PISSARO

Forecasting extreme events in the southwest Indian Ocean on a monthly scale

Collaborative approach with PIROI for disaster risk management

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Forecast ranges

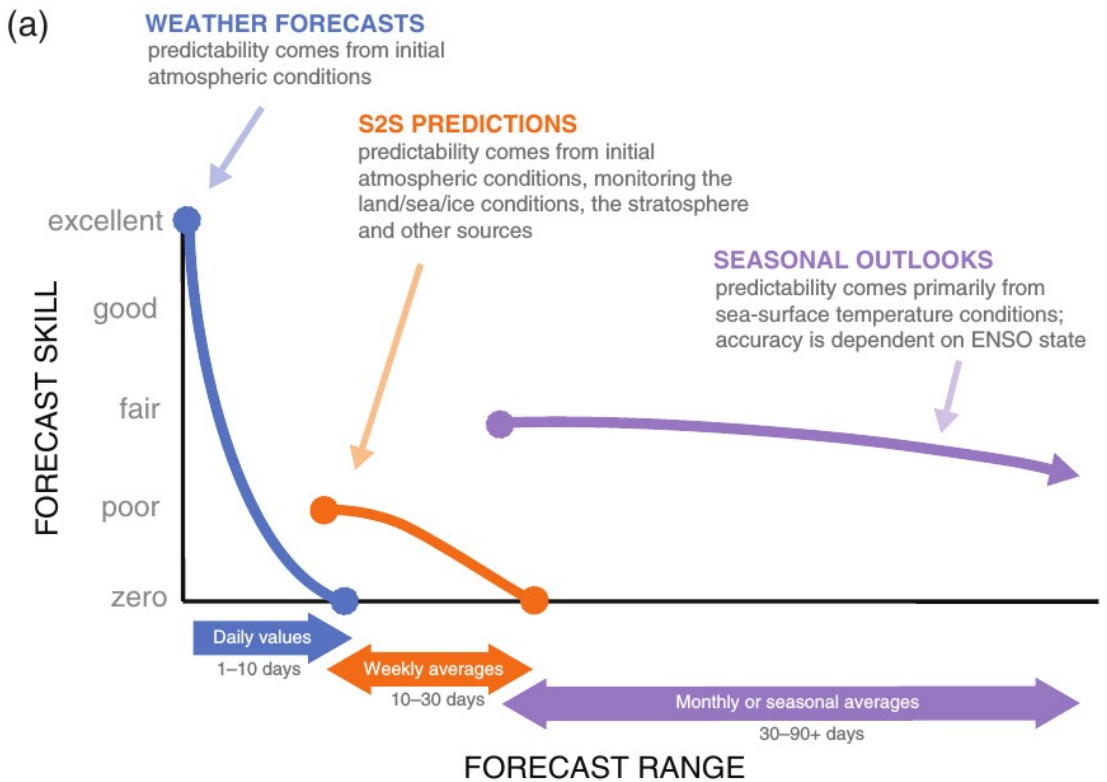


Figure. Qualitative estimate of prediction skill based on prediction range. Source: White et al. (2017).

So far, efforts of the scientific community on :

