# Climate change in an ageing world

## Contents



HelpAge International
global network

## Key messages

- A binding framework to limit carbon emissions and the resulting temperature increase to below 2°C is urgently needed to mitigate the most dangerous impacts of climate change. Even with such an agreement, climate change will continue to pose significant and specific risks for older people.
- National climate change strategies must be inclusive of the capabilities, rights and vulnerabilities of older people to reflect the convergence of population ageing and climate change.
- The full participation of people of all ages in these strategies is essential to their success.

## Introduction

The impact of climate change on an ageing global population is creating a nexus of vulnerability which is set to increase over the coming decades. Scientific consensus has been reached that the earth's climate is warming. The Intergovernmental Panel on Climate Change (IPCC) has concluded that climate change is already causing increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising average sea levels and that it is extremely likely (95% probability or higher) this is due to human activity.[1] At the same time, the world's population is ageing. By 2050, over 21 per cent of the global population will be 60 or over.

The effects of climate change are already being experienced globally through more extreme weather events and the resulting impacts on people's lives, health and wellbeing. Growing proportions of older people are increasingly exposed to risks, especially in low- and middle-income countries, which are the most vulnerable to the impacts of climate change. There is growing political consensus that coordinated global action is required to mitigate climate change and to develop strategies to adapt to current and future impacts.

For the first time in over 20 years of UN negotiations, the 2015 Paris Climate Conference, or COP21, aims to achieve a legally binding and universal agreement on climate change, with the goal of keeping global warming below 2°C. A total of 190 countries have already submitted nationally determined contributions, which will determine whether and how the world implements the COP21 agreement and embarks on a path towards a low-carbon, climate-resilient future.

The need to address the threat of climate change to development progress has been further reflected in the outcomes and frameworks from three other major conferences and summits of 2015: the Sustainable Development Goals, the Sendai Framework for Disaster Risk Reduction, and the Addis Ababa Action Agenda (the outcome of the Third International Conference on Financing for Development). Older people have been recognised for the first time as a stakeholder group within the Sendai Framework, and the Sustainable Development Goals include specific references to all ages and older people.

The implementation of the COP21 framework and climate-focused targets within the SDGs and Sendai must reflect the context of an ageing world. To be successful, the national-level commitments resulting from COP21 must respond to the rights and needs of older people and other at-risk groups.

This paper outlines the impacts of climate change which are currently being experienced as evidenced by the IPCC and identifies the current and future implications for older people, including an assessment of how livelihoods, healthcare, nutrition and energy are particularly affected by our changing climate. It reiterates the global call for an immediate binding agreement during COP21 and makes 10 recommendations to ensure that the national commitments, which will form the basis of its implementation, address the specific needs of older people.

## Older people at risk

Two-thirds of people aged 60 or over live in low- and middle-income countries where disasters are more likely to happen. While climate change affects everyone, there is a growing body of evidence that it poses specific risks for older people. Older people are more vulnerable to the effects of temperature extremes and have a significantly higher mortality risk in extreme weather

### Ageing by numbers

**12.3%**
**of today's population are 60+**

(Source: UNDESA Population Division, World Popuation prospects: the 2015 revision)

**By 2050**

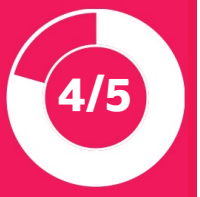
**1 in 5 people globally will be 60+**

(Source: UNDESA Population Division, World Popuation prospects: the 2015 revision)


**of people aged 60+ currently live in developing countries**

(Source: UNDESA Population Division, World Popuation prospects: the 2015 revision)

**In 2050 the proportion of people aged 60+ projected to live in developing countries is**




(Source: UNDESA Population Division, World Popuation prospects: the 2015 revision)


**75%**
**of those who died during Hurricane Katrina in 2005 were aged over 60 (16% of local population)**

(Source: N Wilson, Public Policy and Ageing Report, 2006)

events.[2] They are at greater risk because of increased susceptibility to disease, reduced mobility and the effects of stresses on the food and water supply.

Social and economic factors may also increase the vulnerability of some older people. The combination of chronic health problems and social isolation in addition to more limited access to services, which are often concentrated among older people, can reduce their capacity to cope with climate-related stresses.[3] Minor conditions can quickly become major challenges that overwhelm an older person's ability to cope.

Every older person will face different vulnerabilities to specific impacts of climate change, which may change over the life course. For example, a US study showed that people aged 85 or over are more likely to suffer negative health effects from climate change because of physical decline or frailty.[4]

At the same time, every older person has a range of different capacities to cope with the impacts of climate change. Many older people play a valuable role in their families and communities, especially in crises. Their experience can provide vital information on past climatic histories, hazard and disaster impacts, a community's vulnerabilities and capacities, or socio-environmental relationships, and can be key to understanding the nature of climatic vulnerability. It is therefore vital that climate mitigation and adaptation strategies are inclusive of older people in order to maximise these capacities in addition to addressing their rights and vulnerabilities.

