

Background:

- Heavy rain caused **massive flood in 2020 in Kumamoto**
- Kumamoto Pref. has implemented **Blinded-Flood Response Desktop drill** with local municipalities



Previous Approach (2021-22)

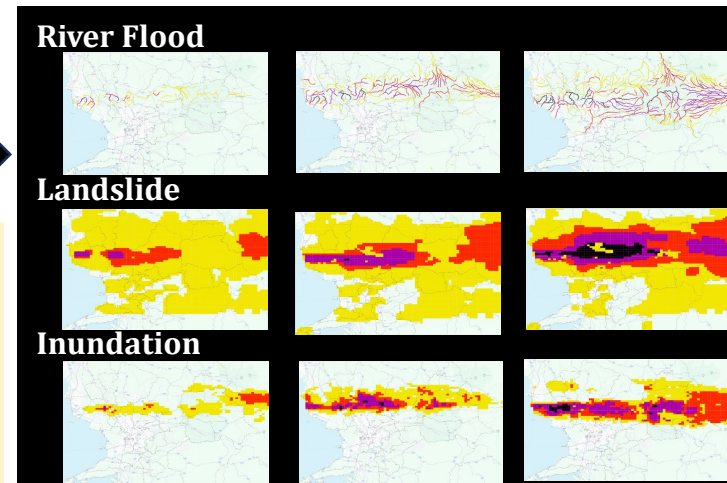
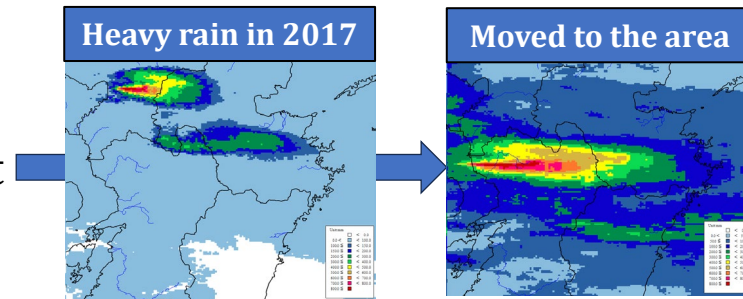
Prepared intentional impacts first, then created weather conditions

Challenge: The virtual heavy rain is **unrealistic**, making it difficult to share a sense of crisis

Novel Approach (2023-)

Steps of creating Scenario

1. **Modified precipitation data** from a past event
2. **Visualized risks** with “Kikikuru”
1-km lattice-mesh risk levels based on the *radar/rain gauge analyzed precipitation data*
 “Kikikuru”: a web-based real-time risk maps created by Japan Meteorological Agency: JMA



3. Pre-test in 3 municipalities

Intervened in 3 and 3 w/o (n=100)
Experiences of the past drills (n= 56)



F-test & Student t-test	Interv.	Contr.	P-value
The timing of issuing the evacuation notice was appropriate	3.29	3.69	0.097*
The scenario could actually happen	4.08	3.59	0.055*
The scenario is close to a damage estimate	3.54	3.00	0.027**

* $p < 0.1$; ** $p < 0.05$

Key Takeaway

- Past weather events will be used for drills as an **evidence-based scenario**
- The novel approach contributes to **get closer to reality**