

# OLDER PERSONS IN EMERGENCIES: AN ACTIVE AGEING PERSPECTIVE



## Older Persons in Emergencies: An Active Ageing Perspective

The development of this report is a concrete WHO response to the 2002 United Nations Madrid International Plan of Action on Ageing (MIPAA) which recommended greater recognition and enhancement of the positive contributions made by older persons during emergency situations. In collaboration with the Public Health Agency of Canada and Help the Aged (UK), the World Health Organization commissioned case studies in 2006-2007 to examine how older persons fared in conflict-related and naturally caused emergencies in both developed and developing countries – war, drought, heat wave, floods, hurricanes, earthquakes, tsunamis, ice storms, wild fires and a nuclear power plant explosion.

The report contributes a wealth of real-life experiences to inform policy and practice makers about the needs and contributions that older people face during emergency and reconstruction phases.



**World Health  
Organization**

Ageing and Life Course  
Family and Community Health  
World Health Organization  
Avenue Appia 20  
CH-1211 Geneva 27  
Switzerland  
E-mail: [activeageing@who.int](mailto:activeageing@who.int)  
[www.who.int/ageing/en](http://www.who.int/ageing/en)  
Fax: + 41 (0) 22 791 4839

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# Contents

<b>Introduction: About this report</b>	<b>1</b>
<b>I. Natural and conflict-related emergencies in an ageing world</b>	<b>3</b>
<b>II. Emergencies and older people: What have we learned?</b>	<b>6</b>
1. Phases of emergency management	6
2. The case studies	7
3. Emergency preparedness and response: strengths and gaps	16
4. Recovery: strengths and gaps	21
5. Contributions of older persons	23
<b>III. Integrating older persons' needs and contributions in emergencies: An <i>Active Ageing</i> framework</b>	<b>27</b>
1. Physical environment	29
2. Social environment	30
3. Economic determinants	31
4. Health and social service systems	31
5. Behavioural determinants	32
6. Personal determinants	32
7. Gender	33
8. Culture	33
<b>IV. The policy response</b>	<b>34</b>
1. Pillars for action	34
2. Key actors and roles	35
3. Key policy proposals	35
<b>Conclusion</b>	<b>41</b>
<b>Case studies and data sources</b>	<b>42</b>

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## Introduction: About this report

The global population of persons aged 60 and over is rising dramatically – especially in regions that experience the greatest risks of natural or conflict-related emergencies. Headlines of the plight of older persons during the European heat wave of 2003 and Hurricane Katrina in the USA in 2005 shocked the world. In developing countries, their situation is generally much less widely-known and their needs and contributions have been largely invisible. But this is changing. The 2002 United Nations Madrid International Plan of Action on Ageing<sup>1</sup> (MIPAA) called for equal access to food, shelter and medical care and other services during and after natural disasters and other humanitarian emergencies. This plan recommended greater recognition and enhancement of the positive contributions made by older persons during emergencies and in reconstruction phases. In 2008-2009, intergovernmental agencies and non-governmental organizations (NGOs) engaged in humanitarian action under UN auspices will begin to formulate guidance for more age-responsive policies and practices.

1 Madrid international plan of action on ageing. Report of the Second World Assembly on Ageing. United Nations programme on ageing, 2002 ([www.un.org/esa/socdev/ageing/madrid\\_intlplanaction.html](http://www.un.org/esa/socdev/ageing/madrid_intlplanaction.html), last accessed 01 February, 2008).

These initiatives are informed by mounting evidence. For several years, HelpAge International has widely disseminated information about the situation of older persons in disasters. The International Federation of Red Cross and Red Crescent Societies highlighted discriminatory policies and practices against older persons in the 2007 World Disaster Report<sup>2</sup> and WHO recently conducted a review of scientific research, field reports and expert opinion to inform health action in crises<sup>3</sup>.

To these resources and initiatives, the present report contributes a wealth of real-life experiences to inform policy and practice. In collaboration with the Public Health Agency of Canada and Help the Aged (UK), the World Health Organization commissioned case studies in 2006-2007 to examine how older persons fared in conflict-related and naturally caused emergencies in both developed and developing countries – war, drought, heat wave, floods, hurricanes, earthquakes, tsunami, ice storm, wild fires and a nuclear power plant explosion.

2 World disaster report 2007. Geneva: International Federation of Red Cross and Red Crescent Societies, 2007 ([www.ifrc.org/publicat/wdr2007/index.asp?gclid=CMj\\_I7HlopECFSQ4Zwod9wk\\_WQ](http://www.ifrc.org/publicat/wdr2007/index.asp?gclid=CMj_I7HlopECFSQ4Zwod9wk_WQ), last accessed 01 February, 2008).

3 Hutton D. Older persons and emergencies: Considerations for policy and action. Geneva: World Health Organization, 2008 ([www.who.int/ageing/publications/active/en/index.html](http://www.who.int/ageing/publications/active/en/index.html)).

The case studies were reviewed by an international expert group in February 2007 to identify priorities for action. This report summarizes the findings and conclusions from the case studies and the expert review.

To guide decision-makers, the report presents an integrated approach for emergency preparedness and response that is grounded in the WHO Active Ageing Policy Framework<sup>4</sup>. This approach adopts a life course perspective that takes into account the diversity of needs and capacities of persons as they grow older. Focusing on the multisectoral determinants of active ageing that are in play in crisis situations, it shows how to promote the health, participation and security of older persons before, during and after an emergency. This approach can be the basis for differentiating and integrating older persons within comprehensive emergency planning. At the same time, it serves to encompass emergency management within broader health and social policy addressing individual and population ageing. The report marshals the evidence and builds the case as follows:

- **Part 1** describes the converging trends of rapid growth of the population over 60 years of age and of health emergencies, and outlines the resulting challenges.
- **Part 2** outlines the basic elements of emergency planning and summarizes the findings from each of the case studies, identifying the impacts of the emergency situations on older persons and the strengths and gaps in emergency preparedness, response and recovery.
- **Part 3** integrates the evidence within the WHO Active Ageing policy framework to show how emergency management can be strengthened by a comprehensive and systematic application of this framework.
- **Part 4** presents the policy response, with concrete proposals to strengthen the active ageing pillars of health, participation and security in emergency management.

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4 Active Ageing: A Policy Framework: Geneva: World Health Organization, 2002 ([www.who.int/ageing/publications/active/en/index.html](http://www.who.int/ageing/publications/active/en/index.html), accessed 01 February 2008).



# I. Natural and conflict-related emergencies in an ageing world

The world is rapidly ageing: between 2006 and 2050, the number of people aged 60 and over will double from 650 million, or 11% of global population, to 2 billion people representing 22% of humanity<sup>5</sup>. By then, there will be more older people than children 14 and under – a turning point in human history. The number of persons aged 80 and older is growing especially fast: by 2050, they will constitute 20% of the world's older population. Developing countries are ageing at a much faster rate than developed countries: by 2050, just over 80% of the world's older people will be living in developing countries compared with 60% in 2005<sup>6</sup>.

Between 1994 and 2003, over 225 million people globally were affected each year by natural disasters. During the same period, these disasters claimed an average of 58 000 lives annually<sup>7</sup>. Based on data reported in the World Refugee Survey 2007, an average of 12 million people worldwide were refu-

gees or asylum seekers each year from 1998 to 2006<sup>8</sup>. The United Nations Commission on Refugees (UNHCR) has estimated that at least 10% of refugees are over 60 years of age<sup>9</sup>.

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*In Indonesia, 16.5 million persons (7.8%) are over 60, which makes it the country with the tenth largest older population in the world. An estimated 18.7% are living below the poverty line... The older population in Indonesia will reach 28.8 million (11.3%) by 2020. Indonesia is prone to natural disasters<sup>10</sup>.*

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Both natural and conflict-related emergencies pose serious threats to human security, health and well-being: apart from direct deaths, crises increase the risk of disease, damage health and social services, displace people from their homes and families and disrupt livelihoods. Although limited, statistical data from recent emergencies and crises in recent history indicate a

5 Population Aging 2006. New York: United Nations Department of Economic and Social Affairs. Population Division, 2006 (<http://www.un.org/esa/population/publications/ageing/ageing2006.htm>, accessed 01 February, 2008).

6 Population issues: meeting development goals. Fast Facts 2005. New York: United Nations Population Fund, 2007 (<http://www.unfpa.org/pds/ageing.htm>, accessed 01 February, 2008).

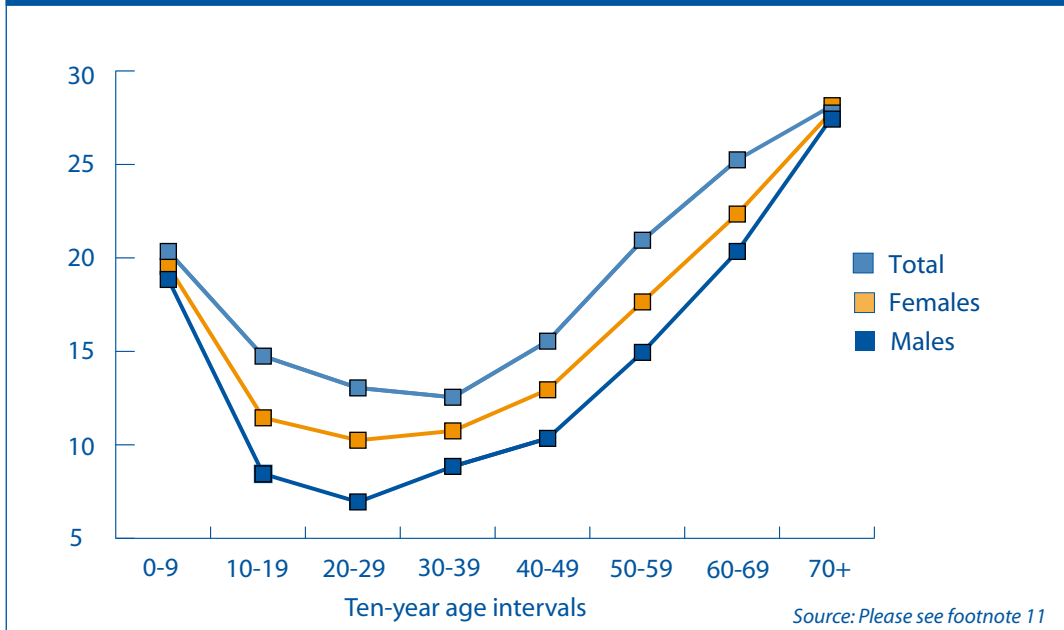
7 Guha-Sapir D, Hargitt D and Hoyois P. Thirty years of natural disasters 1974-2003: The numbers. Louvain-la-Neuve, Presses universitaires de Louvain, 2004 ([www.em-dat.net/publications.htm](http://www.em-dat.net/publications.htm), accessed 01 February, 2008).