## Extreme events due to climate change

Extreme weather events are projected to become more frequent and intense as average global temperatures continue to increase. Floods, droughts and heatwaves are among the key risks of global warming that will pose the greatest threat to humans in the future, according to the IPCC, which examined rising temperatures as a series of comprehensive global risks.[5]

These will lead to loss of life, and increasingly to the breakdown of critical infrastructure such as electricity, water supply, health and emergency services. In addition, they will disrupt food production, cause damage to settlements and consequences for mental health and wellbeing.[6]

During emergencies, frail or housebound older people may be less able or less willing to flee from potential harm. They can struggle to obtain food, travel long distances or endure short periods without shelter.[7] After a disaster, there is a focus on immediate relief, but this is often not appropriate for or accessible to older people. In the medium-term, emergency health services need to respond to the ongoing needs of older people, especially for chronic conditions such as heart disease, diabetes, stroke, respiratory illness, rheumatism and dementia.

Loss of family members, carers and community ties can also leave older people isolated. Coping with day-to-day life after a disaster can be difficult; in many cases, the psychological impact of a disaster on older people can be greater than on other groups.[8]

Yet international humanitarian and national disaster management agencies are often ill-equipped to respond to older people's rights, specific vulnerabilities and needs. Older people are inadequately considered in the majority of humanitarian responses and are often over-represented in mortality and morbidity rates from the impact of disaster.[9]

*When flooding struck my village, water came into my house right up to my waist. I picked up my grandchild and held him tight. Eventually we were rescued and taken to the village temple where we stayed for 10 days. I'm now working with people in my community to support disaster risk reduction. I like being part of the decision-making on matters that affect us.*
**Noom, 80, Thailand**

Robin Wyatt/ HelpAge International

## Floods

In recent years, the number of people exposed to river floods and the effects of sea level rise has increased and is projected to continue to increase with the level of warming over the remainder of the century.
*Source: IPCC, 2014*

Older people tend to experience greater impacts from flood events and a greater incidence of flood-related disease and higher rates of mortality. Floods often result in higher mortality rates among older people than other age groups due to direct causes such as drowning, in addition to secondary health impacts, such as hypothermia and heart problems.[10] Flooding may also restrict an individual's access to medicine, or make it difficult to obtain appropriate medical attention in an emergency. Flood events can directly impact on local medical services and also affect the wider community, given that it may be necessary for hospitals to postpone routine or other non-urgent medical treatments.[11]

Older people are less likely to be reached by flood warnings or be able to respond to them once they do due to mobility restrictions.[12] Water contamination due to flooding is more likely to have greater impact on older people due to their less responsive immune systems.[13]

**Recommendation 1:** Ensure that the Paris framework results in a structural agreement to address loss and damage in relation to climate change impacts which are already occurring. Ensure that national level adaptation funding includes disaster risk reduction and preparedness planning for flood events as well as strategies which engage older people in river basin management and urban planning to manage the risk of flooding.

*Typhoon Haiyan was the most powerful we have ever experienced in my community. We couldn't evacuate as we had no footbridge to cross the river which had broken its banks. Our houses were destroyed.*
**Pelagia, 86, Philippines**

Florence Lang/ HelpAge Deutschland

## Typhoons and hurricanes

The frequency of the most intense storms is likely to increase substantially in some areas with precipitation making landfall more likely in many parts of America, Africa and Asia.
*Source: IPCC, 2014*

There is growing evidence from national disaster loss data that older people are disproportionately more likely to die as a result of typhoons due to mobility difficulties, lack of evacuation assistance and inappropriate evacuation facilities, and disrupted access to essential health and medical support.[14]

When older people do decide to flee, they face risks, including the possibility of being separated from family and friends. The effects of typhoons are likely to be more severe among older people who have reduced or declining adaptive capacity, particularly those who are disabled, poor, chronically ill or socially isolated. Older people may be less responsive to hurricane warnings, may have physical impairments that make preparation more difficult, and may be less connected to community assistance resources.[15]

When typhoons cause flooding, as during Hurricane Katrina in 2005, those who have physical impairments and who lack social contacts or personal transportation are much more likely to be victims.[16] Seventy-four per cent of the deaths related to Hurricane Katrina were people aged 60 or over, and 50 per cent of these were over 75, figures that resulted in efforts to develop specific approaches to evacuating frail and vulnerable older people.[17] During Typhoon Haiyan in the Philippines in 2013, two-fifths of those who died were older people, despite them making up only 8 per cent of the local population.[18]

**Recommendation 2:** Ensure that older people living in typhoon risk areas are included in disaster risk reduction and preparedness planning, and have access to inclusive early warning systems and accessible evacuation routes.

