THE ROYAL SOCIETY

Royal Society submission to the World Humanitarian Summit 2016: The need for joined-up, long-term and evidence-based action

1. The Royal Society welcomes this opportunity to contribute to the World Humanitarian Summit 2016.

Submission overview

2. This submission draws on the work of the Royal Society, in particular its recent policy report 'Resilience to extreme weather'[1]. The Society wishes to highlight issues that the World Humanitarian Summit should address in order to set an ambitious humanitarian agenda that is fit for the future. In particular, this submission highlights:

    i. the need for long-term planning and proactive investment in measures to reduce the future risk of disasters and limit costly disaster response and recovery;

    ii. the need to bring the humanitarian, development, disaster risk reduction and climate change sectors together for coherent and co-ordinated action on disasters;

    iii. that humanitarian action should be evidence-based and should draw on the best available science.

Introduction to the Royal Society

3. The Royal Society is the national academy of science in the UK. It is a self-governing Fellowship of many of the world's most distinguished scientists. The Royal Society draws on the expertise of the Fellowship to provide independent and authoritative scientific advice to UK, European and international decision makers.

4. The Society has a long history of policy work concerning environmental change and sustainable development. Recent work includes science-policy reports on resilience to extreme weather[2], population and consumption[3] and climate change[4]. The Society has also contributed to a joint statement with 14 other national science academies from around the world, calling for governments to engage the national and international scientific community in efforts to build resilience to disasters[5].

5. The recent report on 'Resilience to extreme weather' considers the latest scientific evidence concerning the risk of extreme weather – river and coastal flooding, droughts, and heatwaves – for people throughout the world. The report emphasises that large numbers of vulnerable

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[1] Royal Society (2014) *Resilience to extreme weather* https://royalsociety.org/policy/projects/resilience-extremeweather/

[2] Royal Society (2014) *Resilience to extreme weather* https://royalsociety.org/policy/projects/resilience-extremeweather/

[3] Royal Society (2012) *People and the planet* https://royalsociety.org/policy/projects/people-planet/

[4] Royal Society and US National Academy of Sciences (2014) *Climate Change Evidence and Causes* https://royalsociety.org/policy/projects/climate-evidence-causes/

[5] G-Science Academies (2012) *Building Resilience to Disasters of Natural and Technological Origin* https://royalsociety.org/policy/publications/2012/resilience-disasters/

people are likely to be exposed to these hazards in the coming decades, and assesses actions that can help prevent disasters and reduce suffering. It shows how, with forethought and planning, societies can do more than simply cope with extreme weather, and can instead adapt, progress and develop even in the face of the increasing risks. However, this will not be achieved without a step change in the necessary planning and implementation of new measures.

Issues for the World Humanitarian Summit to address

6. Disasters can have a devastating impact on people's lives and livelihoods. They represent a major obstacle to development, often preventing people from escaping poverty or pulling them into it. Societies are not well adapted to the hazards they face even today. Compounding this, future climatic and demographic changes will increase the exposure of people and their assets to the threats of extreme weather, especially in some areas of the world that include many rapidly developing and least developed countries.

7. Developing countries will be building the equivalent of a city of a million people every five days from now to 2050[6]. How the continuing and rapid growth of urban populations is managed will have a major effect on the levels of risk faced by people in the future.

Consistent implementation of global agreements

8. The challenges of reducing the impact of disasters often exceed national capacities and boundaries, and so require international support. Climate change, disasters and development are inextricably linked. The three United Nations frameworks being negotiated on these issues this year provide a unique opportunity to mobilise activity and reduce the impact of disasters in a sustainable and equitable way. Although the agreements will have been reached by the time of the World Humanitarian Summit, their implementation will be a long-term process. Implementation will be more effective if it is done in a joined-up manner and underpinned by timely, relevant information including that from the best available science[7].

Early investment and long-term planning

1. Early investment in resilience measures and long-term planning will be essential for ensuring that future demographic and climatic changes do not increase the risks people face from extreme weather.