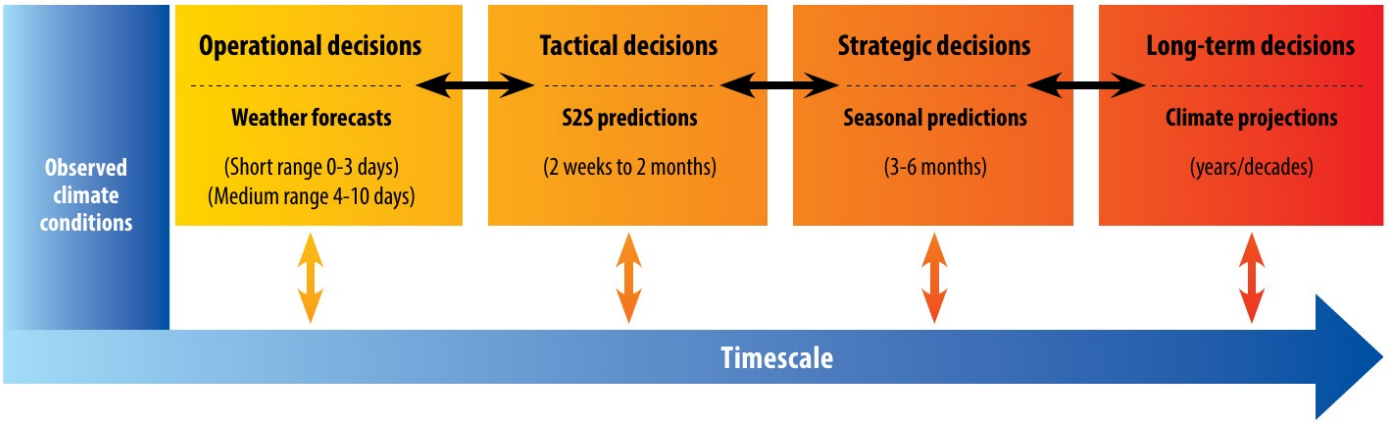
- short and medium term weather forecasting (a few hours to a few days)

  → predictability depending on the quality of the estimate of the state of the atmosphere and the ocean at the start of the simulation
- seasonal forecast (3 to 6 months)

  → predictability according to evolution of ocean state / mean state of atmosphere and ocean / external forcings.

Intra-seasonal forecasting = **until recently underutilized time frames = missing link** →Provide users with **a seamless chain of information** to allow them to refine the elements entering their decision-making process as they go along.

Intra-seasonal forecasting and risks



Source: Modified from ESCAP (2017).

Figure. Monthly forecasting at the intersection of predictability sources. Disaster risk management interventions across the continuum of climate information time scales. Figure extracted from the 2019 United Nations report (ST/ESCAP/2867).

Intra-seasonal forecasting = **missing link** to be able to apply the **"Ready-Set-Go" concept** proposed by the Red Cross Climate Center and IRI (Goddard et al., 2014)

Motivation of the PISSARO project = to evaluate the potential contribution of intra-seasonal forecasting to **support decision making** for various applications including disaster risk reduction (DRR).

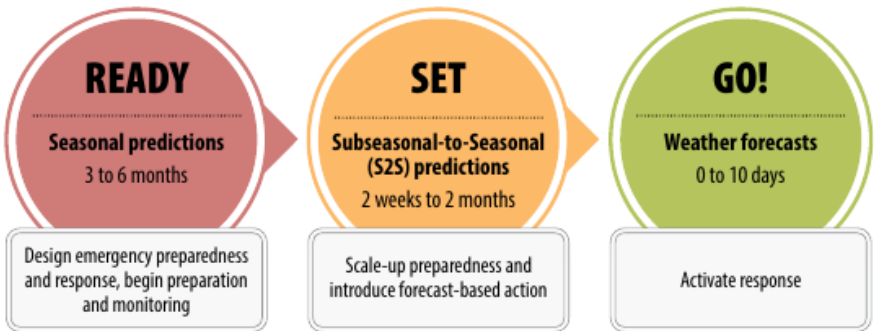


Figure. Ready!", "Set!", "Go!" decision-making structure developed by the Red Cross Climate Centre and IRI. From the 2019 UN report (ST/ESCAP/2867), credit: Goddard et al., 2014.

Collaboration with a DRM stakeholder

Objective:

Exchanges between scientists and users to develop products to help disaster risk preparedness in the southwest Indian Ocean

Activities:

- **Regular meetings** between PISSARO and the operational world
- Invitation and participation in **PIROI and humanitarian workshops**
- **Working session** with identified interlocutor (E. Clerissi internship)

Actions of PISSARO:

Design and development of cartographic products for the anticipation of extreme phenomena (heavy rainfall and tropical cyclones) on the inhabited territories of the south-west Indian Ocean

Perspectives:

- Testing of products in « operational » by an identified interlocutor
- Climatological study to provide rainfall/wind thresholds to build a demand to access to FbF (Forecast-based Financing)

Thank you for your attention !

PISSARO

Retrouvez l'actualité du projet PISSARO et de nos actions avec nos collaborateurs sur le blog du site web pissaro.re !!!

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