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Joint press release with BBK, DWD and THW

Hazards of extreme precipitation events experienced more often starting 2040

Global warming is advancing, and as a result, Germany can expect a sharp increase in extreme precipitation year in around 2040. In three decades' time there will be considerably more damage done by floods. Lawmakers, businesses and society must make timely preparations in anticipation of the looming hazards posed by weather extremes. These are the conclusions reached in a joint research project by the Federal Office of Civil Protection and Disaster Assistance (BBK), the Federal Agency for Technical Relief (THW), the Federal Environment Agency (UBA), and Germany's National Meteorological Service (DWD) on the effects of global warming on extreme weather events, which was introduced today in Berlin by the four public authorities.

"In the winter months of December, January and February, we expect more heavy precipitation throughout many regions of Germany", explains Dr. Paul Becker, Vice-President of DWD. Meteorologists define heavy precipitation as amounts of rainfall that are only exceeded locally on average every 100 days and—depending on the region— can range from 10 to 100 litres per square metre in a 24-hour period. The experts at DWD predict that the frequency of this occurrence will rise sharply in some areas starting 2040. Coastal regions may witness a doubling of heavy precipitation events (compared to the 1960-2000 time period), whereas the situation in the Alps will remain virtually constant, and the area lying between the coast and the Alps will experience an increase of up to 50 percent. In the summer months of June, July and August, the frequency of heavy precipitation events will not develop identically throughout Germany. DWD has forecast that most regions will experience a roughly 50-percent increase, with some north-eastern areas showing a slight decrease in heavy rainfall days.

Boosting precautionary measures to handle effects of global warming

"These events increase the pressure to take action and promote precautionary measures to cope with the consequences of inevitable climate change", explains UBA President Jochen Flasbarth. Extreme weather events in particular hold great potential to do harm, namely to infrastructure such as water and energy supply networks as well as transport routes. As a result, the federal government urgently seeks consultancy on how extreme weather events will change in future and what Germany can do in terms of precaution to prepare for these more frequent and severe weather events.

The Federal Environment Agency focuses on the consequences of weather extremes for the environment and society. As this is expected to vary from region to region in Germany, different adaptation strategies from the various regions are needed. Large cities, for example, will be greatly damaged by heavy precipitation, calling for adaptation measures that call for urban planning that focuses largely on taking water into account. UBA recommends that cities set up decentralised rainwater infiltration systems and design their surface areas such that they can be used for leisure time activities under normal weather circumstances whilst serving the purpose of water retention in the event of a disaster.

Adapting to climate change is task for whole society

Christoph Unger, President of BBK, emphasises that adaptation to global warming is a challenge for all of society as responsibility lies with each and every individual to do his bit. At the same time, coping with extreme weather events and other natural hazards has always been one of the Office's core mandates. "If we are to sustain and advance the current high level of protection provided to the public in Germany, we must detect changes in risk situations at an early stage and react in a timely fashion." Any possible change in heavy rainfall patterns would therefore have a significant impact on rescue services, fire departments, the THW, and other civil defence actors. In consideration of the impending changes civil protection actors would do well to affirm that the human and physical means and resources necessary for action will also be suitable and sufficient in the future. It may be wise to rework alarm plans and solution concepts and to evaluate them as to whether reserve capacities are adequate—assessing everything from specialist equipment to duty apparel.

Extreme weather events are the most frequent major catastrophes

Extreme weather events such as blizzards, floods and extreme dry and heat spells have and continue to be the most common natural catastrophes to affect Germany, according to Volker Strotmann, THW Director of Department for Operative Missions. As the federal government organisation which assists local hazard management authorities with technical support during natural catastrophes, the impact of a possible change in extreme weather events would be considerable for THW. Strotmann pointed out 2010 as an example, in which a total of 845,781 hours of operations were logged- nearly twice as many as in 2009. The lion's share of operations were related to weather events. "The year 2010 may have been an exception in terms of climate, but it shows how important it is for THW to count on such events becoming more frequent in future and whether we must adapt to a changed environment." In order to gain useful insight on which to base decisions about the future, the THW as the operative organisation participated in the research project. It is only through identification of risks, probability of occurrence and estimation of expected damage that concerted efforts to counter these catastrophes can be made. THW can thereupon reach a decision about whether to uphold its present structure or to shift focus to other operative areas. This might include consideration of increasing manpower capacity that is able to move large volumes of water or increasing capacities to supply electricity.

Keynote speeches and other press conference documentation are on the website of the German National Meteorological Service at www.dwd.de/presse

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