8 World Refugee Survey 2007. Refugees and asylum seekers worldwide 1998-2006. US Committee for Refugees and Immigrants.

9 The situation of older refugees. Refugee Survey Quarterly, 1998, 17(4)

10 HelpAge International. Older persons in emergencies. Case study Indonesia, unpublished report, World Health Organization, Geneva, 2006.

Figure 1. Age and sex specific mortality rates among tsunami-displaced households



greater vulnerability of older persons; for example, the highest age-specific death rates resulting from the 2004 tsunami in Aceh, Indonesia, were for adults aged 60-69 (22.6%) and 70+ (28.1%)<sup>11</sup> (Figure 1). The occurrence of more emergencies and disasters in an ageing world means that more older persons will be endangered.

Nevertheless, the fact that older people comprise a greater proportion of population that is more vulnerable in emergencies does not mean that older persons in general are vulnerable: many continue to function well and remain fully engaged. Older

persons are resources for their families and communities particularly during times of crisis. Their years of experience can make them models of personal resilience and sources of inspiration and practical knowledge. They give voluntary aid, care for grandchildren or neighbours, and participate in support or recovery initiatives. Including older persons in planning for and responding in emergencies thus benefits the whole community.

11 Doocy S et al. Tsunami mortality in Aceh province, Indonesia. Bulletin of the World Health Organization, 2007, 85:273-278.

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*The communities relied on older adults, many of them long-time residents, to provide advice and assistance throughout this process [rebuilding] -- for example, a retired building inspector helped to assess damage to burned buildings and advise those who were rebuilding; others were called on to remember from their own experience the location of wells, fences and property lines<sup>12</sup>.*

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The goal is to enhance support for older people in emergencies to minimize harm and help them maintain the highest possible level of health and functional capacity or recover them as fast as possible. This requires that governments, emergency planners and responders and the community at large – including older people – identify and integrate "age-responsive" actions in planning for, responding to, and recovering from emergencies.

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12 Cox, R. A case study of the British Columbia firestorm 2003. Unpublished report, World Health Organization, Geneva, 2006.

## II. Emergencies and older people: What have we learned?

### 1. Phases of emergency management

Although many emergency events are unexpected in their timing, their likelihood is predictable. Much can be done to prevent and minimize their effects before, during and after the emergency. Emergency management comprises three phases: preparedness, response and recovery<sup>13</sup>.

Preparedness refers to those policies, strategies and programmes developed and implemented to prevent or minimize the adverse affects of a disaster. This includes:

- identifying the most vulnerable populations and areas most at risk in the community,
- adopting and implementing risk reduction strategies and plans, for example: locating human settlements away from areas of high risk,
- building more resistant structures, including buildings and bridges,
- developing and sharing warning and response plans involving government and non-government services, the community, and other relevant sectors,
- storing and maintaining aid supplies,
- identifying, constructing and equipping safe shelters,

- training health care providers, emergency workers and community volunteers to assess and prioritize needs and take appropriate measures when disaster strikes,
- compiling lessons learned and best practices from previous emergencies and using them to develop and update emergency preparedness plans.

The response phase includes those activities and procedures designed to minimize the immediate impacts of an emergency, disaster or humanitarian crisis. This should include the implementation of procedures developed during the emergency preparedness phase. Typically, the immediate focus after a crisis is on:

- evacuation,
- treatment of injuries,
- providing shelter, food and water,
- minimizing the effects of the event on health of the affected population and in particular preventing the occurrence of infectious disease outbreaks.

13 Hutton, 2008.

Recovery focuses on the development of medium and long-term post-emergency plans, structures and policies. This includes:

- meeting continuing health care needs,
- restoring housing,
- re-settling displaced persons, and
- re-establishing social and economic roles and activities.

Each phase of emergency management contributes to the next: good preparation leads to effective response and recovery, and well-managed recovery which takes preparedness measures into account, leaves individuals and societies better prepared for future events. Lessons learned from weaknesses in managing the emergency also serve to strengthen preparedness plans.

## 2. The case studies

Case studies were commissioned of emergencies, disasters and other crises from diverse countries reflecting different types of events, both natural and conflict-related. The emergencies included distinct, one-time events such as the Chernobyl nuclear power plant explosion in 1986. Other studies reviewed recurrent emergencies, notably hurricanes in Jamaica and Cuba and earthquakes in the 1990s in Turkey. As a major partner in this initiative, Canada

contributed studies of four emergency situations in that country. The majority of the case study reports were prepared by experts who conducted research with older persons affected by the crises, or who were directly involved in the emergency operations. Authors of each case study examined the impact of the disaster situations on the older adult population from data sources available, and then assessed the strengths, gaps and good practices with respect to emergency planning and response, including how the contributions of older persons were integrated in the community's efforts.

To focus on findings that are specific to older persons, this report leaves aside information about the issues of emergency planning, coordination, or deployment of resources and supplies that affected the entire population of an area hit by a crisis, although obviously, older persons would be included in these general effects. Some of the case studies provided information disaggregated by age, but most documented findings observed for older persons without comparing to other age groups. The type of data sources used by the authors are presented in page 42.

### *What happened?*

The highlights of the emergency events and their impacts on the general population and on older persons are presented here in alphabetical order.

### 1. Aceh (Indonesia) Tsunami 2004<sup>14</sup>

On 26 December 2004, an Indian Ocean earthquake measuring 9.0 on the Richter scale triggered a series of massively destructive tsunamis that flattened the coastal communities of Indonesia, Sri Lanka, India, Thailand and other countries in South and South-East Asia. The province of Aceh in Indonesia was the worst hit with widespread destruction and deaths along the 1000 km coastline. The Indonesian government estimated that there were about 130 000 deaths and 40 000 persons missing and 504 000 displaced persons in Aceh. Subsequent research<sup>15</sup> showed that mortality was highest among young children and older adults. In an area where family is the primary source of care for older persons, the death of so many people has diminished the capacity of families to provide care.

### 2. Bophirima (South Africa) Drought 2002-2005<sup>16</sup>

The Bophirima district in South Africa is a largely agricultural area with a large population of older farmers. From 2002 until 2005, the district experienced acute periods of drought with longer lasting economic effects. Because the environmental and economic impact of prolonged shortage of

rainfall developed slowly, relief measures were delayed: although no human fatalities were directly attributed to the drought, late arriving and often inadequate relief did not mitigate economic hardship for many people. Although South Africa's National Disaster Management Framework does include special provision for older persons, local disaster planning did not target older persons for relief.

### 3. British Columbia (Canada) "Firestorm" 2003<sup>17</sup>

In the summer of 2003, the Province of British Columbia, Canada, was swept by a record-breaking wild fire season. An estimated 2500 wild fires and 15 interface fires (i.e. fires that occurred at the boundaries between wilderness and human settlements) caused massive disruption that included property loss, economic loss, livestock loss and the destruction of large tracts of range and wilderness land. Some towns were virtually destroyed. The fast-moving and violent fires necessitated sudden large-scale and repeated evacuations, the largest in the history of the Province. The area affected included towns that attract retirees and that have a higher than average concentration of older persons. In these towns, relocation of vulnerable older persons living in residential care facilities was an important issue.

14 HelpAge International. Older persons in emergencies. Case study: Indonesia, unpublished report, World Health Organization, Geneva, 2006.

15 Doocy et al, 2007.

16 van Niekerk D and Roos V. Impact of drought in the Bophirima District Municipality (South Africa) on older people. London, Help the Aged UK, 2007.

17 Cox R. Older persons in emergency and disaster situations: A case study of the British Columbia's Firestorm 2003. Unpublished report, World Health Organization, Geneva, 2007.

#### 4. Chernobyl (Ukraine) Nuclear Power Plant Accident 1986<sup>18</sup>

The unexpected explosion of a nuclear power plant contaminated a large area of the Russian Federation, Belarus and Ukraine. The response involved a massive population evacuation and permanent resettlement of 350 400 persons<sup>19</sup>, of whom an estimated 10% were 60 years and older. Radiation exposure, especially among workers in clean-up operations, resulted in long-term damage to health but estimates of the number of persons affected vary widely. Forced evacuation and resettlement, focused on protecting health regardless of social or cultural considerations, led to psychosocial difficulties in adaptation, especially among older persons. A significant number of people eventually returned to the Chernobyl area despite the continuing risk of radiation poisoning.

#### 5. Cuba Hurricanes 150-Year Period<sup>20</sup>

Cuba has a long history of hurricanes which have been occurring more frequently since the 1990s. It also has one of the highest percentage of older persons (15.8%) in the Americas. After the 1963 hurricane

18 Rolnick. Impacts and contributions of older persons in emergency situations - A case study of the explosion at the Chernobyl nuclear power plant. Unpublished report, World Health Organization, Geneva, 2006.

19 The human consequences of the Chernobyl nuclear accident. A strategy for recovery. UNDP and UNICEF, 2002

20 Malagon Cruz Y et al. Contribution and management of Cuban elderly in hurricane situation. Unpublished report, World Health Organization, Geneva, 2007.

devastation, the island developed a comprehensive and differentiated emergency management strategy that identifies and includes older persons within vulnerable groups, depending on health and social profiles, and as full contributors to community efforts. During the period 1985-2001, 17 persons died during hurricanes, including four older persons. Since 2002, there have been two hurricane-related deaths among older persons out of a total of 25 deaths. In all cases, the older persons who died had persisted in remaining in their homes despite opportunities to evacuate. In addition to measures to mitigate damage, the Cuban strategy accords high importance to public information, evacuation, appropriate shelter and support, and continuity of health services for vulnerable persons.

#### 6. France Heat wave 2003<sup>21</sup>

Ten days of unprecedented and unexpected extreme high temperatures in Europe in August 2003 resulted in 34 800 excess deaths, exclusively in the population over age 45, and predominantly among persons over 70 years. The greatest number of deaths – 14 800 – occurred in France<sup>22</sup>, a country with one of the best-funded health and social systems in the world. People who

21 Rolnick, J. Impacts and contributions of older persons in emergency situations - A case study of the 2003 heat wave in Europe. Unpublished report, World Health Organization, Geneva, 2006.

