health**. **Beaches and coastal paths** could become unsafe, resulting in serious incidents and fatalities.



Impact on Personal Safety

The majority of Scottish communities enjoy living on or near our coastlines. From Glasgow to Wick, Banff to St Andrews, Dundee to Edinburgh – and across our islands – it's clear, coastal erosion will affect us all. Visitors to these areas may be at increased risk of **falls near cliff edges or rock-fall and landslide by crumbling coastlines**. For residents already living in higher-risk areas, their **mental health; worry about personal safety, anxiety about home values and resale, and concern about the survivability** of some areas will be significant. In some regions, **rail and road transport links will be affected by flooding and landslides**, cutting off communities. With regular incidents of coastal collapse, landslides and erosion, **some regions may see businesses and jobs**

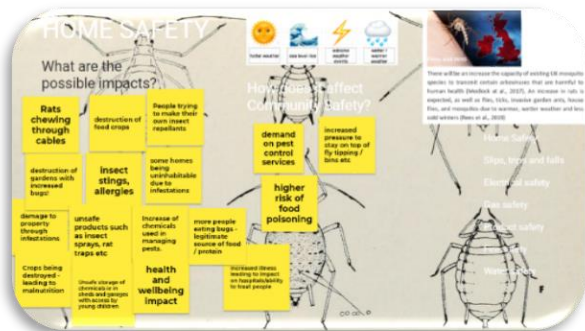
take flight. Some residents may leave, and **some communities may disappear entirely.** In turn, Scotland may need to consider the possibility of **domestic environmental refugees; displaces Scots** evacuated from their homes and communities. Hard choices may need to be made, locally and nationally – if resources are limited – about which areas are supported, for practical help and defence, and those that aren't. Consequently, a social/economic imbalance may emerge, between those with means and those without, to buy land and homes in 'safe' places, sheltered from climate extremes; **environmental economics and wealth divides might split Scotland,** making new areas more desirable and re-shaping where resources, services and support goes in future.

Pests and INNS



Pests and INNS are a real threat to home safety in Scotland and the UK. An increase in pests and INNS in the home could result in damage to property through **infestations**. This might result in some homes being uninhabitable due to infestations, as well as **gardens being destroyed** by large increases in numbers of insects. **Electrical safety and fire risks** could increase too, due to the threat of rodents (rats) chewing through electrical cables in the home. The projected increase of pests could result in an increase in the use of **dangerous chemicals** being used to manage pests. **Unsafe storage of chemicals** (i.e., in sheds, garages, under sinks) could put young children at increased risk of poisoning in the home. Cheap and unsafe pest products, such as insect sprays and rat traps could become more commonplace, in addition to people on lower incomes attempting to make their own insect sprays and pest killing devices. Monitoring of online content and YouTube videos could play a key role when identifying unsafe practices and tutorial videos. An increase of pests in the home puts people at increased risk of **illness, food poisoning and insect stings / allergies**. This can

have a negative impact on health and wellbeing, and put additional **pressure on health services** to treat people. In addition, it could put additional **pressure on pest control services** and on councils / community safety teams to stay on top of fly-tipping and bins. There is also greater risk of more people getting ill from **eating bugs**. Insect protein is a legitimate source of protein, with more products starting to flood the market, including cricket crisps, insect pet food and insect protein powder. Perhaps people might start to attempt to catch, treat and eat bugs found in their home which could result in a host of potential **health risks**. Although an abstract concept, is a legitimate home safety concern.



Impact on Outdoor Safety

Those enjoying the outdoors may be subjected to increased problems from pests and INNS, such as **mosquitos and ticks** and the **disease** they transmit from bites. Possibility of new **virus transmission** would also be increased, for example - Zika virus. Any new viruses and diseases that spread could risk **pandemic** and mean vaccinations and safety measures that curb peoples' lives and freedoms. Changes to the ecosystem could **attract other predators**, such as snakes or birds, which would become more prolific which bring new associated dangers. An increase in rodents will bring disease and could **contaminate water supplies**. Community safety practitioners were particularly worried about the impact increased rodent populations would have on **bins, litter, hoarding and fly-tipping**, and how they might encourage infestations. Overall, it was felt that pests and INNS would increase **general stress, pressure on the NHS** and hit the **most vulnerable** most acutely.



Impact on Personal Safety

Warmer weather means an increase in the **tick population**. This can affect people's **physical health** due to increases in the spread of disease and illness. In addition, the increased presence of pests can increase people's **anxiety** and affect their **mental health** due to diminished willingness to go outdoors. The physical and mental health impact of increases in pests will mean additional pressure and **strain on hospitals and GP practices**. There is a concern around the potential rise of '**do it yourself**' videos, online and on YouTube, targeting people who want to protect themselves against pests. There is potential danger here for accidents, in particular DIY accidents and poisoning, from people attempting to make their own insect repellent sprays, rat traps etc. There is further concern about the impact of increased number of **midges** on tourism... if there were to be substantial increases in the number of midges, this might reduce tourism and have **negative consequences on local economies**, particularly areas with traditionally lower levels of pay (e.g., rural economies and the hospitality sector).



Extreme Weather



Impact on Home Safety

Concerns include things like loss of utilities in homes caused by **power outages** and internet and communication failures. Increasing **costs of insurance** could put additional financial pressure on people whose homes have been damaged by extreme weather events. It is anticipated that it will be difficult for emergency services and community safety services to prioritise the most important / destructive events (storms / flooding / heatwaves etc.). In addition to this, **redirection of funds** to deal with crisis could put additional strain on more routine community safety services; partnership activity and preventative activity.



