Dry-wet asymmetricity in changes of future surface water flow: an event-wise analysis

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AGU FALL MEETING

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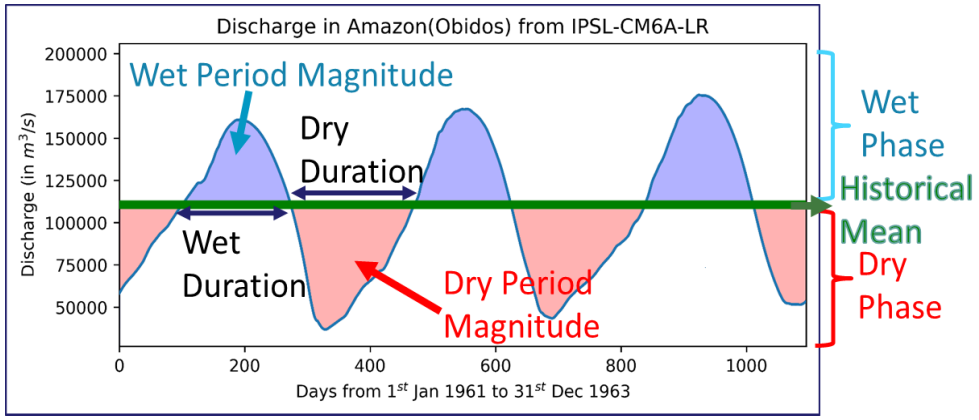
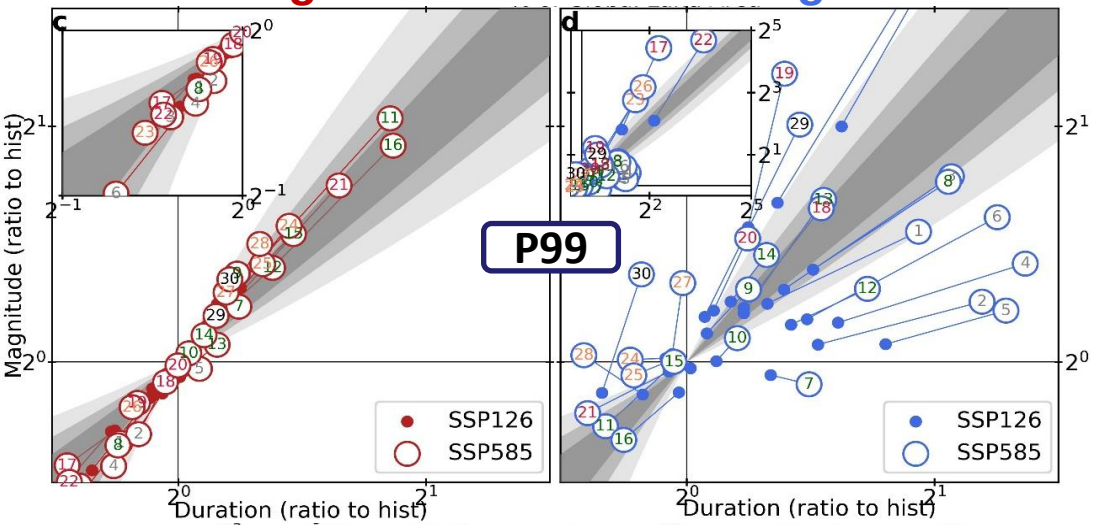
EVENT-WISE ANALYSIS OF DRY AND WET PHASES



