Real-time response: Contributions to clear-sky flooding in Hawaii, April 2017

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Impact of high sea levels: April 2017

• Tourism
• Transportation
• Industry/Shipping
• Public health
Contribution 1: High tides
Contribution 2: Ocean dynamics

Near-real-time satellite altimetry (CMEMS)
Contribution 2: Ocean dynamics
Contribution 3: Wave-driven water level change
Conclusions

1) Recent nuisance flooding in Hawaii resulted from the combination of high tides, El Niño anomalies, decadal variability, and elevated surf.

2) We used global ocean datasets (altimetry and tide gauges) to diagnose the causes of the extreme sea levels and inform the public in real-time.

3) Predictions of these events will benefit from improved physical understanding of the relevant decadal and interannual processes.