

Hello I am Joanna Faure Walker. I am the module tutor for Integrating Science into Risk and Disaster Reduction. This module is all about multidisciplinary, holistic approaches to disaster risk reduction, in particular, how do we take scientific data, fundamental science primary observations and use them in applied science and in modelling, and then ultimately to really understand risk and quantify how risk reduction strategies could change risk so that we can communicate about that to all stakeholders, whether that be individual people exposed to a risk or whether that be all the way up to government level and policymakers. So it really is about developing that common language so we can help build resilience. So we need that language in order to be able to communicate complex concepts, but in an accessible way, so we all need to be able to know how do we quantify risk so that we can communicate about it. We have that common way of looking at it. So we look at what is risk and how do we quantify it, what are the components of risk, hazards, vulnerability exposure, and then can we do those calculations? Can we calculate the probability of events happening and what impact will happen and what is the uncertainty around that? Because so key to discussing risk and communicating it is really about fundamentally understanding all those uncertainties involved. But even with all that, even with information about risk and understanding uncertainty and having all these calculations, people still don't always make optimal decisions. Why? What gets in the way? What are those barriers? And we look at both emotional biases and cognitive errors. So basically things that get in a way. How, why? Why did we let things get in the way of making optimal decision making. Because understanding those barriers to our thought processes means that then we can actually have conversations, and we can explain things in such a way that will help overcome those biases and hence help to actually trigger action. Because ultimately we want to use scientific evidence in order to to promote change and to improve Disaster Risk Reduction. So we look at these emotional biases. We look at quantifying risk. We go on to look at catastrophe modelling. Why is it necessary and how is it used and how could it be used even more in the future? We look at this in relation to the insurance industry and how the insurance industry can both help to transfer risk and reduce the impact of disasters, but also in some cases maybe it doesn't always work. You know, how can actually it maybe not help to increase resilience. We also talk about micro insurance within insurance concepts and not just looking at in more sort of developed countries, but also looking at very small scale projects at the local level. When you look at various examples of different disasters from around the world and how science is used in policy both in the UK and abroad, and we used some examples to do this for particular events, and then we also look at early warning systems in particular, as an example of the process and how we need to look at the science. But we need to look at how the science is used. And this this is what the module, as I said at the beginning is all about. It's how do we take the science and actually use it to promote effective Disaster Risk Reduction and disaster management techniques. So hopefully that's inspired you to want to know more about integrating science into risk and disaster reduction.