### Heatwaves

Climate change-related risks from extreme events, such as heatwaves, extreme precipitation, and coastal flooding will increase further at higher temperatures.
*Source: IPCC, 2014*

Climate change scenarios indicate that extreme heatwaves are expected to increase in the future, even in regions where heatwaves are not frequent.[19] Demographic change combined with climate change is projected to expose increasing numbers of people to more severe heatwaves, especially in high- and middle-income and transition economies.[20] Older people and young children are the most likely to suffer health problems during heatwaves. The World Health Organization estimates that heat exposure due to climate change is likely to cause an additional 38,000 deaths among older people for the year 2030.[21]

Individual physiological factors also interact with exposure to heat. Pre-existing health conditions, such as cardiovascular disease, to which older people are at greater risk, exacerbate susceptibility.[22] Social isolation and limited income are also associated with heat-related illness among older people. In addition, older people with more risk factors for heat-related illness are less likely to access support, to use community centres or to take protective action on their own because their adaptive capacity is reduced.[23]

**Recommendation 3:** Strengthen heatwave awareness and impact prevention programmes and access to appropriate heat resilient shelters for older people. Strengthen health services and community support mechanisms to ensure that older people receive targeted medical support during heatwaves.

*My village experiences heatwaves and with them come forest fires. Although I worry about my physical condition as I get older, I help out in whatever way I can. If disaster strikes, I know that the first thing I must do is account for my grandchildren and keep them safe.*
**Nalor, 65, Thailand**


Robin Wyatt/ HelpAge International

## Impacts on older people's wellbeing and access to resources

### Water security

Climate change over the 21st century is projected to reduce renewable surface water and groundwater resources significantly in most dry sub-tropical regions (robust evidence, high agreement), intensifying competition for water among sectors. Climate change is projected to reduce raw water quality and pose risks to drinking water quality.
*Source: IPCC, 2014*

The quantity and quality of water is likely to become more precarious in the future, affecting people's livelihoods, health and wellbeing. A high proportion of people live in areas that are increasingly affected by water shortages brought on by extreme weather conditions linked to climate change and environmental degradation.[24]

Water insecurity is a major source of stress and expense that particularly affects poor older people who – due to a combination of factors including distance, cost, design of latrines and unsuitability of water points – are often unserved by existing services and facilities. Water scarcity poses a grave risk for older people due to their increased susceptibility to dehydration. Dehydration has been associated with increased mortality rates among older people and various morbidities, such as impaired cognition or acute confusion, falling or constipation.[25]

Even with conventional treatment, water quality is expected to be reduced by climate change through increased temperatures, sedimentation and pollution caused by increased rainfall, concentration of pollutants during droughts, and disruption of treatment facilities during floods.[26] Older people are at increased risk of infection and disease from microbial contamination due to reduced

*In the past 10 years, rain patterns have been unpredictable. There are two boreholes where we get water. The first is about 6km away but the water is very salty. When we are forced to use this water, we experience stomach pains and my grandchildren get diarrhoea. The other is 15km away and has better water. My son brings us water using his donkey cart.*
**Hareda, 87, Kenya**


Gacheru Maina/ HelpAge International

immunity, decreased liver function, or existing chronic illness. Older people are also at greater risk of dying from waterborne infections.[27]

**Recommendation 4:** Ensure water resource management, drinking water and irrigation systems are prioritised within adaptation strategies and that these are accessible to older people.

*Hurricane Sandy destroyed my plantain field and caused a landslide which destroyed my yam field. I had to pay people to help clear my land. The plantain and yam are starting to grow back, but it will take another 9 months before they come up. We got some vegetable seeds from HelpAge that come in 3-6 months for an early harvest. I sold them and it kept me going after the hurricane.*
**Matilda, 85, Jamaica**

Jenny Anderson/ HelpAge International

## Agriculture and livelihoods

Throughout the 21st century, climate change impacts are projected to slow down economic growth, make poverty reduction more difficult, further erode food security, and prolong existing and create new poverty traps, the latter particularly in urban areas and emerging hotspots of hunger.
*Source: IPCC, 2014*

In the majority of low- and middle-income countries, most older people continue to work well into old age. Retirement is a luxury most cannot afford. Global figures from the UN show that more than 30 per cent of men and nearly 14 per cent of women over 65 continue to work.[28] In some countries, these figures are much higher. Most older people in low- and middle-income countries have worked in the informal sector or subsistence agriculture most of their lives, and are unlikely to have savings or social pensions to rely on.

Subsistence agriculture is acknowledged as one of the livelihood strategies most at risk of climatic change. Climate change is expected to disproportionately affect smallholder farmers through pest and disease outbreaks, increased frequency and severity of droughts and floods, and increased likelihood of poor yields, crop failure and livestock mortality.[29] The proportion of older farmers is significant and growing. Globally, 27.5 per cent of agricultural smallholders are aged over 55.[30] In sub-Saharan Africa, Asia and Latin America, agriculture continues to be the most important source of livelihood for the vast majority of economically active older people, and particularly so for older women.