22 Kosastsky T. The 2003 heat waves. Euro Surveillance, 2003, 10(07), 148-149.



were especially at risk were socially isolated, in poor cardiovascular health, or had a decreased capacity to prevent dehydration. Many of those who died lived alone in the community, but there were also many deaths in nursing homes and hospitals. The general lack of air conditioning equipment, absence of family and professional care staff during peak holiday season and poor coordination between emergency, health and social services were factors contributing to the human tragedy.

### 7. Jamaica Hurricanes 2004-2005<sup>23</sup>

Because hurricanes are recurrent and highly predictable events in Jamaica, a national disaster plan has been in place since 1988 to mitigate their impact. However, the island experienced a very active hurricane season in 2004-05. The succession of strong hurricanes during this period magnified the impact, causing cumulative damage. Approximately 1000 families were evacuated to shelters and damage to housing, roads and rural livelihood affected 370 000 persons. Households led by women, including older women, were especially damaged because their housing was in poorer state. Rural areas inhabited by a majority of older persons lacked electricity and clean water for months. Many primary health care centres were damaged, disrupting access to the only source of health care accessible to most older persons in Jamaica.

23 Eldemire-Shearer D et al. Disaster management and older persons. A case study - Jamaica. Unpublished report, World Health Organization, Geneva, 2006.

### 8. Kashmir (Pakistan and India) Earthquake 2005<sup>24</sup>

An earthquake measuring 7.6 on the Richter scale affected Pakistan mainly in remote, mountainous and poor rural areas. A total population of 3.5 million was affected, with 74 000 deaths and 80 000 injured. Almost 3 million (2.8 million) people were without shelter, as 84% of the total housing stock was destroyed or damaged. In addition, the earthquake crippled social service delivery, governance structures, commerce and communication networks. Basic health care systems were completely disrupted. Although many older people did not need outside support, a large proportion of those in displacement camps were older people. Many women and housebound older persons were unable to access care in emergency health clinics. People living in remote communities had poor access to medical care and food supplies.

### 9. Kobe (Japan) Earthquake 1995<sup>25</sup>

A major and unexpected earthquake occurred in the heavily urbanized area of Kobe. A large area was affected resulting in widespread damage of homes, power, transportation communications and essential services. Secondary fires especially

24 HelpAge International. Older persons in emergencies. Case study: Kashmir. Unpublished report, World Health Organization, Geneva, 2006.

25 Watanabe T. Older persons in emergency situations. A case study of the Great Hanshin-Awaji Earthquake. Unpublished report, World Health Organization, Geneva, 2006.



in poorer areas of the city added to damage and to casualties. An estimated 43 792 persons were injured and 6434 died. Among the immediate casualties, just over 50% were older persons, but older persons accounted for 90% of subsequent deaths. Mass evacuations were necessary and survivors lived for several months in temporary accommodation before being relocated in new permanent housing, far from the familiar communities. The new housing was poorly adapted to older persons, and many support services were initiated to offset the negative health and psychosocial impacts.

#### 10. Lebanon armed conflict 2006<sup>26</sup>

Lebanon has been ravaged by wars and invasions since 1975. The latest conflict occurred in June 2006 when there were 33 days of air raids and land incursions in South Lebanon. A total of 1183 persons died, mostly civilians, and nearly 5000 were wounded. About 1.1 million people were forced to leave their homes. An estimated 84% of older persons were displaced to homes of relatives or to camps and some experienced several displacements. Those who remained behind in their homes reported having no transportation, having nowhere to go or simply being left behind. Shortages of water, damage to primary health care facilities and disruption of care in 60% of hospitals were important consequences for an older population with a high prevalence of chronic illness.

26 Sibai AM and Kronful N. Needs assessment of older adults: The July 2006 war on Lebanon. Unpublished report, World Health Organization, Geneva, 2007.

#### 11. Louisiana (USA) Hurricane 2005<sup>27</sup>

Though hurricanes are a regular and predictable event in the United States, Hurricane Katrina was the most devastating hurricane in the history of the nation. The storm hit Louisiana, Mississippi and Alabama, but the worst damage occurred after the levees in New Orleans were breached causing a flood to the city. About 1.36 million persons were displaced. Of the deaths in Louisiana, 71% were among persons over the age of 60<sup>28</sup>. Many vulnerable persons did not prepare in response to hurricane warnings nor evacuate. Poor coordination in disaster planning and unreliable communication lines prevented timely deployment of life-saving resources. Shelters were unequipped to handle a large population with large numbers of persons with disabilities and chronic illnesses.

#### 12. Manitoba (Canada) Flood 1997<sup>29</sup>

In April and May of 1997, the Red River flooded a very large area in the Province of Manitoba primarily south of the major city of Winnipeg. Due to past flood experiences, the flood was anticipated and prepared

27 Weston MM and Tokesky GM. Impacts and contributions of older persons in emergency situations. A case study of Hurricane Katrina in the United States of America. Unpublished report, World Health Organization, Geneva, 2006.

28 AARP. We Can Do Better: Lessons Learned for Protecting Older Persons in Disasters. Research Report. AARP Public Policy Institute, Washington, 2006.

29 Lindsay, J. and Hall MA. A case study of the 1997 Manitoba flood. Unpublished report, World Health Organization, Geneva, 2006.

for well in advance. Floodways, a system of riverbank dykes and extensive temporary sandbag upgrades effectively protected Winnipeg from flood waters. An estimated 28 000 people were relocated, including residents of a home for frail older persons and hospital patients in small communities. Although gaps were identified in emergency management in relation to public information for older persons and relocating frail and disabled persons, the overall impact on older persons was minimal and short-lived.

### 13. Mozambique Floods 2000<sup>30</sup>

The worst flood in 50 years to hit Mozambique occurred in 2000 and was responsible for some 700 deaths. Nevertheless, the prior development of a flood contingency plan prevented a larger disaster: owing to effective preparations and coordination of relief efforts, 500 000 evacuees were sheltered and there were no major outbreaks of disease or malnutrition in shelters. The early warning system was not entirely effective however, and messages were not broadcast in local languages. Some communities were returned to high risk areas prematurely. Field reports documented the involvement of older persons in successful post-flood recovery and development initiatives.

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30 Da Silva T. Older persons in emergency and disaster situations: A case study from the Great Flood of 2000 in Mozambique. Unpublished report, World Health Organization, Geneva, 2007.

### 14. Saguenay (Canada) Flood 1996<sup>31</sup>

A destructive flood in terms of property and infrastructure damage occurred in July after two days of extremely heavy rain following weeks of higher than average rainfall and heavy summer rain in the Saguenay region of the province of Quebec. An estimated 426 homes were destroyed and 2015 were damaged. Roads and bridges were flooded or affected by mudslides, isolating several towns and villages. Damage to power lines, water line and sewage systems also created hazards. Municipalities did have emergency response plans in place which mitigated the impact: about 16 000 people were evacuated, at least 2000 of whom were older persons. Several service centres were opened for disaster victims and home visits were made to persons at risk.

### 15. Quebec (Canada) Ice storm 1998<sup>32</sup>

Freezing rain storms within a one week period in January caused widespread damage to power lines, roofs and trees across wide areas of the province of Quebec that lasted from days in some areas to almost a month in others, affecting a population of 4.8 million, or almost two thirds of the population of the province. About 11% of the population was aged 65 or older. While some people fled to relief centres

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31 Maltais D. Impact of the July 1996 floods on older persons in Quebec's Saguenay region. Unpublished report, World Health Organization, Geneva, 2006.

32 Maltais D. Impact of the 2003 Quebec ice storm on older persons. Unpublished report, World Health Organization, Geneva, 2006.

(140 000 people) others stayed in their own homes using hazardous heating devices. Inadequate records for locating vulnerable individuals made it difficult to reach people who needed home support. There were 30 deaths directly due to the ice storm in Quebec, 50% of whom were persons over age 65. Unprepared municipalities could not provide basic food, water, electricity and heating for their citizens.

### 16. Turkey Earthquakes 1992, 1999<sup>33</sup>

Turkey experiences earthquakes often, but a series of severe earthquakes in 1992 and 1999 resulted in significant mortality, disability, psychosocial problems and homelessness. The damage to structures was worsened because of widespread disregard of safety regulations in building construction. About 600 000 people were left homeless after the earthquake, and shelter provision proved to be a challenge. Extensive informal support and aid stemming from strong family and informal community ties helped to offset slow mobilization of government response. Although housing for children and older persons was a focus of the government during recovery, makeshift tent communities and inappropriate permanent housing failed to meet the needs of older persons.

33 Rolnick, J. Impacts and contributions of older persons in emergency situations: A case study of the 1992 and 1999 earthquakes in Turkey. Unpublished report, World Health Organization, Geneva, 2006.

### *How were older persons affected?*

The emergencies had effects of varying severity and duration on older people which differed depending on specific characteristics of the population or the situation itself.

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*In summary, emotional stress was the major health effect described as a result of the disaster and it was perceived to have mainly short-term effects. As well, many individuals found that family and friends were very supportive during the Flood<sup>34</sup>.*

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Age-disaggregated data available in some studies showed greater vulnerability among older persons, Although the number of fatalities varied considerably between the disaster situations, a disproportionate mortality in the older population was reported in five emergencies: Aceh tsunami, Cuba hurricanes (1985-2001), France heat wave, Louisiana hurricane, Kobe earthquake and Quebec ice storm.

The aggravation of pre-existing physical illnesses and disabilities, especially mobility related, or the emergence of new health problems were the most frequently observed health impacts. These were linked to hazards and environmental barriers, loss of social support and assistive aids and to impaired access to health services. In the Kobe earthquake and Jamaican hurricanes, poorly adapted shelter conditions contributed to the deterioration of health of older

34 Lindsay and Hall, 2006.

persons. In other instances, such as the aftermath of the Aceh earthquake, people in shelters experienced fewer health problems because they had better access to services than those remaining in the community.

