

Tropical Cyclone Risk

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In tropical cyclone (TC) risk analysis, many scientists tried to estimate damage focusing on TC intensity and/or size, whereas the role of TC track has not received much attention. Here, we show that TC damage is highly dependent on the track path. In the decision tree analysis, track was chosen as a primary factor to predict damage occurrence while the other risk elements were secondary factors including exposure/vulnerability as well as TC-based hazard parameters like central pressure, maximum wind speed, and size of TC. This significant track-dependency of TC risk is because TC location mostly determines damage through local active hazard interrelating with both of socioeconomic and physical geography. This study suggests that small track deviation could lead totally different amount and horizontal distribution of damage.