Older people have knowledge and experience of farming techniques that can increase production and reduce waste while minimising environmental damage. Their years of knowledge of weather patterns can make a huge contribution to action to mitigate the impacts of a changing, less predictable climate.[31] Ecologically sound farming practices and conservation agriculture techniques which utilise better technology and science are becoming more central to climate adaptation thinking. Some conservation agriculture methods are extremely labour intensive, which can reduce their accessibility for older people. There is an urgent need for targeted government policies to support smallholder farming including increased access to drought, flood and pest resilient crops, promotion of accessible conservation agricultural approaches, and increased access to scientific data and technological solutions.

**Recommendation 5:** Ensure that smallholder farmers are prioritised within adaptive agricultural policies, and that these integrate the knowledge of older farmers on resilient agricultural methods, while strengthening their access to scientific knowledge and labour-saving technological advances. Social protection systems should be prioritised to address the economic needs of vulnerable older people.

## Food security

All aspects of food security are potentially affected by climate change, including food access, utilisation, and price stability.
*Source: IPCC, 2014*

Extreme weather and gradual changes in climate are already affecting the quantity, quality and seasonality of food by disrupting production, trade and local markets. Rural communities face increased risks including recurrent crop

failure, loss of livestock and reduced availability of fisheries and forest products. Changing temperatures and weather patterns create conditions for the emergence of new pests and diseases directly affecting the quality and quantity of yields as well as the availability and price of food, feed and fibre.

Local markets may also be disrupted by extreme weather which may adversely affect the availability of food for older people and other vulnerable groups. This in turn could increase the prices of major crops in some regions. Households with low income and older people with reduced access to income will be hit hardest by price rises and volatility, and in cases may reduce the amount of food they consume as a result.[32]

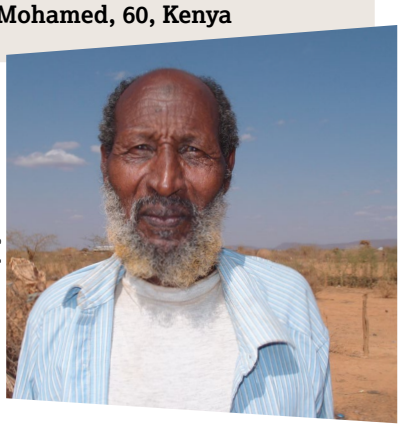
Cultural norms within the household dictate who has priority access to food. In households where food is short, older women and men often bear the brunt of the shortage because they choose to forgo food so that younger members of the family can eat. This can lead to malnutrition.[33] During food shortages, access to food may be further compromised due to food distribution points being located in areas that may be difficult for older people and other vulnerable groups to reach or due to the lack of existing safety net or social protection programmes.[34]

Nutrition is also likely to be affected by climate change through reduced access to sufficient quantities of food or key food products that households are reliant on.[35] This may include foods that are particular to the dietary needs of older people. The impact of malnutrition can be even greater for older people. Often there is a complexity of factors that can influence nutritional status, including pre-existing chronic illness, medication that can affect appetite, hydration, and how the body absorbs nutrients.[36]

Older people may be unable to utilise the kinds of food provided in food distributions. For example, those who have lost teeth may find it hard to chew hard foods, or they may find some foods difficult to digest. Access to fuel and cooking utensils may be essential to make food edible for older people.[37] Poor health and undernutrition in turn further undermine older people's resilience to climatic shocks and their ability to adapt to climate change.

**Recommendation 6**: Adaptation strategies should strengthen food security through supporting increased food production, while supporting the establishment of nationally owned social protection schemes (including the delivery of direct nutrition interventions) that contribute to ensuring the realisation of the right to adequate food for all. Food relief distribution programmes need to ensure accessibility for older people and other vulnerable households, while ensuring that food products are appropriate for their dietary needs.

*Ten years ago, there was always somewhere to go to for better pasture. Meat and milk all used to be available. This drought is different. Now there are no pastures, no water and no rain. I am 60 and I've never seen such drought. I've given my remaining livestock to my relatives to look after for me. The rest have died due to the drought. Now I survive on the relief food we have been receiving every two months.*
**Mohamed, 60, Kenya**



Gacheru Maina/ HelpAge International

*For the last three years the drought was the worst I have ever seen. I heard of people dying in the area and I made a decision. If we had remained in Somalia my family would have died. Since the journey I have had many problems. I can barely stand or walk without my walking stick and I also have headaches and pain in my abdomen.*
**Ali from Somalia, now living in Kenya**

Benjamin Schilling/ HelpAge International

## Health

Throughout the 21st century, climate change is expected to lead to increases in ill-health in many regions and especially in developing countries with low income.
*Source: IPCC, 2014*

The World Health Organization held its first conference on health and climate in 2014 and concluded that climate change causes unacceptable global risks to public health.[38] As temperatures rise and water and food resources become more precarious and changeable, the health impacts on increasing numbers of people could be significant.

