Discussion Space early warning in Africa – WG3: South Africa (Wed 18 Sep 2024)

- Scientific role: adapt/customize the NWC-SAF SW for tailored products
    - Engagement with an existing scientific network in the region
    - Products to be adapted on the main phenomena monitored observed in the region/countries covered
    - Product validation activities

1. Existing scientific network to take into account e.g. universities etc. Mandate is with national weather services in their countries.
2. Hydrological and other non meteorological institutes as partners
3. Academic networks as partners (presentation on Thursday's session)
4. Africa network for disaster programme, EW and disaster assessment
5. Canadian funded project for tropical cyclone intensity/tendency
6. Water basin and acro met related products
7. Disasters related to snow need to be covered, "cold waves"
8. Multi hazard aspect and impact
9. Database of severe weather events in SADC, used for verification
10. Use common tools like Moodle
11. SOP for data validation

- Operational role: Operate AMSAF and disseminate products
    - 24/7
    - Main product documentation
    - Run/Maintain computation capabilities/dissemination infrastructure

1. Each African region should have NWC-SAF running. RTC role in that
2. Which institutions have capacity to run NWC-SAF
3. Different RECs need different products, and this should be taken into account when operational capabilities are decided
4. ITU involvement in data dissemination in relation to EW4A
5. Monitoring tools for product dissemination, AI/ML
6. One portal model like RMSC web portal
7. CAP to be followed together with WMO
8. WIS 2.0 to be utilized for product dissemination
9. Make study on the most economical infrastructure related to cloud computing/services and NREN
10. Specific roles in SADC region TBD
11. Benchmark best practises from Europe to run AMSAF in Africa

- Engagement with users
    - Collect feedback on products
    - Run a helpdesk
    - Maintain contact with users
    - Use cases

1. CAP protocol is for general public and not used in specific applications like aviation. To whom it is disseminated.
2. CAP has written and map format.
3. NGOs and private sector involvement

4. ITU engagement in data dissemination and outreach
5. Networks of NMHSs and DRR actors to be involved, and trained how to interpret and use warning messages
6. Cell phone network not always handle the high traffic in severe weather case. Radio amateurs' systems always work.

- Training
    - Building capacities in the use of products

1. Specific training for island states
2. NWC product specific training organized in SAWS. However, those products not used in every country. From met service to met service.
3. Many countries capacity for NWC missing (Why?), training needed.
4. SWIFT, WISER project benefits
5. NWC training needs some customization to be effective.
6. Training needs to be relevant for the needs of the specific country
7. Build general public trust on met service products. Starting from ministerial level messaging to take weather service seriously.
8. Trust comes from the usefulness of the products and services
9. Impact based forecasting training
10. Media training for weather service and products
11. Training to cover whole value chain, from products to disaster risk management etc.
12. Political/strategical aspect of training, sending signal on AUC, World Bank level etc.

- Sustainability

1. Human resources, big hardware and complicated infrastructure needed for NWC service
2. Taking an advantage of regional project, and engage with new projects
3. Avoid duplication and put effort on cooperation, with clear roles to guarantee continuation of AMSAF/EWS
4. Strengthening the existing structures with clear roles
5. Participants need to be committed from top to down
6. Socio economic benefit studies of EW services. This is missing in many African weather services.

Group discussion Reps: Mozambique, Madagascar, SA (RAIDEG meeting on Saturday)

- Scientific role: adapt/customize the NWC-SAF SW for tailored products
    - No customized algorithms
    - 4x4 km resolution
    - SA region for 1.5 km
    - UK Met office model data
    - Fire products
    - Energy: solar radiation
    - Heat waves
    - DRR: impact based early warning system
    - SAWS has impact metrics: snow, rainfall, TS, wind, snow, ...
    - Some product validation done
        - SOP for Cal/Val in preparation
        - Ground sourcing obs

    - Needs extra resources

- Operational role
    - SAWS has mandate to do warnings
    - Regional services can provide guidance
    - RMSC web portal
    - Cloud based system
        - Still very expensive option
        - African cloud in the future
    - Requires maintenance resources
    - AMSAF as operational service needs resources
        - Human
        - Infrastructure could be outsourced, cloud?
        - Part of existing operational service
        - SOP and product documentation needed

- Engagement with users
    - Levels of communication should be defined within users with different roles
        1. NMHS
        2. DRR management, environmental agencies etc
        3. Big audience
    - CAP: Common Alert Protocol
    - SADEC: Stake holder engagement.
    - Universities, SANSA, CSIR (more climate)
    - WMO RTC at Madagascar
    - Collaboration between SADEC, RSCs and climate services should be improved

- Training
    - NMHS training
        - Regional training center
        - Train the trainer
        - Product training
        - Moodle site
        - VLab, COMET
    - Training for DRR management etc
        - NMHS responsibility
    - General audience
        - Community training sessions
        - Plan at SAWS to have that kind of training