Commonly reported effects on mental health included psychosomatic symptoms, including disturbance in sleep and eating patterns and fatigue, as well as depression, discouragement, anxiety, loneliness and social withdrawal. Although short-lasting in some cases, such as in Manitoba, long-term emotional distress was observed after the Saguenay flood and the Chernobyl power plant accident. While most cases did not compare older with younger persons specifically, reports from the Turkey earthquakes suggested that post-traumatic stress disorder symptoms and depression were associated with age. During the Lebanon conflict, many older persons experienced the trauma of entrapment, either at home or during displacement. The sense of discouragement that losses could not be recovered was reported in Bophirima, Jamaica and Kashmir, while in Cuba and Lebanon, some older persons insisted on remaining at home despite the high risks. During the Quebec ice storm and in the Louisiana hurricane, the safety of pets was a reason given for not evacuating. Noted in Bophirima and in Chernobyl was the strong attachment to place among older persons; forced permanent evacuations from the Chernobyl resulted in adjustment

problems in resettlement for older people especially and initiatives to return home after some years, despite ongoing health risks due to radiation contamination.

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*Authorities ignored cultural factors that had particular meaning for older people. Some, for example, voiced a desire to be buried in their home communities. Half of the people who resettled or were evacuated now express a desire to return. This number seems to reflect disproportionately the older population<sup>35</sup>.*

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Other obvious impacts were the loss of housing, material possessions and livelihood. Relationships with family members, friends and neighbours were disrupted owing to death, injuries and displacements, both short and long term. Social isolation was a problem in Kobe and in Turkey where new housing grouped older persons together, separating them from intergenerational family support networks. In some cases, older people experienced further social marginalization: in Kashmir, older persons were overrepresented in displacement camps or neglected by families overwhelmed with meeting their own needs; in Jamaica, there were instances of older persons abandoned in shelters or hospitals; in Lebanon, finally, a common reason cited by older persons in zones of active conflict who did not relocate to safety was that they were left behind when others fled.

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<sup>35</sup> Rolnick. Chernobyl Case study, 2006.

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*My family was struggling for their own survival in the wake of the earthquake and they were unable to take care of me. I remained isolated for four days and could not contribute towards my family and community. My sons hardly talked to me during those days and I was treated like a burden<sup>36</sup>.*

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Some groups within the older population experienced greater harm than others resulting directly from the disasters or gaps in responding to their needs. In Kobe, Jamaica and Bophirima, older persons with low incomes lived in areas and housing that were more prone to damage or they had fewer resources to cope during the emergencies. In British Columbia, economically disadvantaged persons had limited means of transportation for evacuation, and no home insurance to rebuild their houses.

Gender was another important determinant of disaster impacts, accounting for greater dependency on others for information and support in Lebanon, and poorer access to health care in Aceh and to other necessary services in British Columbia. Impoverished older women living alone or caring for others were especially vulnerable in Jamaica. Conversely, in Aceh, rigid gender roles led to difficulties for male-only households in managing household chores and in providing care for children.

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36 HelpAge International, Case study: Kashmir, 2006

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*Many organizations involved younger women in their planning. However, in very few instances were they involved in response and recovery. Whilst older women were not included in any stage<sup>37</sup>.*

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Cultural differences added to hardships: for instance, difference in modes of communication and service priorities between affected persons in rural areas and urban service decision-makers in British Columbia, and the values of self-sufficiency held by older persons in Jamaica and Kashmir made some of them reluctant to apply for benefits to which they were entitled.

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*Many of those interviewed described a recovery process that was controlled by a small group of individuals, mostly non-resident... this resulted in the absence of some needed services and the provision of some services that were not sensitive to the .. specific needs of older adults living in rural environments.. For example, during recovery, homes without pantries/root cellars were constructed for people who had until the fire relied economically on their ability to can and store food<sup>38</sup>.*

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37 HelpAge International, Case study: Indonesia, 2006.

38 Cox, 2006.

### 3. Emergency preparedness and response: strengths and gaps

In general, disaster planning and response depended on the availability of resources, both material and human, and on the quality of infrastructure and services. However, the effectiveness of emergency management could not be explained entirely by community wealth. Disasters in rich countries – the hurricane in Louisiana, the earthquake in Kobe and the heat wave in France – revealed serious deficiencies in planning and responding to older persons in particular. Conversely, the case of Cuba, a developing country, shows that including older persons in a differentiated and comprehensive emergency plan is possible even without extensive resources.

#### *Preparations*

A few cases describe preparations targeted to older persons. In Louisiana, an interstate agreement for emergency assistance was in place which facilitated the deployment of specialized personnel from other states to rapidly assess the needs of vulnerable older persons. In the case of the Saguenay flood, group homes with vulnerable residents (older and/or disabled) had been identified by community health and social service agencies. Similar attention to the needs of older persons in local care facilities was shown by targeted messages given by some community disaster committees in Jamaica. Also in Jamaica, one

radio station broadcast public information on how to safeguard medications, medical records and important documents, and gave advice to older persons on what to take with them in case of evacuation.

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*Everyone interviewed agreed the media, especially the radio, was important in informing people of the progress of the fires and thus in allowing people to make plans to evacuate<sup>39</sup>.*

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By far the most comprehensive emergency planning that includes older persons' needs and contributions has been developed in Cuba. Here, preparation is provided to all emergency responders and to the general population every year just prior to hurricane season. Local evacuation and service plans and resources are reviewed and updated, including identification of vulnerable persons and review of procedures for self-protection and protection of others. Local health clinics and providers are closely involved in identifying and planning services for vulnerable older persons in the community. Older persons participate actively on local emergency committees, making the community aware of their potential needs and contributions, and they play a role in public information and education.

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<sup>39</sup> Cox, 2006.



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*The senior citizens participate actively in all the phases in the reduction of disasters; contribute in the elaboration of the plans of disaster reduction and at the same time are informed and prepared to face disaster situations<sup>40</sup>.*

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Lack of preparedness was evident in several case studies. The absence of an overall emergency plan or policies to address specific needs of older persons was mentioned in relation to the disasters in Aceh, Jamaica, Kashmir and Mozambique. In the Bophirima drought, district emergency plans did not respect the national emergency guidelines which did include measures targeted at older persons. A lack of coordination among government and non-government agencies involved in emergency management was evident in France and Louisiana, and in Quebec during the ice storm. Because communication strategies were not targeted to reach persons with low literacy, sensory loss, or who spoke a minority language, the older adult population was not well informed about the impending emergency, or not adequately educated regarding self-protection measures. Poor information reach to the older population was a gap in British Columbia, France, Jamaica, Kobe, Louisiana, Mozambique and Manitoba.

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40 Malagon Cruz et al, 2007.

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*Many of the elderly victims had dismissed the multiple, highly televised warning about Hurricane Katrina as it passed through the Gulf of Mexico. In other cases, older residents clearly understood the warnings; however, they did not have the financial means or the knowledge of emergency resources to ensure their survival<sup>41</sup>.*

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Basic demographic information and community records to locate potentially vulnerable people quickly were missing in the British Columbia fire storm and Quebec ice storm, the earthquakes in Turkey, and most dramatically, in the heat wave that affected France. In the latter case as well, the plight of affected persons was not visible to authorities because of inadequate surveillance of heat related fatalities. Assessment guidelines and tools to rapidly assess individual needs, resources and specific challenges were not in place in Aceh.

### **Response**

Although the evidence generally points to gaps in responding to the needs of older persons in emergencies, there were good practices worth highlighting.

When the emergency occurred, efforts were made to identify and assist potentially vulnerable older persons. In British Columbia

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41 Weston and Tokesky, 2007.

and in France, volunteers went door to door. During the British Columbia fire storm and the Quebec ice storm, home care staff identified clients in need of targeted assistance and prepared them for relocation if required. In Kashmir, the International Organization for Migration (IOM) systematically included older persons in the shelter security survey. Older persons who remained at home received food delivery in Kashmir and home support services during the Quebec flood.

An emphasis on relocating at-risk older persons to safe shelters was reported in British Columbia, Cuba, Jamaica, Kobe, Lebanon and in the Quebec ice storm. Homes of family and others in the community, as well as churches, schools, workplaces, hospitals and nursing homes provided temporary shelter, as did displacement camps. Special attention was paid to safely evacuating frail older persons, notably in Cuba, British Columbia and Kobe. Special housing for homeless vulnerable persons, including older persons, was built in Turkey after the earthquakes. In Kobe, group housing with on-site services was set up for older persons who were too disabled to be accommodated in shelters.

Psychosocial support to evacuees has been assured in Cuba by favouring placement in familiar homes in the community while in British Columbia and Kobe, a community meeting place was created for mutual support and socialization among evacuees. In Kashmir, local emergency

providers received training to offer psychosocial support. To regain a sense of normalcy in stressful circumstances a local newspaper was distributed to evacuees in British Columbia and they were regularly informed about progress in managing the crisis. In Bophirima, the sharing and use of traditional knowledge to manage drought allowed older farmers to have a sense of personal control.

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*Seniors indicated that they had welcomed the tips and advice for safe home heating and lighting that were provided on radio programs, adding that they had put this information into practice. They also appreciated the fact that the police regularly patrolled their neighbourhoods and welcomed the presence of military personnel who not only made them feel safer, but also contributed to relief efforts (such as helping seniors carry firewood into their homes)<sup>42</sup>.*

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Other important actions were to provide necessary health care services and supplies. In British Columbia, the beds, medications and familiar staff were relocated with nursing home residents to ensure continuity of care. During the Saguenay flood, home visits and in-home care and support were provided. Access is assured to medical assessment, care, medications and assistive aids (glasses, mobility aids) in Cuba and in Lebanon. Mobile medical units in Kashmir provided effective response through imme-

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42 Maltais, The ice storm, 2006.



diate assessment of needs, primary health care and referral and health clinic services, especially in remote communities.

In Kashmir, the World Food Program set up a no-queue system in distributing food to older persons and in Cuba, nutritional assessment and appropriate food is assured. During the conflict in Lebanon, the majority of older persons in the community and in displacement camps received material support and financial assistance. Finally, the report on the Kashmir earthquake noted that inter-organization coordination and communication fostered cooperation among these organizations and effective inclusion of older persons in emergency management.

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*Food is guaranteed for the elderly. A previous nutritional and clinical assessment is done in the evacuation centres. The seniors who stay at homes receive non-elaborated food. In far away places and evacuation zones, medical assistance is guaranteed to face any emergency situation. The elderly also receive the medicines they are taking<sup>43</sup>.*

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The reports of inadequate responses in all of these areas tended to outweigh the good practices. The root cause in many instances was that older persons were simply invisible to emergency providers. They were not specifically mentioned

in emergency programmes or policy in Aceh, Kashmir, Jamaica, Manitoba or Mozambique. In Aceh, household needs assessments overlooked older persons on the assumption that they were going to be looked after by their families. As well, there was no mechanism to ensure that older persons were included in the one-time cash subsidy to victims. In Kashmir, older persons were excluded from participating in camp committees to voice their needs and issues because it was believed that they were unwilling and unable.