The recent Lancet climate commission highlights older people as a group particularly vulnerable to the health effects of climate change.[39] This is often because of existing socioeconomic inequalities, cultural norms, or intrinsic physiological factors. It has been estimated that 99 per cent of the health impacts of climate change will affect developing countries.[40]

Older people are often more susceptible to infectious disease, and as environments change, so will disease patterns and prevalence. In developing countries, this susceptibility is exacerbated by poverty and malnutrition, poor infrastructure and the lack of resources to treat their specific needs. A higher proportion of severe forms of malaria has been reported to be associated with older individuals without immunity, compared with younger adults.[41] A study by HelpAge and Médecins Sans Frontières found that older people suffered more from the impact of cholera in Haiti than other groups.[42]

In addition, the changing climate and environment is altering infectious disease patterns and increasing prevalence of non-communicable diseases (NCDs) such as diabetes, heart disease, cancer, obesity, sensory-organ disease and dementia.[43] NCDs do not only affect people in wealthy countries; 80 per cent of global deaths due to NCDs occur in low- and middle-income countries[44] and older people are particularly at risk. This is a chronic health security issue, which will be further exacerbated by the changing climate, mainly due to temperature increases and indoor and outdoor air pollution. For example, air pollution is known to increase the incidence of cardiovascular disease and respiratory illness.[45]

**Recommendation 7**: Invest in healthcare systems and basic public health measures such as provision of clean water and sanitation, to ensure that they are climate resilient and responsive to older people, especially in areas where chronic and non-communicable diseases, infectious diseases and psychological conditions can be exacerbated by climate change.

*I was displaced from my own land in Jamalpur on the bank of the Jamuna River. All of our land and our home were swept away by a flood in one night. So we had to move and start a new life in another district.*
**Bishu, 67, Bangladesh**

Jotishankor Adhikary/Bohubrihi

## Migration and displacement

Climate change over the 21st century is projected to increase displacement of people. Displacement risk increases when populations that lack the resources for planned migration experience higher exposure to extreme weather events, in both rural and urban areas, particularly in developing countries with low income.
*Source: IPCC, 2014*

As more people migrate to cities or are forcibly displaced due to extreme weather and climate stresses, older people are increasingly vulnerable. There is a growing body of evidence that shows older people often stay behind in hazardous environments when the rest of their community is displaced. This is because they may not be physically capable of making the journey to safety due to ill-health or disability. They may be unable to either keep up with their family or risk slowing down their progress. In addition, they may feel tied to their home and lands and decide not to leave. When older people do move, migration and displacement in later life can be particularly traumatic, due to severed social ties, lack of facilities, rights and protection in unfamiliar new environments.[46]

The United Nations High Commissioner for Refugees (UNHCR) recognises older displaced people as among the most at-risk individuals, characterising them as "persons with special needs" alongside chronically ill or disabled people, and those who have experienced very high levels of trauma. Older people will be confronted with specific challenges at each stage of the displacement cycle – the flight, the period of displacement and the process of return, resettlement or local integration.[47] Prolonged displacement can have a particularly devastating impact on family ties and the community support available to older people.

Older women require specific attention. Due to their longer life expectancy, they outnumber men and are more likely to be living alone. In addition, in many IDP (internally displaced people) and refugee camps, older women take on the responsibility of supporting children whose parents have died or migrated elsewhere. Some of the main challenges to protect the rights of older

displaced people include obtaining access to vulnerable older people who stay behind; securing identification and documentation; providing for basic needs and healthcare; reuniting them with families; and ensuring access to social support and income.[48]

**Recommendation 8**: Prioritise the establishment of a Climate Change Displacement Coordination Facility under the Paris agreement to provide assistance to people displaced by the impacts of climate change with a particular focus on certain groups such as older persons. Ensure that IDP and refugee programmes are adequately targeted towards the needs and rights of older people and that older people are supported when they remain in environmentally risky areas.

## Urbanisation

Many global risks of climate change are concentrated in urban areas. Heat stress, extreme precipitation, inland and coastal flooding, landslides, air pollution, drought, and water scarcity pose risks in urban areas for people, assets, economies, and ecosystems. Risks are amplified for those lacking essential infrastructure and services or living in poor-quality housing and exposed areas.
*Source: IPCC, 2014*

By 2030, two-thirds of the world's population will reside in cities. The major urban areas in high- and middle-income countries will have 25 per cent or more of their population aged 60 or over.[49]

In most cities, poor people live in the riskiest urban environments – for instance on floodplains or other areas at high risk of flooding or unstable slopes. People living in informal settlements are among those that are particularly vulnerable to climate shocks due to being located on dangerous sites (for instance on floodplains), living in poor quality housing and lacking protective infrastructure. These populations are very vulnerable to any increases in the frequency or intensity of storms, floods or heatwaves, and to increased risk of disease, constraints on water supplies or rises in food prices.[50] Within many urban centres, the lack of adequate drainage means that relatively minor rainstorms cause serious flooding.[51] Higher temperatures occur in urban areas than in outlying rural areas due to absorption and re-radiation of solar energy and heat from built or paved physical structures. These increase the frequency and severity of heat-stress events in cities.[52]

Older men and women face particular vulnerabilities that need consideration – for instance, high temperatures in urban areas have a direct impact on older people's health and are associated with heat-related stress and excess summer deaths.[53] In addition, increased flood risk due to high population densities are being exacerbated by climate change, increasing the vulnerability of older people in urban areas both to floods and water contamination.[54]

As populations of older people increase in urban areas, the quality of global and local ecosystems and access to services will play an increasingly important role in public health on issues ranging from solid waste disposal, provision of safe water and sanitation, and injury prevention, to the interface between urban poverty, environment and health.[55]

Improving housing and services, and building resilient infrastructure systems for older people and other at-risk groups could significantly reduce vulnerability and exposure in urban areas. Increased capacity, voice, and influence of older people, low-income groups and vulnerable communities and their partnerships with local governments will benefit adaptation strategies.

