



Integrating Climate Information into Adaptive Social Protection



ASPIRE - *Adaptive Social Protection - Information for
Enhanced Resilience*
and **Red Cross Red Crescent Climate Centre**



Cheikh Kane, Understanding Risk Abidjan, 20_22 Nov 2019



What is Adaptive Social Protection (or ‘shock responsive social projection’)

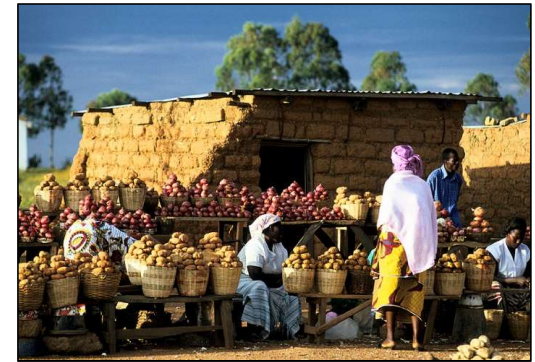
Social protection is a way to enhance the capabilities of individuals and groups to meet the needs of everyday life. It is also a means to break down economic as well as social barriers limiting the access to services and benefits of development. Examples of social protection include mechanisms such as social assistance (e.g. cash transfers, school meals and public works programmes), insurance (e.g. maternity, unemployment or illness cover), pensions (i.e. state pensions) and labour market interventions (e.g. maternity and sickness benefits).

Adaptive social protection aims to protect poor households from climate and other shocks *before* they occur and support them *when* they occur through measures such as predictable transfers, building community assets and other coping mechanisms.

The ASPIRE project was designed to explore **how climate information can inform social protection programming in the Sahel to enable it to become adaptive.**

(Adaptive) Social Protection in the Sahel and ASPIRE

- ASPP program run by World Bank to increase access to effective ASP systems for vulnerable people in the Sahel called the Adaptive Social Protection Programme
- Supports national governments to design, run and evaluate ASP systems
- The ASPIRE programme funded by DfID. It will seek to support the World Bank's programme through looking at if and how climate information can be integrated into ASP to support decision-making (e.g. increasing regular cash payments to vulnerable households if a drought is forecast)



Main questions of interest of the World Bank

1. When the shock comes first, there is first whole set of work to do about:

The kind of shock is coming

- quantifying the shock
- predicting the shock
- modelling the shock

2. A second piece of work is around:

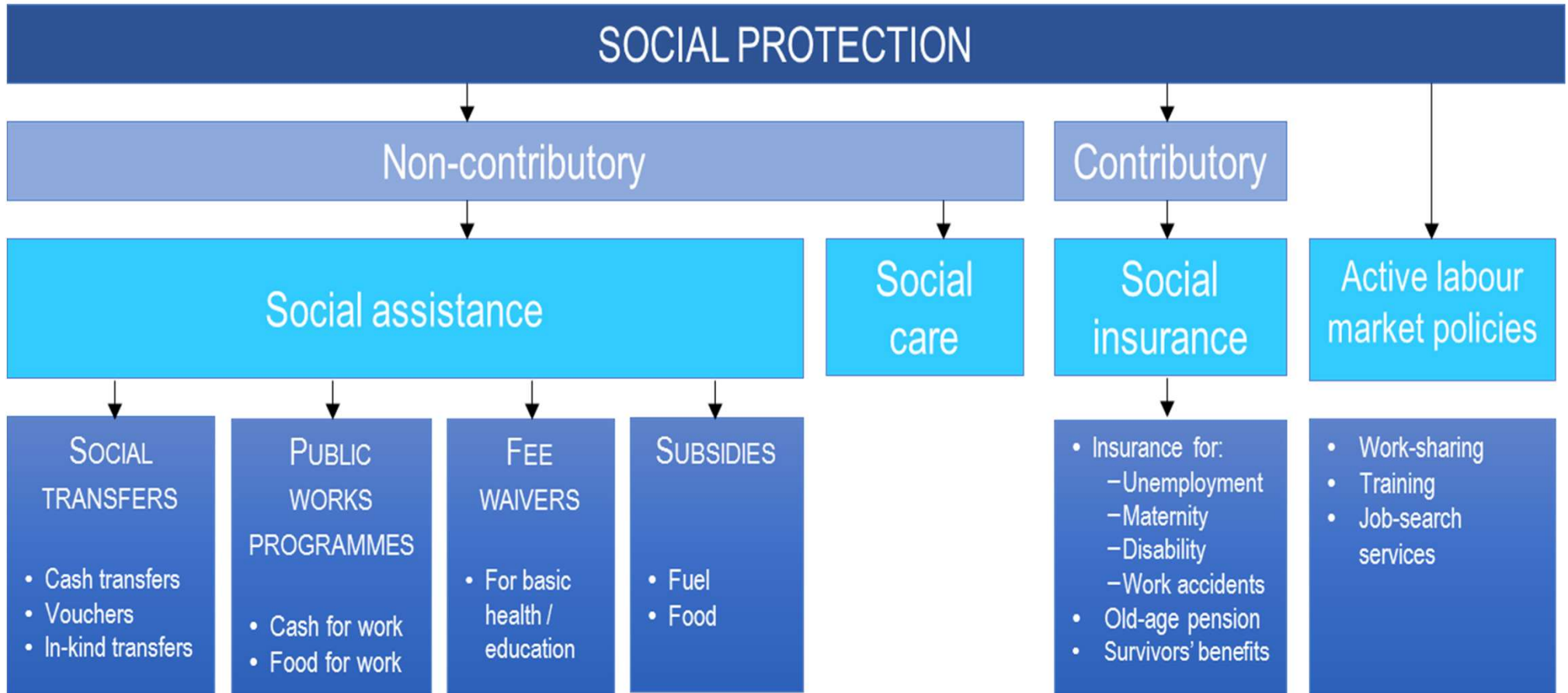
- what will the Household (HH) do without any SP
- how will the HH self-protect and react and start compensating mechanisms