Evacuation of older persons was delayed in Kobe and Louisiana, while in Jamaica, the evacuation of persons living in local nursing homes was problematic. In Manitoba, emergency responders lacked guidelines for evacuating frail or disabled people living in care facilities.

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*The majority of the residents (of residential facilities) are bedridden and this poses difficulties with evacuations given the small number of staff to help and the type of available transportation. The staff have their own families to prepare for and cannot come to work or in some cases cannot get through due to blocked roads. The institutions operate on a shoestring budget so do not have stand-by generators or water tanks to use in such times<sup>44</sup>.*

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43 Malagon Cruz et al, 2007.

44 Eldermire-Shearer et al, 2006.

Many case studies noted the inadequacy of shelters for older persons; the problems included barriers such as stairs, lack of railings and support bars, poor access to sanitary facilities, lack of water or electricity, as well as excessive heat or cold, poor bedding, overcrowding and lack of privacy, excessive noise, lack of space and activities and separation from family support.

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*The toilets at the evacuation centre were inconvenient, especially at night when there was a danger of falling, and elderly people, suffering dehydration due to the restrictions on water, as well as diarrhoea due to the cold, dried boxed-up meals, soon became very weak. Even healthy older people living in the evacuation centres were likely to become unable to move and become bedridden. The condition of older people who needed rehabilitation deteriorated as their functional training was suspended or they had lost their auxiliary aids. Elderly people receiving treatment at home found that the caregivers who normally accompanied them on hospital visits could not make it to their homes and the fact that they could often not get to their usual hospital for reasons such as the breakdown or changes in the transport system, further accelerated their health declines<sup>45</sup>.*

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Access to appropriate health care was another frequently mentioned problem. Many older people with mobility problems could not access health services in Aceh,

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<sup>45</sup> Watanabe, 2006.

Jamaica or Kashmir. Although damaged roads and facilities were partly the reason, other factors also contributed. Insufficient health personnel or inadequate capacity of health care facilities to respond to greater demand in emergencies was noted in France, Jamaica, Kobe and Quebec (ice storm).

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*Due to the surplus demand, hospitals and CHSLD (long-term care institutions) that took in frail and disabled persons were forced to contend with worker burnout, staff shortages, depleted material resources and a shortage of shelter spaces<sup>46</sup>.*

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Health care staff were not attentive to older persons nor well trained to diagnose and treat chronic conditions in Aceh, or to recognize symptoms related to excessive heat in France. Shortage of medications and medical equipment for chronic conditions, as well as a lack of assistive devices, such as eyeglasses and mobility aids were often mentioned. Health services in affected communities outside of evacuation centres or camps tended to be less accessible, and persons with mobility impairments experienced the greatest challenges in getting care. Gaps in psychosocial care were noted as well.

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<sup>46</sup> Maltais, The ice storm, 2006.

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*The need for medications was highest, with 65.9% of all older adults reporting a shortage of at least one drug... The need for devices to assist with basic activities of daily living, including those assisting with mobility, was also as high as 10% among older adults. Dentures were lacking among 44%... Moreover, 15% and 9.7% of the older adults needed glasses and hearing aids<sup>47</sup>.*

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There were deficiencies in providing food and non-food items to older persons because of long, chaotic queues in Jamaica and inaccessible distribution points in Kashmir. Furthermore, in Kobe and Kashmir, the food provided was not easy to prepare or consume, or was not sufficient for older persons as well as the children in their care.

#### 4. Recovery: strengths and gaps

Several initiatives described how older persons were successfully included in post-emergency community recovery. Restoring homes of older persons was a priority in Turkey, Jamaica, Aceh and Kobe. In Jamaica, the First Caribbean Bank and Caribbean Disaster Response Agency provided funding for building materials and volunteers provided the labour. In Aceh, older people were actively involved in community efforts to identify homes of older persons needing reconstruction

and to participate in the reconstruction process. In British Columbia, a relief fund was created to raise money to restore the uninsured homes of people with lower income. Special efforts in Kobe were dedicated to assisting the large older population concentrated in major new housing units with on-site health services, psychosocial support, community centres and support for residents' initiatives. In Turkey as well, a rehabilitation centre offered recreational activities specifically for older persons. Initiatives developed by HelpAge International in Aceh, Kashmir and Mozambique sought to respond to the material, economic, health and psychosocial needs of older persons by harnessing their skills and knowledge in livelihood rehabilitation projects benefiting the entire community.

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*During the post floods period another successful programme involved supporting older persons in their homes by a visiting programme run by other older people... By carrying out home visits, they helped to identify vulnerable older persons living in the villages and where possible, encourage the support of other family members, the community and the programme resources<sup>48</sup>.*

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<sup>47</sup> Sibai and Kronful, 2007.

<sup>48</sup> Da Silva, 2007.

An important weakness in several cases was the insensitivity of recovery processes and supports to specific needs and issues of older persons. Financial compensation to tsunami victims in Aceh was inadequate for older persons caring for children. For older rural residents affected by the fire storm in British Columbia, it was a challenge to obtain largely electronic information sources and application forms or to travel to other towns where government services were located. Application procedures for compensation after the Saguenay flood were complicated, but in Jamaica, there were long queues to register for services, long and tedious application forms to complete, further problems because of missing identity papers, and then long delays to obtain assistance. Very soon after the hostilities ended in Lebanon in 2006, government and NGO assistance diminished sharply, resulting in general shortages combined with an almost total responsibility of families to support and care for older persons.

Resettlement and housing were problematic. In Kobe and Saguenay, older persons were relocated often before being resettled or returning home permanently. In Kashmir, older persons remained longer in displacement camps before going back to home communities; in Jamaica, besides delays in re-housing, there were reported instances of older persons having been abandoned in shelters or hospitals.

A particular issue faced by older persons in Bophirima was the destruction of their barely adequate housing by the drought and the lack of provision for housing restoration in relief benefits. Difficulties related to disrupted family and community support networks in the areas of resettlement and new housing were noted especially in the aftermath of the disasters in Turkey and Kobe. Moreover, the new housing units that were built there were structurally unsuitable for many older persons, exacerbating their social isolation.

Older people were excluded from economic recovery initiatives in many instances. In Aceh, older persons were not included in information about livelihood recovery programmes, or these programmes were not suited to their needs or capacities. There were age restrictions in eligibility for government job rehabilitation programmes in Jamaica and no assistance to restore informal livelihood, such as backyard farms.

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*In general there is difficulty in accessing relief both immediate and long-term. Long term rehabilitation involves waiting in lines to be registered, then assessors visit and then Ministry decides how much. The process can take years... The Ministry rehabilitation grant also has an upper age limit under normal circumstances of 45<sup>49</sup>.*

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49 Eldermire-Shearer et al, 2006.

Older persons were excluded from participating in decision-making processes that could have made the recovery more responsive to their needs; such was the case in Kashmir, where older persons were not included on camp committees responsible for managing services and restoring normalcy to lives.

Lessons learned from gaps in emergency response have served during the recovery phase to strengthen preparedness for the future. In the aftermath of the heat wave, France introduced a *Plan Canicule* (heat wave plan) in 2004 with many specific measures to assist individuals, communities and health and other services to prevent, prepare and respond more effectively to a future period of extreme hot weather. Since the tsunami in Aceh, HelpAge International has developed and delivered training to other relief agencies so staff are more aware of older persons in emergencies and know how to better assess and respond to their issues and needs.

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*Since the heat wave, France, Britain and many other countries have put into place relief measures to prevent a repeat of 2003. In 2004, the French Ministry of Health unveiled the Plan Canicule which includes a new weather alert service, a registry of people at risk, guidelines for hospitals and voluntary aid workers. The Ministry also urged city councils to carry out a census of older people to create a list of vulnerable persons. The new plan in France calls for coordination between the different ministries within the government<sup>50</sup>.*

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## 5. Contributions of older persons

Previous sections have emphasized the impacts and needs, often unmet, of older people in emergency situations in order to draw attention to policies and practices that should be improved. However, older persons are very diverse, with a wide range of capacities, skills and resources. Nearly all of the emergency case studies describe the many practical and concrete ways older persons contributed to family, community and agency efforts to cope with, and overcome the hardships. These are presented in Table 1.

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50 Rolnick, Europe heat wave, 2006.

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*Some of the older persons mentioned that they will often go to bed without any food so that their children and grandchildren can eat<sup>51</sup>.*

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Their work was often fully integrated in the collective efforts, as, for instance, the participation of large contingents of retired workers who contributed their occupational skills and knowledge, and the community volunteers who provided outreach, information, material and practical assistance and emotional reassurance wherever needed. Within families, older

members shouldered care responsibilities and shared their resources. There are several examples of distinct contributions made by older persons, such as know-how and personal strength in the face of adversity, use of positions of respect to keep the community intact and functioning. In most cases, emergency responders considered older persons more as a client group than as contributors. Yet a few cases, including Cuba and the emergencies in which HelpAge International was involved, offer compelling evidence that older persons can be major actors in community rehabilitation projects benefiting persons of all ages.

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51 van Niekerk and Roos, 2007.

