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Balancing permanent and forecast-based action to lessen wind-induced building damage in the Philippines.

Demi Vonk[1], Marc van den Homberg[2], Nanette Kingma[1], Dinand Alkema[1], Aklilu Teklesadik[2], Damien Riquet[3], and Maarten van Aalst[4,1]

[1]University of Twente, ITC, Netherlands
[2]Netherlands Red Cross, 510 humanitarian data team, Netherlands
[3]German Red Cross, Germany
[4]Red Cross Red Crescent Climate Centre, Netherlands

With a global paradigm shift from post-disaster response aid to anticipatory action, the question on how anticipatory action relates to long-term climate adaptation and often government-led actions towards permanent disaster prevention becomes more relevant. With rising disaster risk, a framework that decision-makers can use to select between preventive and preparedness risk reduction efforts would be most useful. A model originally developed to compare permanent interventions to forecast-based action for floods was applied to wind-induced building damage due to tropical cyclones, focusing on a case study from the Philippines. We made use of a typhoon forecasting model based on the ensemble forecast from EMCWF, and modeled the wind footprint to estimate the wind speed in the case study area. A threshold was defined, similar to how it is done in actual operations by the Philippine Red Cross. If the forecasted typhoon exceeds a pre-set threshold in terms of wind speed, action to strengthen light-weight wooden houses with a Shelter Strengthening Kit (SSK) is taken. SSKs temporarily make these houses more resistant to withstand extreme winds, thereby reducing the impacts. This short term action is compared to a scenario in which lightweight wooden houses are permanently upgraded. Results give actors in humanitarian response, anticipatory action as well as permanent disaster prevention insight into which variables affect this balance. and help policymakers to allocate their scarce budgets in a cost-effective way. The framework, although developed for the Philippines, can also be replicated in other cyclone-prone countries.