Tropical Atlantic ocean & weather forecast

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Observation Influence results in 2 global systems
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Weather forecast

- Extremes, sub-seasonal variability, climate and other aspects are addressed in depth in the other sub-chapters
- Mainly based on Numerical Weather Prediction, seen from Europe. Earth system target (→ km).
- Western Africa (AMMA)

- Key importance of data assimilation, and satellite operational missions.
- Significant impact of in situ observations (see Paul Poli)
- Long term monitoring is also critical (reanalysis and comparison of forecast to climatology)
- Short term previsibility linked to slowly varying components (e.g. W African weather and the AMOC)
- Complex topography, model resolution and spatial scale
- The realm of salinity
- Cross-equatorial ocean flow
- Meridional and equatorial asymmetric modes in atmosphere and ocean variations (and monsoon circulations)
- The Caribbean warm caldron, source of Rossby waves, interaction with MJO, cyclones, Gulf Stream
- Interbasin variability
- And so on... including Western Boundary currents, marine stratocumulus...

The current review has a benefit for operational forecasters, the guys we must not forget, who are there to compensate for the weaknesses of the numerical suites...
Thanks