Table 1: Contributions of older persons in emergencies

Emergency	Contributions
Aceh tsunami	<ul style="list-style-type: none"> <li>• Helped families in evacuation and cared for children during recovery</li> <li>• Told stories to children and cared for them in camps</li> <li>• Reached out to others (women and children) to offer support and aid</li> </ul>
Bophirima drought	<ul style="list-style-type: none"> <li>• Supported families economically with their government pension</li> <li>• Deprived themselves of food to feed children and grandchildren</li> <li>• Cared for grandchildren when adult children go to work in cities</li> <li>• Shared traditional knowledge and farming skills to cope with drought</li> </ul>
British Columbia wildfires	<ul style="list-style-type: none"> <li>• Formed the "backbone" of community emergency response</li> <li>• Helped their immediate family</li> <li>• Provided information, advice and technical skills in recovery phase (e.g. location of wells, fences, job creation and economic development, assessment of building damage, advice on rebuilding)</li> </ul>
Chernobyl power plant accident	<ul style="list-style-type: none"> <li>• Served as historical witnesses of the event and as examples of taking control over personal destiny (by returning to home area)</li> <li>• Facilitated social and economic revitalization of previously evacuated area</li> <li>• Shared knowledge on how to minimize exposure to radiation in the soil</li> </ul>
Cuba hurricanes	<ul style="list-style-type: none"> <li>• Participated in all aspects of community emergency planning, response and recovery, for instance:                             <ul style="list-style-type: none"> <li>- information and education on evacuation and home safety measures</li> <li>- weather watches and dissemination of local emergency directives</li> <li>- identification of local risks and safe, secure areas</li> <li>- clean-up, reconstruction, moral support to others</li> </ul> </li> </ul>
Kobe earthquake	<ul style="list-style-type: none"> <li>• Were models of resilience and resourcefulness</li> <li>• Became historical witnesses to relate the disaster and provide lessons for the future</li> <li>• Set up mutual aid and support projects in temporary housing</li> <li>• Offered ongoing outreach and peer support to other older people still affected by the earthquake</li> </ul>

Jamaica hurricanes	<ul style="list-style-type: none"> <li>• Acted as models of resourcefulness and resilience</li> <li>• Cared for younger and sick family members while adults dealt with immediate problems.</li> <li>• Provided shelter for displaced persons</li> <li>• Volunteered practical skills (older tradesmen went around volunteering help)</li> </ul>
Kashmir earthquake	<ul style="list-style-type: none"> <li>• Provided wisdom and coping skills learned from previous hardships</li> <li>• Cared for children and those who were ill and took in orphans</li> <li>• Used traditional position of honour and respect to keep families and communities intact and functional (e.g. taking responsibility for admission of camp children to the public school outside the camp)</li> <li>• Older imams provided counselling and teaching</li> <li>• Established a tented mosque for community worship</li> </ul>
Lebanon armed conflict	<ul style="list-style-type: none"> <li>• Provided care for others, including other older persons, children and grandchildren, during and after the conflict</li> </ul>
Louisiana hurricane	<ul style="list-style-type: none"> <li>• Served as volunteers and contributed professional skills (retired emergency response personnel) to emergency efforts</li> </ul>
Manitoba flood	<ul style="list-style-type: none"> <li>• Served as volunteers (cooking, baking, donating money and clothing, fundraising, hauling sandbags, helping in shelters, socializing with evacuees)</li> </ul>
Mozambique flood	<ul style="list-style-type: none"> <li>• Provided traditional knowledge in predicting weather</li> <li>• Participated in community-based rehabilitation projects, e.g. home visiting vulnerable persons, organizing reconstruction efforts, planning and managing seed distribution in the community</li> </ul>
Saguenay flood	<ul style="list-style-type: none"> <li>• Acted as volunteers at a day centre established by community health and social service centre</li> <li>• Created and operated a committee that provided technical and moral support to flood victims and advocacy in dealing with government offices</li> <li>• Provided shelter to family members</li> <li>• Served as volunteers for community organizations</li> </ul>
Quebec ice storm	<ul style="list-style-type: none"> <li>• Served as volunteers in shelters</li> <li>• Provided shelter to family members</li> </ul>



### III. Integrating older persons needs and contributions in emergencies: an Active Ageing framework

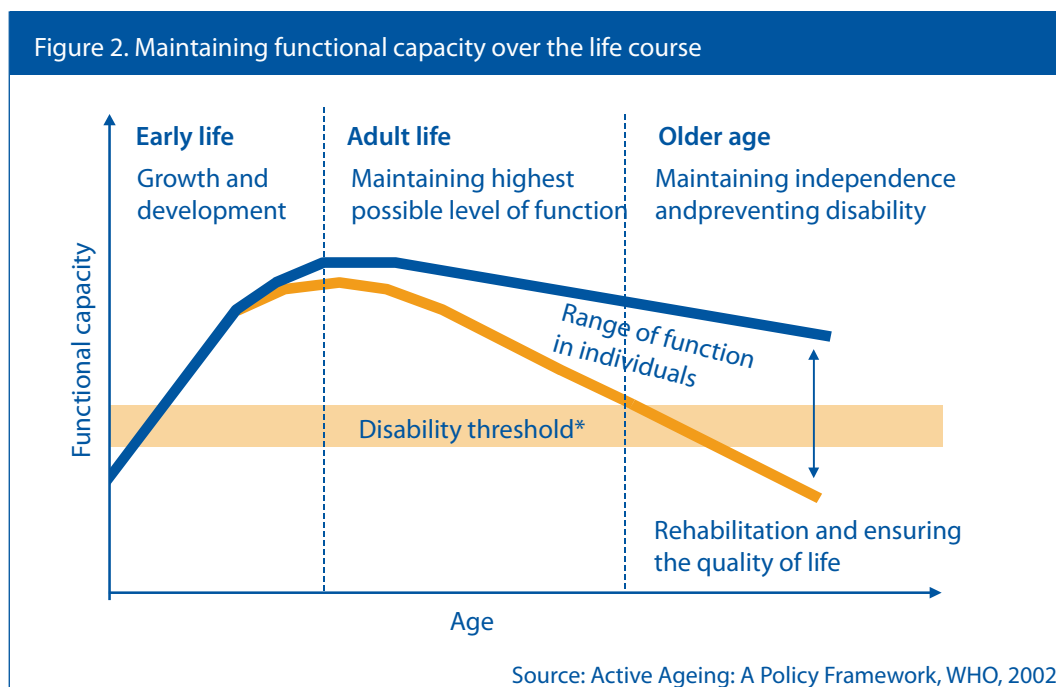
Because emergencies affect all areas of human activity and well-being, integration of older persons in emergency management can only be achieved through a comprehensive policy strategy that integrates several policy domains and all sectors of society. The WHO active ageing framework guides this strategic policy response.

Active ageing takes a life course perspective that recognizes that older people are not one homogeneous group and that individual diversity increases with age. Promoting active ageing means creating supportive and enabling environments at all stages of life and for the wide range of functional capacities (Figure 2).

*Active ageing is the process of optimizing opportunities for health, participation and security to enhance quality of life as people age<sup>52</sup>.*

Functional capacity (such as muscular strength and cardiovascular output) increases in childhood, peaks in early adulthood and eventually declines. The rate of individual decline is largely determined by the risks and opportunities encountered during life. The extent to which persons

52 WHO, 2002.



become, or remain, disabled depends on social, environmental and economic factors that raise or lower the threshold of disability. In emergencies, structural damage and social and economic disruption make life much more challenging and disabled older persons become even more dependent on prompt and appropriate care.

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*The higher the age, the earlier the symptoms of maladaptation to change in the environment surfaced<sup>53</sup>.*

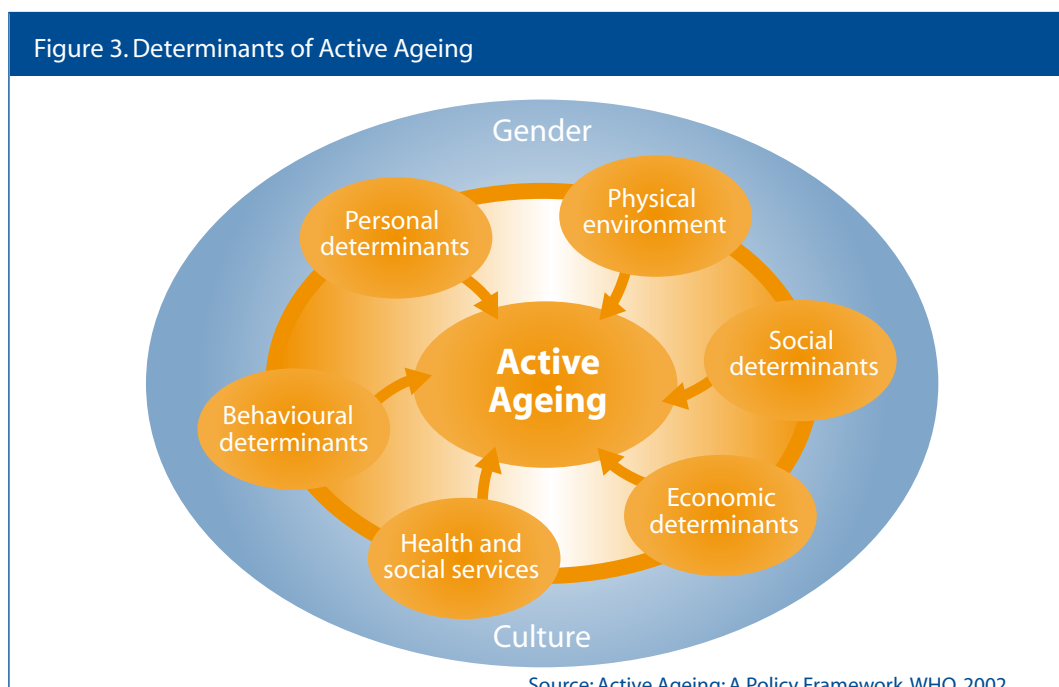
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Older people who normally can manage on their own with mild to moderate impairments also risk becoming disabled and unable to contribute to collective efforts to overcome the crisis. Losing medications

that control chronic illnesses or having difficulty walking or standing for a long time to access food, water or a toilet can be seriously incapacitating for many otherwise independent older people. An older person with arthritic knees and diminished vision, living alone in a high-rise apartment with no family members or friends nearby, can become incapable of getting food or water or feel in danger, and may be overlooked by neighbours.

Active ageing depends on a variety of social, structural and material determinants that act upon individuals, families and communities. All of these factors, and the interplay between them, affect how resilient – or vulnerable – people become as they grow older.

53 Watanabe, 2006.



Crisis situations put considerable stress on these determinants; the 16 case studies reviewed in this report clearly reveal the consequences of strengths and deficiencies in all of the determinants. To minimize adverse impacts and enhance adaptive capacity, age-responsive emergency management must examine and address each of these factors (Figure 3).

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*The findings of this case study [British Columbia firestorm] argue for a reframing of disaster resilience as a process rather than a personal characteristic; shaped by the intersection of an individual's personal characteristics (e.g. self-esteem, coping styles), gender, life conditions (e.g. employment, housing), economic and social resources as they intersect with a parallel complex of resources at the community and social levels...<sup>54</sup>*

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### 1. Physical environment

In normal circumstances the independence and quality of life of older persons are strongly influenced by factors such as geographic location and topography, presence of hazards in the environment, transportation, housing and access to clean water and safe food. Emergencies almost invariably cause acute strain on human settlements, creating and exacerbating barriers in the natural and built environment, and thus increasing risks for injury and disease. Older people living in precarious environments or who are disabled are particularly at risk.