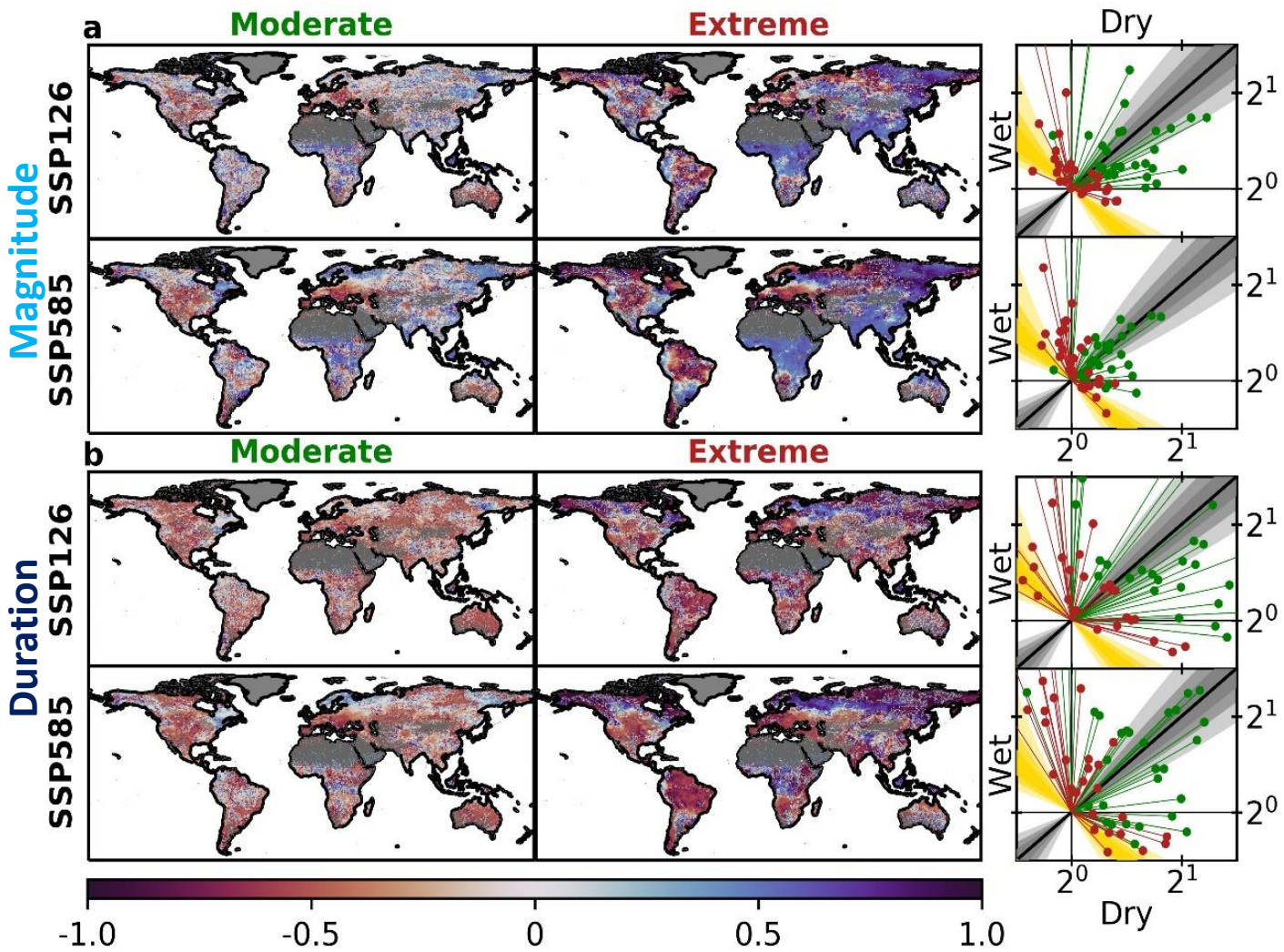
MAGNITUDE-DURATION CHANGES

Dry Phase — Homogeneous

Wet Phase — Heterogeneous

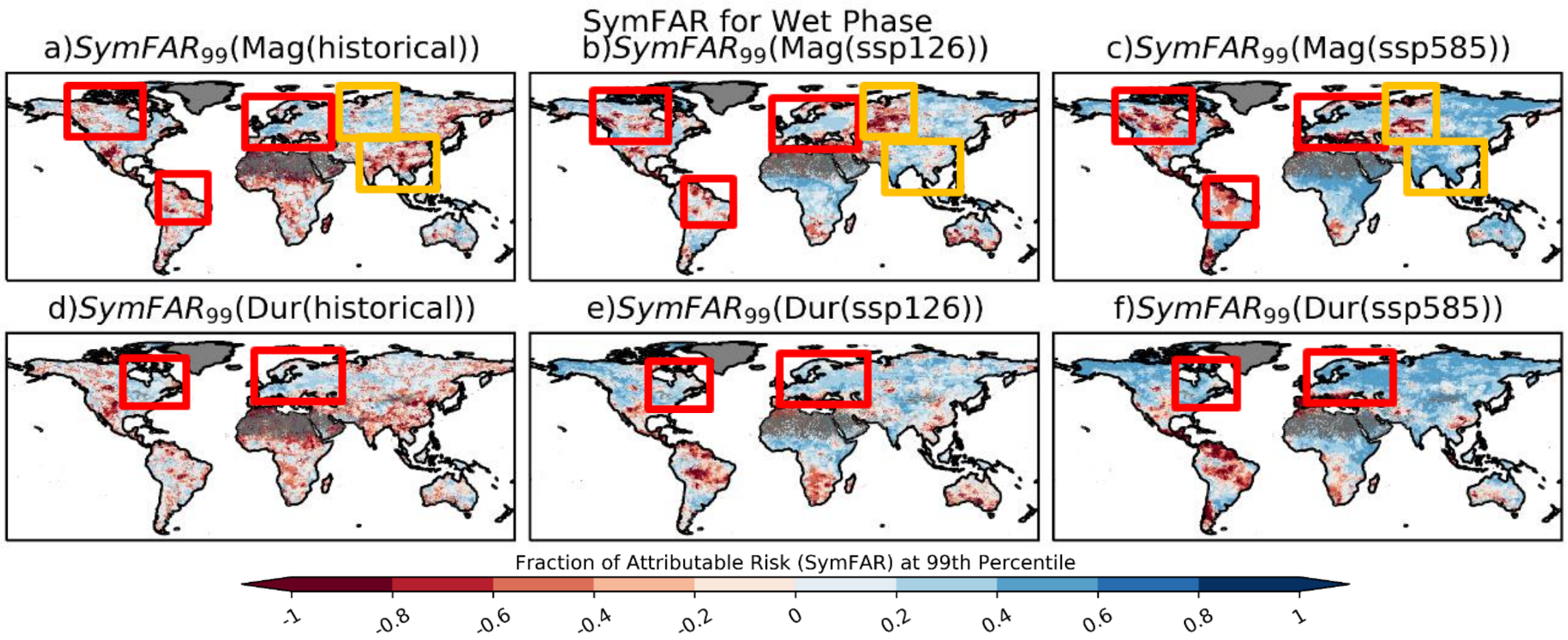


SIGNIFICANT WET-DRY ASYMMETRICITY IN SHIFTS



Intensification of shifts with additional warming from SSP126 to SSP585

HUMAN INDUCED WARMING IS RESPONSIBLE FOR BOTH INCREASE AND DECREASE IN RISK OF EXTREME EVENTS



Tipping points in historical period and reversal of risk with warming

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SUMMARY AND CONCLUSIONS

Dry shifts are homogenous for magnitude and duration

Voluminous wet shifts and protracted dry shifts in the future

HIW both increases and decreases the risk of extreme events

Event-wise analysis unravels the complexity of change in streamflow that enables us to formulate better adaptation and mitigation strategies.

The climate change caused by HIW is non-linear in nature with **reversal of risk in certain regions as warming increases.**

Thank you for your time!

For queries, please contact:
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Image: https://nerc.ukri.org/nerc/assets/images/news/Flood%20and%20drought.jpg