2. There is often a window of opportunity for building resilience following a major disaster when there can be greater political attention and funding. However, actions taken in the immediate aftermath of a disaster tend to be reactive, and the need for rapid recovery and rebuilding can overwhelm more well-considered policies. The reliance on reactive rather than proactive approaches contributes to an international humanitarian system that is stretched beyond its means.

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[6] Royal Society (2012) *People and the planet* https://royalsociety.org/policy/projects/people-planet/

[7] Royal Society (2015) *Taking joint action on disasters, development and climate change* https://royalsociety.org/policy/publications/2015/taking-joint-action-on-disasters-development-climate-change/

3. Effective resilience planning should involve early, pre-emptive investment in measures to reduce future risks, in addition to tested emergency plans. This has been shown to be cost-effective in many instances.

4. In order to limit the need for costly disaster response and recovery, more national and international funds will need to be directed to pre-emptive measures that build resilience. The barriers to early investment need to be identified, prioritised and tackled through public and private action.

Recommendation: The World Humanitarian Summit should address how early investment in resilience-building measures can be enhanced and current barriers overcome, with the aim of reducing the need for costly disaster response and recovery.

5. National governments have a responsibility to develop and resource resilience strategies. These should include, but also go beyond, emergency plans which can be put into effect when hazards are forecast. They should consider all the factors – the whole system – likely to be affected, including areas not directly impacted and effects over decades. They should integrate multiple sectors (water, energy, climate change, land use, biodiversity, transport, housing, economic development etc.) and should attempt to arbitrate among competing local interests. Bringing competing agendas under a coherent strategy is preferable to a piecemeal project-by-project approach to building resilience.

6. Strategic resilience planning should draw on expertise from a range of sources, including the scientific community, the private sector, Non-Governmental Organisations and local communities, and a range of relevant disciplines.

7. Infrastructure development is key for long-term planning. Disasters affect many aspects of infrastructure – including transport, energy, water, buildings and communications – and cause major disruption to societies and economies. Building resilient infrastructure requires taking a long-term view and planning ahead for future hazards.

8. Systems thinking is also central to the planning, design and maintenance of resilient infrastructure. It involves taking a holistic approach and recognising that vulnerabilities or failure in one sector can affect the whole system, potentially leading to a cascade of failures.

9. The most critical components of an infrastructure system should be prioritised when building resilience. The goal should not be to completely avoid failure (which would be very difficult and prohibitively expensive) but rather to minimise the consequences of any failure for people and the economy.

Recommendation: The World Humanitarian Summit should encourage and help policymakers to develop resilience strategies that consider whole systems and cascading risks, that draw on a range of expertise and that prioritise critical infrastructure.

Bringing together the humanitarian and development communities

10. Although emergency preparedness is a core feature of most efforts to manage climate and disaster risks, investing in pre-emptive resilience-building still represents a major transformation. It requires the traditionally separate domains of humanitarian response and longer-term development to be brought together. This in turn requires transforming existing funding mechanisms, and better co-ordinating funds across the proactive-reactive continuum nationally and internationally.

Recommendation: The World Humanitarian Summit should identify ways in which the humanitarian response and development sectors could be brought together, including through transforming existing funding mechanisms.

Evidence-based humanitarian action

11. The Royal Society advocates evidence-based policymaking at all levels, encouraging policymakers and practitioners to draw on the best available evidence and engage with those at the forefront of excellent science. Natural and social scientists have a vital role in developing a full picture of environmental and sustainable development challenges, uncertainties and the efficacy of potential solutions.

Recommendation: The World Humanitarian Summit should draw on the best available evidence, including the scientific research base. It should also identify ways in which evidence-based decisions can be embedded across humanitarian work in the future, and how links between the humanitarian sector and international science community can be strengthened.

For all enquiries please contact Sally Tyldesley, Policy Adviser at the Royal Society, sally.tyldesley@royalsociety.org.