



Feedback on FANFAR system and floods during 2019 from Liberia

National Disaster Management Agency/ Liberia Hydrological Service



Gemeh Buway Roberts & Guah Kennedy

Date: Feb.10, 2020



River Map

Surface water is supported by six main water sheds: Mano, Lofa, St Paul, St. John, Cestos, and Cavalla rivers and many smaller tributaries.



System for Network Data Collection

- 15 water level stations
- Eleven rainfall stations
- Each station has an observer assign to it
- For the rainfall station reading are done one time and twice during heavy down pour

■ Map of gauge stations



Flood events during 2019

Summary of all events



Number of floods	32
Casualties	0
People affected	35000
Damage cost	Insert total cost of damages from floods

Worst event

Where	St. Paul River, Whea Town
When	August 2, 2019 and lasted for 1 week,
Casualties & damage	Zero death, 10000 people affected with the estimated damage costs



Second worst event

Where	Gbo River, Soul Clinic town (Gaza Community)
When	August 20, 2019 and lasted for 1 week
Casualties & damage	Zero death, 8000 people affected with the estimated damage costs



Accuracy of FANFAR forecasts & alerts

How well did FANFAR forecast floods / streamflow peaks during 2019?

1. Compare with (i) **gauge measurements**, (ii) **other forecasting systems**, (iii) **field observations**, (iv) **news reports** etc.
2. How well did FANFAR capture the **location** of peak flows? Was it Correct / Near / Far/ Upstream / Downstream?
3. How well did FANFAR capture **timing** of the peak? Example: 2 days early, or 1week late
4. How well did FANFAR capture the peak **magnitude**? Example: overpredicting by 10%, or underpredicting by 30%

Please illustrate & give evidence for your accuracy assessment (responding to the questions above)

This can be graphs, maps, screenshots, photos, videos, statistical summaries etc.

Please illustrate & give evidence for your accuracy assessment (responding to the the questions above)

This can be graphs, maps, screenshots, photos, videos, statistical summaries etc.

Accuracy of FANFAR forecasts & alerts

5. How well did the forecasted **severity level** (yellow/orange/red) correspond with the actual severity observed in the field? Did it vary in any way? Example: FANFAR typically showed higher severity than real impacts on the ground, except for the most severe events where it was about the same.
6. Were there any **false alerts**? E.g. Yes on 2019-09-01 in Niamey FANFAR had severity level 2, but nothing was observed on the ground

Please illustrate & give evidence for your accuracy assessment (responding to the questions above)

This can be graphs, maps, screenshots, photos, videos, statistical summaries etc.

Please illustrate & give evidence for your accuracy assessment (responding to the questions above)

This can be graphs, maps, screenshots, photos, videos, statistical summaries etc.

How we used the FANFAR system in 2019



Forecasting system used:	<input checked="" type="checkbox"/> FANFAR	<input type="checkbox"/> OTHER	<input type="checkbox"/> NONE
How often:	<input checked="" type="checkbox"/> < 1 PER WEEK	<input type="checkbox"/> 1-7 TIMES PER WEEK	<input type="checkbox"/> EVERY DAY
At what time:	<input checked="" type="checkbox"/> BEFORE FLOOD	<input type="checkbox"/> DURING FLOOD	<input type="checkbox"/> AFTER FLOOD
What component(s):	<input checked="" type="checkbox"/> VISUALISATION PORTAL	<input type="checkbox"/> HYDROLOGY-TEP	<input type="checkbox"/> KNOWLEDGE BASE

1. What is your general experience from using FANFAR?
2. What is the most useful feature of FANFAR?
3. What is the most important feature to improve?
4. Did you use FANFAR flood risk information in material sent to your stakeholders? What information? How did you distribute it (bulletin, e-mail, whatsapp, sms, etc.)? Please give example (e.g. image/screenshot).





Additional feedback

- Optionally, you can provide additional feedback on the FANFAR system here





www.fanfar.eu