Impact on Outdoor Safety

Extreme weather will undoubtedly affect outdoor safety to a great degree. It will result in in much of what has been discussed above, regarding flooding and landslips, including **damage to infrastructure and buildings**, danger to life from **drowning and accidents**, and **communities being cut-off** resulting in lack of access for emergency services and resources. In extreme weather, transport links via train, road and ferry will be particularly affected. In addition, more hazards were identified regarding excessive cold weather, such as **slips and falls** on ice and snow, **power cuts**, and **risk of hypothermia and fuel poverty**. Snow can also bring **potholes** in roads which are a risk to drivers, cyclists and pedestrians. Risks of **flying debris** and falling trees, and tall structures must be considered with high winds stressing their stability. Storms that bring **sea-surges and lightning** may become more common. If extreme weather is sudden then there is risk of people being caught off-guard and needing rescued more frequently, putting **pressure on rescue services**. Sudden weather changes are also **difficult to plan for**. All of the above issues will put increased **pressure on the NHS and emergency services**. Other issues mentioned were **looting**, **climate change anxiety** and colder countries having a **higher dependence on alcohol**.



Impact on Personal Safety

In terms of extreme weather events, the impact on personal safety is similar to those mentioned in the previous 4 sections. There is overlap from the previous impacts in terms of **employability, investment, mental and physical health**, all resulting in increased pressure on public services, in particular health services. Natural hazards such as extreme weather can become more hazardous due to **poor decisions in**

planning, in particular around **housing**. Current investment does not reflect the current and future risks to communities from extreme weather events. Conversely, there is also concern that **over-investment** in resisting and preparing for extreme weather may **diminish existing services** in other parts of the community. Striking a balance is key. There are currently some very innovative **natural flood management systems** and networks in Scotland, and examples of good practice in relation to volunteering and local community action. However, in the face of more extreme weather events in the coming years, these efforts need to be further enhanced and prioritised, and shared.



Conclusion

The 'Climate Change and Community Safety' workshop findings are the beginning of an enquiry, exploring the impact of climate change on community safety. We believe, at this time, this is unique. We are unaware of any similar workshops investigating the same issues in this way. This means our learning is somewhat innovative and perhaps, it could be a blueprint for future progress and dialogue.

The information in this report was co-produced with community safety professionals, from across the sector. The topics and risks discussed are of real concern to those working in community safety. Reviewing the findings from the report, it's clear there is overlap concerning climatic change impacts in home safety, outdoor safety and personal safety. The broader themes, such as economic inequality, physical wellbeing and mental health, pressure on public services and infrastructure, and environmental damage are also common throughout.

The question now is; what do community safety practitioners do about the projected impact of climate change? What can you do, locally?

The key message from SCSN is that it is up to those working within each local area to understand the impacts and influence change. This can be achieved on a personal level and a professional capacity, to involve others and start conversations about climate change with community safety at its heart. Climate change is everybody's responsibility.

Participants in the workshop suggested that the information from this report be shared widely with our members, partners and networks. This - we hope - will help to spark

new conversations and encourage people to start considering the future; resources and operational constraints in the face of our changing climate. New community safety strategic documents should include climate change. Risk assessments should include the impacts listed throughout this document. To note, the new Scottish Fire and Rescue Service draft strategy includes climate change as a priority. We welcome this and suggest other organisations consider this too.

The next step for SCSN is to utilise the skills of an experienced graphic designer, to summarise the findings in a simple, easy to understand and engaging illustration, perhaps resulting in a poster or zine, digital or physical. We will be share this widely within our network, website and social media. We will also consider a future webinar on the same topic, whereby community safety professionals can collaboratively map solutions and adaptations, to help overcome the community safety challenges of the future.

In addition to this report, a 'Jam Pack' PDF file can be downloaded which includes all the jam boards (virtual post-it notes) from the workshop.

Thank you for your time reading this report, we hope you find it helpful.

The SCSN Team.

Feedback on the event

100% of respondents felt the topic was relevant.

75% of respondents rated the event overall as 4 or 5/5 stars.

60% of respondents rated the breakout sessions using jamboard as 4 or 5/5 stars.

83% of respondents would definitely or very likely attend another of our events.

The main 'takeaways' from the event were around:

- A wider understanding of the complexities of climate change including the variables and less obvious implications
- The effect of climate change on the most vulnerable
- The need to think about social care and health alongside community safety
- Working with communities to educate and prevent
- The need to build better networks and partnerships to adequately prepare
- The many cross-cutting areas and opportunities for collaboration
- Lack of meaningful awareness around climate change

Some comments:

"Structure was perfect - attended too many events where people simply wish to talk at you over a screen. This was much more balanced - good use of slides and message

facility in intro followed by jam boards and final discussion. Really relaxed and engaging. In this respect, best training I've done in a while!"

"Informative, interactive"

"Really well organised and facilitated with useful content. Like the Jam Board"

"Enabled us to reflect on our own work and communities - brought up issues I had never thought of before as being impacted by climate change"

There were some comments on more interaction between participants, more focus on actions and community input. We will take these on board.

We also had a twitter # for the day, with 10 tweets and 9 retweets about the session reaching 45,281 accounts.