**Recommendation 9:** Develop age-friendly cities and urban areas through comprehensive and inclusive urban planning processes, which address the infrastructure and economic, employment, social and wellbeing needs of ageing urban and migratory populations.

*In the past this was good farmland. Now it no longer rains properly, and we can no longer live here. Because of the change in the climate my children have moved away. I too moved to the city, but because I'm old now I had to return to my community.*
**Juan, 71, Bolivia**

Lisett Larico/ HelpAge Bolivia

*The blackout means we have no electricity from 11am to 3pm and from 11pm to 6am. The price of electricity has increased since last year. Heating is the main problem. We bought a ton of coal to last the whole winter, but it's not enough so I usually use animal dung for heating during the day. We try not to use coal very often, only on very cold days.*
**Imin, 79, Kyrgyzstan**

Azuma Nakahira/ HelpAge International

## Energy and resource poverty

As well as having a large potential to mitigate climate change, renewable energy may, if implemented properly, contribute to social and economic development, energy access, a secure energy supply, and reducing negative impacts on the environment and health.
*Source: IPCC, 2011*

The rate and magnitude of climate change has and will continue to affect biodiversity and natural resources with negative consequences for human wellbeing.[56] Climate change adds to existing pressures on the land, water and energy resources and brings to light difficult choices about how to manage these resources and continue to supply a range of goods and services.[57]

Vulnerable people are likely to be the most affected by degradation of natural resources and competition for these resources. Older people are often among the most resource-poor and are already suffering from land grabbing and scarcity of water and other resources. They are often fuel-poor due to low income, increased heating needs, especially in colder climates, and the long hours they spend at home.[58] In many low- and middle-income countries, they are also considered "energy poor" as access to fuel is often difficult. It is estimated that 1.3 billion people are living in energy poverty.[59] As fuel prices increase due to dwindling resources, the poorest and most marginalised, including older people, will be the hardest hit. This problem is often more pronounced in colder climates across Europe and Central Asia.[60] However, this is also true in warmer climates where fuel is also needed for cooking, lighting, livelihoods and safety. Without support and protection to ensure older people can afford the rising costs of energy services in later life, vulnerabilities could arise, despite development gains.

In the face of a changing climate, renewable energy offers the prospects of both the energy access that everyone deserves, and a stronger buffer against the global effects of climate change that many are already experiencing. There is evidence that most of the energy needs of poor people in rural areas in developing countries can be met by harnessing local, clean energy resources with minimum environmental impact on climate change.[61] However, older people often lack information on renewable energy options, or the finance and technology required to access renewable energy. It is essential older people and other energy poor people have access to renewable clean energy and that their voices and concerns are considered in energy planning and policy.

**Recommendation 10**: Ensure that climate mitigation and adaptation strategies prioritise access to clean and sustainable energy for older people in order to reduce fuel poverty, contribute to carbon mitigation and strengthen resilience.

# Conclusion

Older people are already profoundly affected by the impacts of climate change. These impacts are set to increase due to the combination of increased stress factors from climate change leading to mortality, poor health and reduced access to food and other resources, and global population ageing. Adaptation and mitigation choices made now will affect the consequences of climate change throughout the 21st century.[63]

It is vital that the binding framework agreed at COP21 and the national adaptation and mitigation strategies and commitments that arise from it, take into account ageing populations and their specific vulnerabilities. Without specific policies and more services for older people and strategies for an ageing population in a changing climate, marginalised older people will be pushed further to the edge of safety and survival.

*"The desire to live in a safe and secure planet does not diminish with age. For us to create a sustainable future for our planet, we have to ensure every stage of the life course is considered in development and climate change discussions."* [62]

Rosita Kornfeld-Matte, UN Independent Expert on the Enjoyment of All Human Rights by Older Persons

## Note on IPCC sources

These are taken from the IPCC *Climate Change 2014: Synthesis report, fifth assessment report*; *Climate Change 2014: Impacts, Adaptation, and Vulnerability*; *IPCC Special Report on Renewable Energy Sources and Climate Change Mitigation*, 2011. The contents remain true to IPCC reports, however wording in some statements has been edited to be more concise.

