

DROUGHT



The number of consecutive dry days (CDDs) is commonly used to assess prolonged periods of dry spells (no-rain days) and serves as an indicator of meteorological drought. Water Resources Planning Branch of the Water Resources Agency, Ministry of Economic Affairs (2022) indicates that there is a consistent increase in CDDs across these three regions (Figure). Specifically, under a 2°C global warming level scenario, the number of CDDs in northern, central, and southern Taiwan could increase by 16.9%, 11.1%, and 13.7%, respectively, leading to longer periods without rainfall in the future. Regarding low-flow characteristics under climate change scenarios, river discharge in northern, central, and southern Taiwan is projected to decrease consistently. In the most severe scenario, the reduction in low-flow discharge ranges from -18.2% to -49.5%. Additionally, analysis of seasonal rainfall changes indicates (Tseng et al., 2022) that while the joint probability of normal meiyu and normal typhoon conditions increases under climate change scenarios, the marginal probabilities of delayed meiyu and delayed typhoon conditions also rise. This suggests a higher likelihood of relatively abundant rainfall but also an increased probability of delayed meiyu and delayed typhoon conditions.

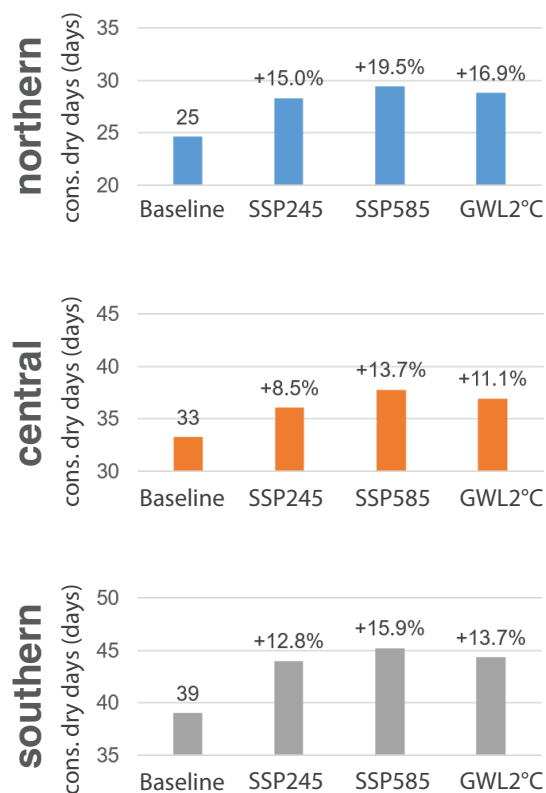


Figure
Changes in CDDs under Various
Climate Change Scenarios

