

Taking joint action on
disasters, development
and climate change

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The need for action

We are now at a critical time. The wellbeing of human populations is recognised as an international priority, yet the mounting challenges from climate change, biodiversity loss, food, water and energy insecurity, growth in population and consumption, and increasing inequality are putting future prosperity at risk.

This year three international agreements will be reached on:

- disaster risk reduction in March (a successor to the Hyogo Framework for Action);
- sustainable development in September (a new set of global Sustainable Development Goals); and
- climate change in December.

Disasters, climate change and sustainable development are inextricably linked. One issue that cuts across all three is extreme weather.

Extreme weather can have a devastating impact on people's lives and livelihoods. It represents a major obstacle to development, often preventing people from escaping poverty or pulling them into it. Societies are not well adapted to the extreme weather being experienced today. Compounding this, future climatic and demographic changes will increase the exposure of people and their assets to this threat. The three United Nations frameworks provide a unique opportunity to mobilise activity and build people's resilience to extreme weather in a sustainable and equitable way.

Seizing the opportunity

The agreements and actions arising from them will be more successful if they are consistent and implemented in a joined-up manner. In all cases actions will be more effective when underpinned by timely, relevant information including the best available science.



Make international frameworks consistent

The purpose, design and implementation of these new frameworks should be aligned and consistent regarding extreme weather.

Why is this important?

Aligning the frameworks will:

- reinforce global efforts to build resilience;
- avoid duplication of efforts;
- prevent confusion over the roles and mandates of each framework; and
- reduce monitoring and reporting demands at national and sub-national levels.

How can we achieve this?

- Explicitly acknowledge the importance of consistency in all three frameworks.
- Emphasise the importance of issues that cut across all three frameworks. These include the role of the natural environment in building resilience rather than just driving risk, and the need for pre-emptive investment to limit costly disaster responses.
- Align the timeframes and reporting protocols for the successor to the Hyogo Framework for Action and Sustainable Development Goals.
- Use metrics that are identical or comparable to incentivise co-ordinated action and allow the effectiveness of different measures to be compared. For example, targets related to adaptation or loss and damage under the new climate agreement should be consistent with those under the Sustainable Development Goals and successor to the Hyogo Framework for Action.
- Explore using the information collected by regional, national and local ‘HFA Monitors’ to help track progress against not only the new disasters framework but also the Sustainable Development Goals – for example, progress to reduce disaster mortality and disaster-related economic losses by 2030, which is a proposed target under both frameworks.



Put evidence at the heart of international frameworks

The agreements reached in 2015 should be informed by science. Continued engagement between scientists and policymakers will help those negotiating and implementing the new agreements to decide what action to take to most effectively build resilience.

Strengthening the use of science in policymaking

Natural and social scientists play a vital role in developing a full picture of global challenges, uncertainties and the efficacy of potential solutions. At present, the following bodies provide scientific and technological advice to the frameworks:

- The Scientific and Technical Advisory Group for the disasters framework;
- The Sustainable Development Solutions Network for the Sustainable Development Goals;
- The Subsidiary Body for Scientific and Technological Advice for the climate change negotiations; and
- The Nairobi Work Programme for advice on climate change adaptation.

Strong links should be built between these groups in order to share learning between the disasters, climate change and development sectors.

We welcome discussions about a Science and Technology (Engagement) Partnership, a revitalised Science and Technology Advisory Group, and co-produced knowledge as part of the new disasters framework.

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Developing effective targets and indicators

Science has an important role to play in the development of targets and indicators for the three frameworks.

Scientific and technological advances present significant opportunities to develop reliable, locally-relevant indicators. However, despite the availability of high resolution data, modelling capabilities and communication technologies, there remains a lack of suitable institutions and procedures to develop and use such indicators.

- The new international agreements should commit to reviewing and, where necessary, strengthening the institutional arrangements for their implementation in all countries and at all levels.
- International oversight will be needed to strengthen national and local monitoring capacity, particularly in the developing world, and to co-ordinate data collection.

- Such oversight should involve interactions with national statistical offices and should draw on data from technical agencies, technology companies and the scientific community.
- Indicators should be locally-relevant and be determined and collected with participation from local communities.
- Both input and output metrics should be developed under the new frameworks. Input metrics are particularly important as a way of encouraging early action and investment in resilience-building, whereas outcome metrics are inherently retrospective.

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The Royal Society



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More information

Resilience to extreme weather report:
royalsociety.org/policy/projects/resilience-extreme-weather

People and the planet report:
royalsociety.org/policy/projects/people-planet

Trends in extreme weather events in Europe: implications for national and European Union adaptation strategies EASAC report:
easac.eu/home/reports-and-statements/detail-view/article/extreme-weat.html

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Cover image: Aerial view of the residential area of Milton, during the great Brisbane Flood of 2011, the worst flooding disaster in Australia's history.