## End notes


**1**. Intergovernmental panel on Climate Change (IPCC), *Climate Change 2014: Synthesis Report.* Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland, 151 pp, 2014

**2.** Filberto D, et. al. "Older People and Climate Change: Vulnerability and Health Effects," *Journal of the American Society on Aging*, 2011

**3.** Haq G, Whitelegg J and Kohler M, "*Growing Old in a Changing Climate: Meeting the Challenges of an Ageing Population and Climate Change.*" Stockholm, Sweden: Stockholm Environment Institute, 2008

**4.** McGeehin M, and Mirabelli M, "The Potential Impacts of Climate Variability and Change on Temperature-related morbidity and mortality in the United States", *Environmental Health Perspectives 109* (Suppl. 2): 185-9, 2001

**5.** IPCC, *Climate change 2014: Synthesis report, fifth assessment report*, 2014

**6.** IPCC, *Climate Change: Impacts, Adaptation, and Vulnerability*, 2014

**7.** HelpAge International, *The neglected generation: The impact of displacement on older people*, London, HelpAge International, 2012, www.helpage.org/what-we-do/emergencies/the-neglected-generation-the-impact-ofdisplacement-on-older-people/

**8.** HelpAge International, *Conflict and fragility*, unpublished

**9.** HelpAge International, *A study of humanitarian financing for older people*, London, HelpAge International, 2010, www.helpage.org/silo/files/a-study-of-humanitarian-financing-for-older-people.pdf; HelpAge International, *A study of humanitarian financing for older people and people with disabilities 2010-2011,* London, HelpAge International, 2012, www.helpage.org/download/4f4222be3ce76; Ngo, E, *"When Disasters and Age Collide: Reviewing Vulnerability of the Elderly.*" Nat. Hazards Rev., 2001

**10.** Ahern M, et al. "Global Health Impacts of Floods: Epidemiologic Evidence", 2005, Epidemiologic Reviews, *Oxford Journal*, 2005; Fernandez L, et. al. "Elderly as Disaster Victims: Emergency Management Strategies", *Prehospital and Disaster Medicine Journal*, 2002

**11.** Fernandez L, Byard D, Lin C, Benson S, Barbera J, "Elderly as Disaster Victims: Emergency Management Strategies", *Prehospital and Disaster Medicine Journal*, 2002

**12.** Fielding J, Burningham K, Thrush D, and Catt R, *Public response to flood warning.* R&D Technical Report SC020116. Environment Agency, Bristol, 2007

**13.** Vardoulakis S, Heaviside C, *Health Effects of Climate Change* in the UK Health Protection Agency, 2012.

**14.** Harris, C, *Disaster Resilience in an Ageing World*, HelpAge International 2014; Myung and Jang "Causes of death and demographic characteristics of victims of meteorological disasters in Korea from 1990 to 2008", *Environmental Health* 10:82, 2011; Adams V, Kaufman S, Hattum T, Moody S, "Aging Disaster: Mortality, Vulnerability, and Long-Term Recovery Among Katrina Survivors", *Medical Anthropology*, 2011, May; 30(3): 247–270

**15.** Donner W, Rodríguez H, "Population Composition, Migration and Inequality: The Influence of Demographic Changes on Disaster Risk and Vulnerability" *Social Forces*, Volume 87, Number 2, December 2008

**16.** Sherman A, and Shapiro I, *Essential Facts about the Victims of Hurricane Katrina*, Centre On Budget and Policy Prioirities, 2005

**17.** Hyer, K.,"Establishing and Refining Hurricane Response Systems for Long-Term Care Facilities," *Health Affairs 25*: W407–11, 2006

**18.** HelpAge International, *Older people disproportionately affected by Typhoon Haiyan*, http://www.helpage.org/newsroom/latest-news/older-people-disproportionately-affected-by-typhoon-haiyan/ December 2013; D'Ippoliti D et al, "The impact of heat waves on mortality in 9 European cities: results from the EuroHEAT project", *Journal of Environmental Health*, 2010

**19.** D'Ippoliti D et al, 2010

**20.** Watts N et al, "Health and climate change: policy responses to protect public health", *Lancet*, vol. 6736, no. 15, 2015, p.11

**21.** WHO, Edited by Hales S, Kovats S, Lloyd S and Campbell-Lendrum D, *Quantitative risk assessment of the effects of climate change on selected causes of death, 2030s and 2050s*, World Health Organization, 2014, p.1

**22.** Filberto D et al, 2011

**23.** Kovats R S and Ebi K L, "Heatwaves and Public Health in Europe", *European Journal of Public Health* 16(6): 592–9, 2006

**24.** Maplecroft Water Stress Index, 2011, http://maplecroft.com/about/news/water-stress.html

**25.** Mentes J, "Oral hydration in older adults: greater awareness is needed in preventing, recognizing, and treating dehydration", *The American Journal of Nursing*, 2006; Sheehy, CM, Perry PA, Cromwell SL. "Dehydration: biological considerations, age-related changes, and risk factors in older adults". *Biol Res Nurs.* 1999

**HelpAge International helps older people claim their rights, challenge discimination and overcome poverty, so that they can lead dignified, secure and healthy lives.**

The HelpAge International network is active in over 65 countries.
This briefing was written by Clodagh Byrne and Clare Harris with contributions from Mark Gorman, Charlotte Aberdein, Bridget Sleap, Sion Jones, Marcus Skinner and edited by Karen Porter.