Older persons located in rural and remote areas face many challenges. They may not be well informed by the media about an imminent emergency nor how to protect themselves. Fewer people are available in communities to assist, particularly if many younger adults have migrated to cities for employment. The scarcity of local services and long distances to urban areas reduce access to essential relief supplies, alternative shelter and health services, especially when roads are damaged or conditions are unsafe for travel.

Accessible and affordable transportation services are crucial in emergencies. Older persons without means of transportation risk delayed and dangerous evacuation and even abandonment. Latecomers to shelter, they may have less suitable accommodation. During the recovery phase, they may be deprived of relief supplies, health services and benefits to assist in recovery. As well, frail and severely disabled older persons may require adapted vehicles.

Safe, adequate housing and living arrangements are no less important. The homes of older persons may be older, in greater need of repair, and less well equipped or structurally resistant to natural hazards. Emergencies often force people into stressful living arrangements that may be especially inappropriate for older adults. In shelters, overcrowding, noise, inadequate bedding or sanitary facilities and uncomfortable temperatures add to distress and to risk of disease. Physical barriers in shelters

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54 Cox, 2006.

and temporary housing impede mobility and contribute to social isolation. Frequent displacement is unsettling, and older persons whose needs may be difficult to accommodate may be moved from place to place more often than others. For the same reasons, older people also may be obliged to remain longer in temporary accommodations.

Access to sufficient clean water and safe, appropriate food is a priority in emergencies. Standing in long distribution queues for supplies can be an impossible ordeal for those who are weaker or mobility impaired. A requirement for some older persons that is often overlooked in relief supplies is food that can be prepared easily and chewed and digested without problem.

## **2. Social environment**

As people grow older, the pool of family members and friends often diminishes. Disability further erodes social networks as opportunities for social contact are reduced. For these reasons, socially isolated older persons are particularly vulnerable in emergencies because they may be unaware of dangers and resources and they may be invisible to emergency services. Death, injury, displacements, physical barriers and overwhelming personal demands that occur in crises disrupt the fabric of social relationships. Older persons with smaller

social networks and who are more dependent on others for support and care are more vulnerable to these social losses and strains. Although relocation that gives priority to vulnerable older persons is intended to provide better protection, accommodation separated from family members and familiar faces actually reduces access to practical aid and to psychosocial support. When younger adults die or become otherwise unavailable, grandparents take on the responsibility for grandchildren which may further tax their own meagre resources.

Crisis situations increase the risk of elder neglect, exploitation and violence. Abandonment of older persons in unsafe areas or in displacement camps and shelters, or neglect of their needs can result when family members are struggling to survive themselves or when older persons are regarded as an inconvenience or a burden. Exploitation of older persons' financial or material resources, theft, and physical violence can occur as well.

Low levels of education and illiteracy are more common among older adults in all countries, and particularly among those who are poorer. When emergency strikes, they may not be able to read written information or fully comprehend media messages. In the recovery phase, completing forms to obtain benefits may be an impossible task.

### 3. Economic determinants

Poverty at all ages is a major risk factor in emergencies, but older persons are especially affected notably in developing countries because the majority of them are poor. They are more likely to live in high risk zones and in unsafe housing. They have fewer resources to prepare for emergencies, protect the assets they do have (such as home insurance) or to relocate to safety. Compounding their vulnerability, older people with long-standing poverty are usually sicker and more disabled than higher income counterparts. Persons with low incomes are more reliant on public and charitable supports and services which may be inadequate to meet immediate needs or to recover from disaster. The net result is that these persons are left more impoverished than before the emergency.

In many countries, the family provides the majority of material support to its members, both younger and older. Older persons depend upon, and contribute to this family social safety, financially or in-kind. Emergencies place considerable strain on patterns of family support. Because emergency relief agencies may ignore the support reciprocity in families, automatically assuming that older members are wholly supported by families, older persons may not be entitled to receive cash benefits in their own name. Also encountered is the situation where older persons are excluded from receiving much-needed emergency relief benefits because they already get a government pension.

In developing countries, necessity keeps older people working as long as they are capable, often in the informal economy. Disasters and conflicts wreak havoc on most employment and means of livelihood but older people are often excluded from job creation and economic rehabilitation programmes that are established as part of the community recovery phase.

### 4. Health and social service systems

Health services in emergency situations focus primarily on treating injuries and health problems caused by the crisis and preventing the spread of disease. As the global burden of disease shifts towards chronic illnesses however, health action in crisis means addressing the needs of people of all ages who require more care than cure. Because rates of chronic illnesses and disability increase with advancing age, older persons are more likely to have chronic and often multiple health problems that make them more vulnerable to acute, life-threatening conditions under extreme situations and that necessitate ongoing preventive services, control and rehabilitation. Without knowledge of the profile of health and social needs in the community nor a means of identifying vulnerable persons, it is difficult to anticipate needs for health supplies, including medications, equipment and assistive aids, or for health personnel with appropriate training to assess and treat older persons. Reaching out to provide prevention, support services and care to those who are socially isolated is particularly challenging.

Continuity of care from home to temporary accommodation, to hospitals and care facilities and back, is of prime importance for frail individuals. Without rehabilitative services in shelters and temporary housing, prolonged immobility worsens health. Ongoing psychosocial support and mental health care are a necessary health service for all people affected by emergencies and especially for older persons who suffer proportionately heavier and more enduring physical health incapacities as well as material and social losses.

### **5. Behavioural determinants**

Adoption of healthy lifestyles and actively participating in one's own care are vital at all ages to maintain good health. In emergencies, these behavioural determinants are no less important. In the preparedness phase, public information and education can help older individuals make personal emergency plans and prepare their medications and other supplies. Appropriately designed accommodations with some recreational amenities can promote physical activity that is beneficial to physical and mental well-being and social interaction. Supplies of nutritious and safe food items that can be readily prepared by individuals contribute to healthy eating and self-reliance.

### **6. Personal determinants**

Psychological factors, such as cognitive capacities – intelligence, knowledge and wisdom – as well as coping skills and attitudinal traits (optimism, self-efficacy, self-esteem), contribute a lot to adaptation and well-being as people grow older. These factors play a crucial role in coping successfully with crises and helping others. Declining ability to process information and memory loss add to individual vulnerability. Negative beliefs that may be reinforced by others that older persons have less worth lead some older individuals to renounce the benefits and assistance to which they are legitimately entitled. Omission, exclusion and neglect by families, communities and providers in emergencies accentuate feelings of low self-worth. On the other hand, the survival know-how in emergencies that older people have acquired helps them cope and provides inspiration and guidance to others. Being valued, listened to, and included in collective decision-making and activities to overcome the crisis further strengthen feelings of personal worth and mastery.

## 7. Gender

Being a man or a woman influences all aspects of life from birth to death. In most societies, women are socially and economically disadvantaged to varying degrees. These disadvantages are evident in emergencies. Older women are more likely to have inadequate housing and material resources, and to live alone or with children without sufficient support. Because they typically live longer with more chronic disabling conditions, women are over-represented among the very frail, disabled and socially isolated older persons facing the greatest risks. They may be denied health services if there are not enough female health providers, or insufficient supplies or trained practitioners to meet their needs. During the recovery phase, service providers focused on job creation targeting men primarily may neglect the needs of women who work in the informal economy or who are unpaid caregivers. Conversely, when older men assume caregiving functions that are outside role expectations, their needs also may be overlooked.

## 8. Culture

Culture is another determinant that affects all others in shaping the opportunities for active ageing. Cultural elements at play especially in emergencies are the prevalent social beliefs about and attitudes towards ageing and older persons.

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*An older person in a camp said "We are not a priority for government, families or humanitarian agencies because we are old"<sup>55</sup>.*

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Older persons' needs and capacities may be discounted if they are regarded as a passive and wholly dependent group. They may be actively excluded if considered less worthy than younger persons of care and support. On the other hand, in a culture that recognizes the continuity of people's lives and their inherent diversity, their efforts are integrated seamlessly in the whole. Where cultural value is placed on the role of elders, older persons may play unique and respected functions, such as that of community advisers, teachers of traditional practices in emergencies and historical witnesses of significant emergency events in the community.

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<sup>55</sup> HelpAge International, Case study of Kashmir, 2006.



## IV. The policy response

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The WHO Active Ageing framework is based on the recognition of the human rights of older persons expressed in the United Nations Principles for Older Persons (independence, participation, care, self-fulfilment and dignity). Shifting policy action away from a needs-based approach towards a rights-based approach, active ageing recognizes the rights of people to equality of opportunity and treatment in all aspects of life as they grow older. A rights-based approach to emergency management does not mean establishing several separate services for older persons. Rather, as HelpAge International advises, older people should be integrated into mainstream services and equity of service provision should be ensured in all sectors<sup>56</sup>, including provision of basic necessities, health and psychosocial care, protection, and economic rehabilitation.

### 1. Pillars for action

Mainstreaming older persons in emergency management from an active ageing approach requires action on three basic pillars.

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<sup>56</sup> HelpAge International. Older people in disasters and humanitarian crises: Guidelines for best practice. London, HelpAge International, 2000.

### Health

To the goals of prevention and treatment of physical and mental trauma and infectious diseases related to the crisis, age-responsive emergency policies should include management of chronic illness to maintain and restore functional capacity. Health services should widen their intervention focus to ensure continuity of care across settings and over time.

### Participation

In respect of basic human rights, removal of arbitrary age restrictions and facilitative measures are required to encourage participation of older persons in all activities related to community planning, response and recovery in the event of emergency

### Security

Physical, social and financial protection and care to be assured for all persons prior to, during and after emergencies in accordance with their basic human rights and individual needs. Families and communities are to be supported in their efforts to care for older members in the same way that older persons are to be supported in efforts to provide care to others.



## 2. Key actors and roles

Mitigating the impact of emergency situations and recovering afterwards require the orchestrated (i.e. differentiated and integrated) efforts of the entire community, collectively and individually. Depending on the magnitude of the crisis, the "community" can include actors from other jurisdictions, and even the international community. The actors encompass governments at various levels and sectors, the media, health professionals and other service providers, civil society organizations, faith communities, families and older persons. The key actions in which all actors engage to varying degrees can be summed up as follows<sup>57</sup> :

**Communicate:** Provide timely, accurate and practical information in ways that will reach everyone about impending or current emergency risks and about resources available for protection, coping and contribution.

