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Why do Impact Forecasting and Impact Modelling?

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When a weather or natural hazard event is predicted, providing meaningful information on the impact of the event to the public, emergency responders and governments is essential. Knowing what could potentially happen leads to improved preparedness and mitigation strategies to reduce these impacts. In recent years impact based warning systems, such as the UK's National Severe Weather Warning Service, have used impacts to categorise the level of weather warnings issued to the public. To help understand and assess potential impacts, impact modelling is a growing area of research and development. In the UK, the Natural Hazard Partnership's (NHP) Hazard Impact Modelling project aims to develop a series of Hazard Impact Models (HIMs) to establish a world-leading natural hazard impact forecasting service. Current HIMs focus on high winds, surface water flooding and landslides. Communicating the outputs from the HIMs effectively and with integrity is important; the models have to be understood by the user to be useful. This presentation will introduce impact forecasting and impact modelling and why this new EMS session on impact modelling and forecasting was created. It will present an overview of impact-based warnings and the HIMs being developed by the NHP, as well as discuss the challenges when developing impact models and the communication and understanding of outputs.