Toward operational flood forecasting and warning services across West Africa – recent experiences at national and regional scales

Jafet Andersson[1], Mohamed Hamatan[2], Martijn Kuller[3], Addi Shuaib[4] , https://doi.org/10.5194/egusphere-egu21-3027

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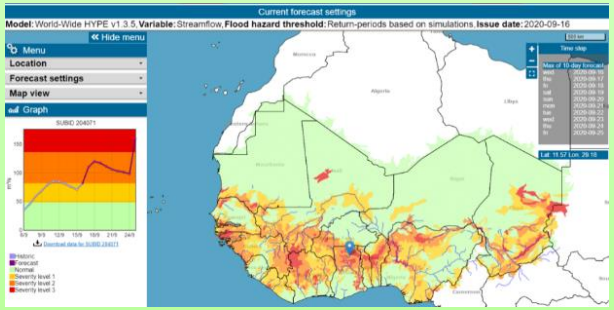
1. Background & Aim

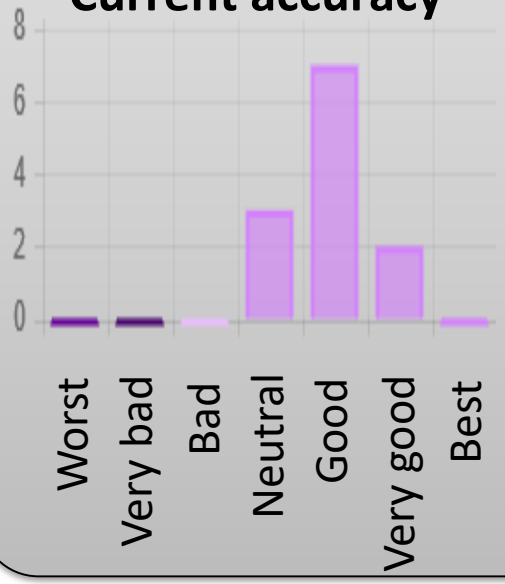
- Flood challenges in West Africa
- FANFAR: co-developed system providing flood forecast & alerts across region since 2018
- How accurate is it?



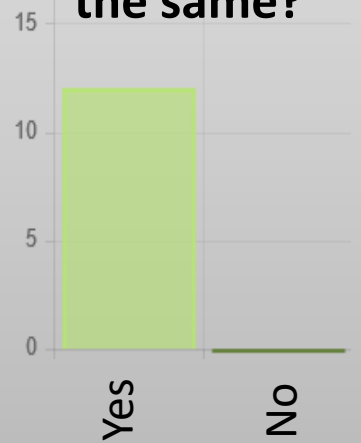
2. Experiences

- Government agencies in 17 West African countries
- 2019 & 2020 rainy seasons
- Location, timing, magnitude, alert level

Current accuracy



Future use if accuracy remains the same?



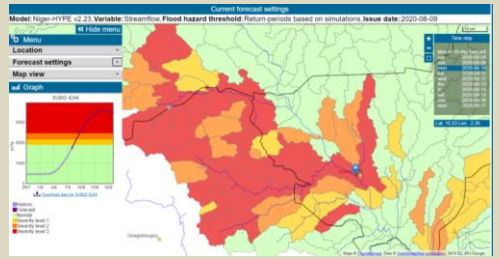
3. Streamflow gauges

- Example: record flood in Niamey, Niger, 2020

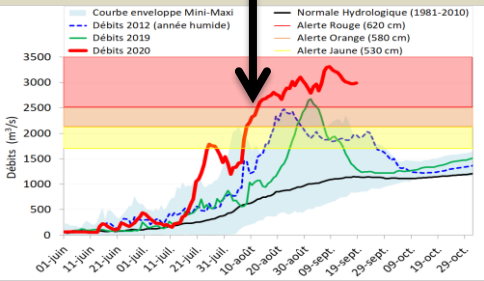
Timing & Severity well captured

Duration underestimated

Forecast for 2020-08-10



Gauge observations



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Additional information

- Lienert et al. (2021) https://doi.org/10.5194/hess-2021-177 describes the process and results of co-designing the FANFAR system as well as the survey to gather experiences around current accuracy and future use of the system with West African stakeholders.
- Andersson, et al. (2020) https://doi.org/10.5194/egusphere-egu2020-7660 contains additional project background and summary of accuracy assesment at a set of streamflow gauges and some experiments to improve accuracy.
- https://fanfar.eu/resources/ → FANFAR Knowledge Base → Workshops. These pages contain feedback from each participating organisation around critical flood events in their area, the perceived accuracy of FANFAR, and their flood risk communication.
- https://fanfar.eu/resources/ → Deliverable 3.2 Report documenting and explaining the hydrological models. This report contains results from experiments to assess accuracy at streamflow gauges and improve accuracy through e.g. recalibration, assimilation, meteorological inputs and flood thresholds.

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