**Coordinate:** Ensure that all relevant bodies, at the local level and beyond, are engaged as appropriate, with established roles, procedures, tools and resources. Focal points for coordination are clearly identified, with responsibility to guarantee consistency and complementarity of action.

<sup>57</sup> Weston M. Unpublished intervention during the WHO Technical meeting on older persons in emergencies, Winnipeg, Canada, February 2007.

**Educate:** Provide clear, targeted training and resources for self, informal and professional protection and care.

**Accommodate:** Ensure that assessment tools and protocols, supplies, interventions, services and benefits acknowledge and integrate distinct needs and capacities of persons of all ages.

## 3. Key policy proposals

### Health

#### Health and support services

- Coordinate activities of agencies responsible for health care and services for older persons with those from agencies responsible for emergency preparedness.
- Collect regional demographic, social and health information to create a population profile of health needs.
- Ensure that emergency health supplies include medications, medical equipment and supplies, and assistive aids to meet the needs of persons with chronic illnesses and disabilities.
- Maintain an up-to-date local registry of long-term care facilities, group dwellings and private households with persons who are likely to be vulnerable in an emergency.

- Create a database of local professional service providers and volunteers, including older persons, who may be recruited to assist emergency workers to meet needs of vulnerable older people.
- Create and use emergency assessment protocols, guidelines and checklists that integrate specific needs and priorities of older persons who are affected, including psychosocial needs.
- Train emergency, health and social service workers to identify, assess and respond to older persons' needs and priorities.
- Ensure coordination of care for persons whose health needs require transfer from community primary care to hospital or long-term care settings.
- Collect field data disaggregated by age and sex to assess the effectiveness of health and support services in responding to differential needs in the population.

- Provide emergency food supplies that are nutritious, readily digestible and easy to prepare and eat.
- Provide safe places and opportunities for recreational physical activity in temporary accommodation sites.

### Personal determinants

- Provide information about emergency risks and resources in formats and communication channels that are accessible to older persons so they can make informed personal decisions.
- Ensure that needs assessment tools and service guidelines recognize the individual needs and expressed priorities of older persons.

### Physical environment

- Pre-position aid and medical supplies for rapid assistance to vulnerable persons.
- Design evacuation plans, modes of transportation and barrier-free shelters to accommodate older persons with special medical or functional needs, and equip and staff the shelters accordingly.

### Behavioural determinants

- Provide public education on ways and resources to safeguard one's own health or the health of vulnerable family members in an emergency.
- In primary health care (PHC) settings, provide individual counselling to older persons and their families on ways to meet specific health and functional needs in the event of an emergency.

- Ensure the proximity of PHC and support services to older persons in community settings and provide home visits and mobile health units to reach mobility-impaired and geographically isolated individuals.
- Facilitate access to essential supplies for older persons (e.g. no-queue).
- Deliver health and social services and supplies equitably in richer and poorer areas, including rural locations that are more deprived.
- Provide information and public education to prepare for to meet health needs during an emergency in formats that are accessible to persons with less education and low literacy.

### Social environment

- Inform families of resources available to assist them in supporting older persons in emergencies.
- Provide emergency shelter in homes of family or other familiar locations as much as possible.
- Minimize the number of shelter displacements required to alleviate psychosocial distress.
- Reunite older persons with families and other familiar persons in emergency accommodation and resettlement sites.
- Provide meeting places and opportunities for mutual aid and support in emergency accommodation.
- Resettle people as close and as soon as possible to the communities they call home.

### Economic factors

- Provide access to health services, medications, assistive aids, clean water and safe nutritious food at no cost to all persons affected by an emergency.

### Gender

- Provide gender-sensitive health services, including adequate personnel, appropriately equipped and designed facilities, and outreach to housebound persons.
- Include all persons affected by an emergency, both men and women, in needs assessments and in decision-making processes, to accurately identify their health needs and priorities.

### Culture

- Challenge and correct negative assumptions regarding the needs and capacities of older persons that lead to their exclusion and disempowerment during emergencies.
- Accommodate valued cultural practices regarding single or co-residency with family and patterns of social support to maximize the security and well-being of older persons.

## *Participation*

### Health and social services

- Recruit, train and engage older, retired professional practitioners and volunteers in all areas of emergency health care and social support operations where their skills are appropriate.

### Behavioural determinants

- Engage older persons in self-help and mutual aid groups to maintain healthy lifestyles during crises and encourage family and peers to follow suit.
- Provide food, water and other essential supplies at distribution points that older persons can access as they require.

### Personal determinants

- Involve older persons in community, family and personal planning and decision-making with regards to all aspects of emergency management.
- Promote the sharing of older persons' coping skills that worked effectively in previous crises.
- Acknowledge and accommodate older persons' needs and priorities in household needs assessments.

- Provide opportunities for older persons to initiate and lead activities to promote their own and others' recovery.

### Physical environment

- Consult older persons to identify hazards and resources in the natural and built environment.
- Involve older persons in practicing and passing on sound traditional approaches to cope with environmental risks.
- Involve older persons in programmes to design and reconstruct housing, communities and economic activities.

### Social determinants

- Assess and accommodate the needs of older persons who are supporting other family members as well as themselves during and after crises.
- Involve older persons in local efforts to identify vulnerable persons to emergency services and to communicate with others directly to convey important information.
- Engage older persons in participation and taking on leadership roles in recreational, spiritual, social, educational and other activities.

### Economic determinants

- Include older persons as full participants in economic recovery activities to benefit the community and themselves.

### Gender

- Accommodate specific responsibilities and individual needs of older men and women, for example, by providing help to older women to repair damaged houses and assisting older men who are caregivers.

### Culture

- Engage older persons in positions of respect and authority in family and community roles that help maintain solidarity, morale and continuity in daily life.
- Involve older persons as full participants in the community's cultural affirmation vis-a-vis external agencies with respect to its needs, responses and ways to manage and recover from the emergency.

### *Security*

### Health, social and emergency services

- Coordinate agencies responsible for public security, emergency management and social services to ensure inclusion of older persons in public safety and evacuation.

- Disseminate information regarding imminent dangers and appropriate security measures and resources in order to reach older persons effectively, in particular, those with sensory, cognitive and mobility impairments.
- Develop and implement plans to protect frail and severely disabled persons, such as recruiting supplementary care providers and stocking up on essential supplies.
- Collect field data disaggregated by age and sex to assess the effectiveness of services in responding to differential needs in the population.

### Behavioural determinants

- Provide public education and resources to assist older persons take appropriate measures to protect themselves in emergencies.

### Personal determinants

- In public communication about the emergency, explicitly counter assumptions held by some older persons that unwisely minimize risks.

### Physical environment

- Provide adequate and safe shelter from the elements, together with necessary food, water and clothing quickly.

- Evacuate older persons from settings that pose major barriers to their functional abilities.
- Provide ample warnings regarding safe ways to deal with physical hazards, e.g. fallen power lines and contaminated water.
- Provide financial assistance, materials and labour to improve housing before a disaster and to rebuild afterwards.

### Social determinants

- Ensure that socially isolated older persons are identified, thoroughly informed of risks and resources and provided with necessary aid to protect themselves.
- Ensure that older persons who care for others are assisted in protecting those to whom they provide care, including cherished companion animals.
- Ensure the security of older persons and their possessions against neglect or abandonment, personal violence and exploitation.

### Economic determinants

- Ensure that older persons living in disadvantaged areas with less than adequate infrastructure and housing, as

well as those with low levels of education and literacy, are appropriately informed of emergency risks and resources and receive targeted aid appropriate to the additional risks they face.

- Provide entitlement to financial and material support during an emergency, as well as compensation afterwards, without age or gender discrimination.
- Provide information and assistance to older persons in applying for compensation and support to restore livelihood.
- Offer paid work opportunities and training suited to the capacities of older persons.

### Gender

- Provide appropriate opportunities, training and resources to assist older women deprived of economic support by families to become self-supporting.
- Provide accommodation, facilities and service workers that respect the privacy requirements of women and men.

### Culture

- Address cultural barriers to accepting public assistance ("handouts" or "welfare") among some older persons that prevent them from accessing resources to which they are entitled.

## Conclusion

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An overlooked consequence of global ageing is that older people will become more prominent in populations most vulnerable to natural and conflict-related emergencies. However, they will also constitute an important resource to their families and communities for managing and overcoming emergencies. Keeping the balance tilted to favour the self-protection and contribution of older person to collective efforts in crises requires a wide range of actions in many sectors. The Active Ageing framework

provides a roadmap for designing multisectoral policies which will ensure that older persons have adequate security, health services and opportunities to participate when emergencies strike. In the longer term, integrating the Active Ageing framework in health policy will enhance individual and community resiliency in the face of new emergencies.



## Case study data sources

Case study data sources		
Location	Event	Data sources
Aceh, Indonesia	Tsunami, 2004	Humanitarian field assessments and research
Bophirima, South Africa	Drought, 2002-2005	Research with older persons and local authorities in the affected area
British Columbia, Canada	"Firestorm", 2003	Research with affected older population and service providers in 3 communities
Chernobyl, Ukraine	Nuclear Power Plant Accident, 1986	International agency reports, scientific articles and popular press (English only)
Cuba	Hurricanes, past 155 years	Official data and national and international agencies reports
France	Heat Wave, 2003	Public health reports, popular press (English only)
Jamaica	Hurricanes, 2004-05	Official reports, popular press articles and direct service provider experience
Kashmir (Pakistan and India)	Earthquake, 2005	Humanitarian field assessments and research
Kobe, Japan	Earthquake, 1995	Official reports, research and intervention reports
Lebanon	Conflict, 2006	Research with a representative sample of 500 older persons in affected areas
Louisiana, USA	Hurricane, 2005	Official reports, popular press articles and direct service provider experience

Manitoba, Canada	Flood, 1997	Official reports; pre-post flood research on older persons in the affected area
Mozambique	Floods, 2000	National and humanitarian NGO reports
Saguenay (Quebec), Canada	Flood, 1996	Research with affected and service professionals in the affected area
Quebec, Canada	Ice Storm, 1998	Official reports; research with affected persons and service providers
Turkey	Earthquakes, 1992, 1999	Agency reports, scientific articles, popular press (English only)