[GENEVA] Scientists must develop an interdisciplinary approach to disaster risk reduction (DRR) research and show how their work can inform policy creation and delivery, a report says.

Policymakers require evidence that science can provide comprehensive solutions to specific problems and aid all levels of the decision-making process, says Virginia Murray, head of extreme events and health protection at Public Health England, United Kingdom, and an author of the report.

"We are not making enough of an impact. Not all policymakers are using scientific evidence," she tells SciDev.Net.

The report by the Scientific and Technical Advisory Group of the UN's Office for Disaster Risk
Reduction was unveiled last week (22 May) during the UN-organised Global Platform for Disaster Risk Reduction meeting in Geneva, Switzerland.

It draws on ten case studies, such as developing tsunami-warning systems for the Indian Ocean region and rain-monitoring technology in the Sahel, to illustrate how science can contribute to DRR.

The report says that there are four critical stages of tackling an issue: defining the problem, understanding the problem, driving policy and application, and producing benefits — with science potentially playing a major role in each.

While calling for more case studies, Murray hopes that the ten in the report will show the benefits of already using science for DRR and provide a powerful argument for better engagement between scientists, politicians and the wider community.

As well as coordinating research to address issues holistically, the report stresses the importance of disseminating scientific knowledge and translating it into practical action, and placing science at the heart of a framework to replace the Hyogo Framework for Action in 2015 — a ten-year plan to help vulnerable countries reduce the impact of climate-related disasters.

The report also calls for the integration of the disparate fields of DRR research.

Jane Rovins, executive director of Integrated Research on Disaster Risk, an international research programme, agrees that better cohesion is needed between scientific disciplines to push the DRR agenda within international policy circles.

"There are lots of people doing fantastic science but there is no consistent message to policymakers," she says.

The scientific community's failure to provide a united voice before 2015 — when both a post-Hyogo framework and the Sustainable Development Goals are expected to come into force — would be a major setback for DRR, Rovins adds.

"If this doesn't get moved up to the higher levels of the international community, we are going to slide backwards."

But, along with Murray, Rovins is optimistic, pointing to a marked increase in interest from national policymakers over the past few years in reducing the risks posed by disasters.

Furthermore, developing countries with increasing influence on the world stage are taking the lead on the issue, she adds.

Tom Mitchell, head of the climate and environment programme at UK think-tank the Overseas Development Institute, also sees many developing nations, such as China, Indonesia and the Philippines, taking DRR science advice "seriously", although most countries still undervalue this input.
As well as national leadership, the role of regional partnerships, especially in areas with few resources, is essential to ensure a wide and varied research base, he says.

"In many countries, there simply isn't the capacity to develop domestic science to cover all the issues," Mitchell says.

Nonetheless, however important science is to DRR, he warns that it is only one part of the jigsaw.

Core development programmes, such as poverty reduction and basic services provision, have a much greater influence on reducing the impact of disasters, Mitchell says.