Design by Dama Sathianathan
Front cover photo: Glyn Riley/ HelpAge International

**HelpAge International**
PO Box 70156
London WC1A 9GB, UK

Tel +44 (0)20 7278 7778

Registered charity no. 288180
Company limited by guarantee

info@helpage.org
**www.helpage.org**

**@helpage**



**ISBN 978-1-910743-03-4**

IDLON0147

**26.** IPCC, Climate Change: Impacts, Adaptation, and Vulnerability; and Climate Change, 2014

**27.** Gerba CP, Rose JB, Haas CN. "Sensitive populations: who is at the greatest risk?" *International Journal of Food Microbiology* 30:113-123, 1996

**28.** UNDESA, Population Division, Profile of Ageing, 2015

**29.** Morton JF, "The impacts of climate change on smallholder and subsistence agriculture", *Proc. Natl Acad. Sci,* 2007

**30.** Heide-Ottosen S, "The ageing of rural populations: evidence on older farmers in low- and middle-income countries", HelpAge International, London, 2014

**31.** Gorman M, Older women, older farmers – the hidden face of agriculture, HelpAge Briefing Paper, 2012

**32**. United Nations World Food Programme and Hadley Centre Met Office, *Climate impacts on food security and nutrition A review of existing knowledge*, 2012

**33.** HelpAge International, Food and nutrition, *Ageways 76*, London, HelpAge International, 2011, p.4-5, www.helpage.org/download/4d51468bc9898/

**34.** Collodel A. *Food security and livelihoods interventions for older people in emergencies*, HelpAge International, 2012

**35.** United Nations World Food Programme and Hadley Centre Met Office, 2012

**36.** Nursing Standard, *Nutrition and older people*, RCN Publishing Company, 2009

**37.** Collodel A, 2012

**38.** WHO, *Conference on climate and health: conference report*, 2014

**39.** Watts N et al, 2015

**40.** Colagiuri R, Boylan S and Morrice E, "Research priorities for NCD prevention and climate change: An international Delphi survey", *Int. J. Environ. Res. Public Health*, vol. 12, no. 10, 2015, pp.12941-12957

**41.** WHO, 2014

**42.** Medecins Sans Frontieres, *Older people in crises: A review of MSF's approach to vulnerability and needs*, 2012

**43.** Friel S, Bowen K, Campbell-Lendrum D, Frumkin H, McMichael J and Rasanathan K, "Climate change, non-communicable diseases and development: The relationships and common policy opportunities," *Annu. Rev. Public Health*, vol. 32, No. 1, 2011, pp. 133-147

**44.** WHO, *Global status report on noncommunicable diseases 2010"* 2011, http://www.who.int/nmh/publications/ncd_report_full_en.pdf.

**45.** Colagiuri R et al, 2015; Friel S et al, 2011

**46.** Wells J, Calvi-Parisetti P, Skinner M, *The neglected generation the impact of displacement on older people*, HelpAge International and IDMC, 2013

**47.** Wells J et al, 2013

**48.** Wells J et al, 2013

**49.** United Nations, Department of Economic and Social Affairs, *World Urbanization Prospects: The 2014 Revision*, 2014

**50.** Satterthwaite D, Huq S, Pelling M, Reid H and Lankao P, *Adapting to Climate Change in Urban Areas, The possibilities and constraints in low- and middle-income nations*, IIED, 2007

**51.** Satterthwaite D et al, 2007

**52.** ARUP, *Reducing urban heat risk: A study on urban heat risk mapping and visualisation*, ARUP 2014

**53.** ARUP, 2014

**54.** Huong H, Pathirana A, "Urbanization and climate change impacts on future urban flooding in Can Tho city, Vietnam" *Hydrology and Earth System Sciences*, 2012

**55.** IPCC, *Climate Change: Impacts, Adaptation, and Vulnerability*, 2014

**56.** Convention on Biodiversity, https://www.cbd.int/convention/text/, 2015

**57.** Adaptation Sub-Committee, Managing the land in a changing climate, Adaptation Sub-Committee Progress Report, 2012

**58.** Age UK, *Reducing Fuel Poverty: A scourge for Older People*, Age UK, 2014

**59.** IEA, *World Energy Outlook 2014*, 2014

**60.** Robića S, Olshanskayab M, Vrbenskyb R, Morvajb Z, *Understanding energy poverty – case study: Tajikistan, Paper presented at the World Energy Congress*, Montreal, 2010

**61.** Practical Action, *Climate Change and the Challenge of Energy Poverty*, 2012

**62.** Huffington Post Impact, *Growing Older in a Changing Climate*, http://www.huffingtonpost.com/rosita-kornfeldmatte/growing-older-in-a-changi_b_8712902.html, 2015

**63.** IPCC, *Climate Change: Impacts, Adaptation, and Vulnerability*, 2014