3. A third whole set of work is around protecting the HH through:

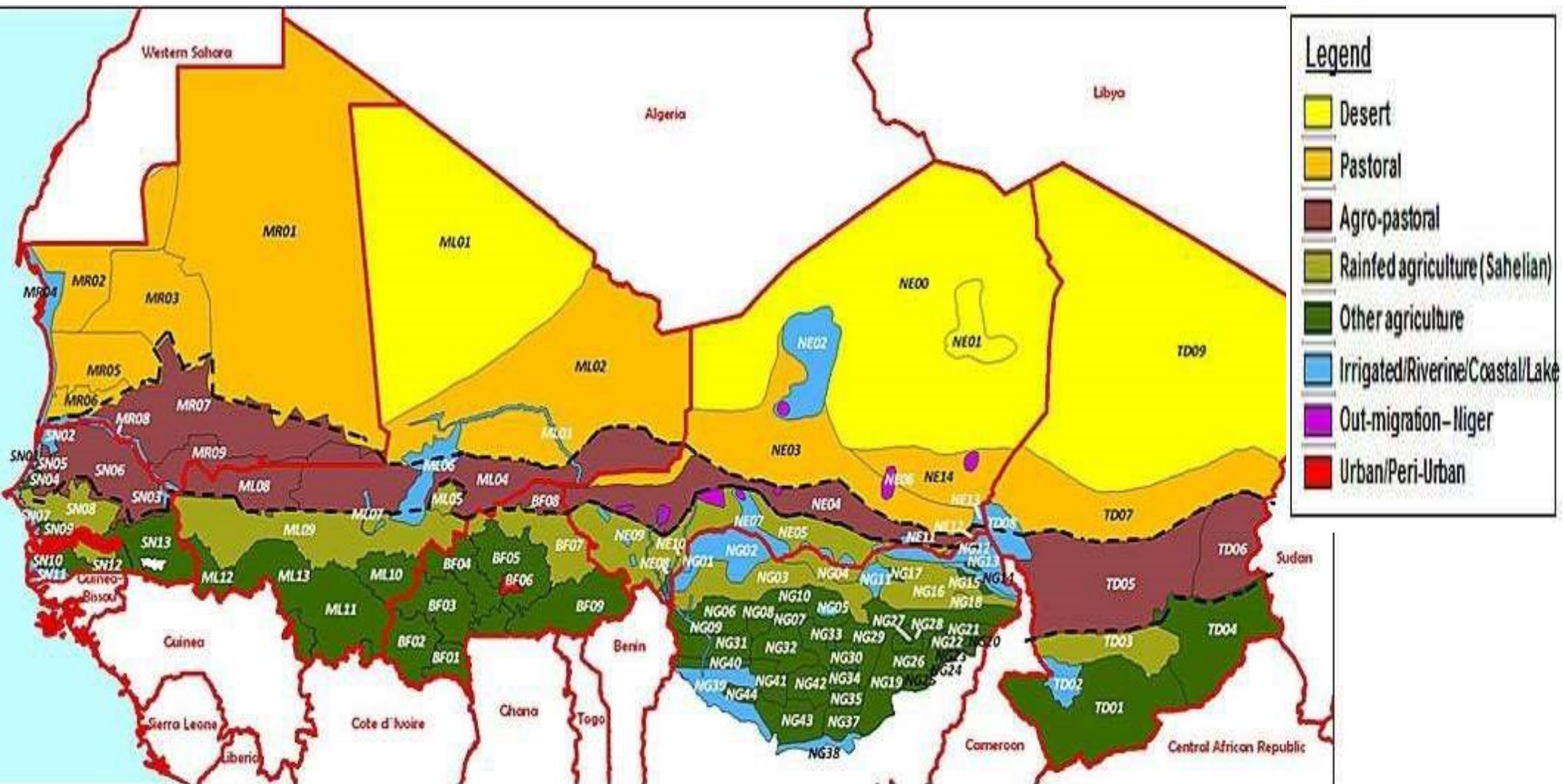
- hedging the shock
- providing some sort of insurance reaction in channelling self protection behaviour into something productive, so that it helps build their own resilience

4. A last set of work is around:

Prevention, so how can we build that resilience more on the long term and protect the HH for the next shocks and channel such a behaviour through education as well



O'Brien, et al. (2017), 'Shock-Responsive Social Protection Systems Research. Oxford Policy Management, Oxford, UK.



Livelihood zones across the Sahel

Climate information for adaptive social protection

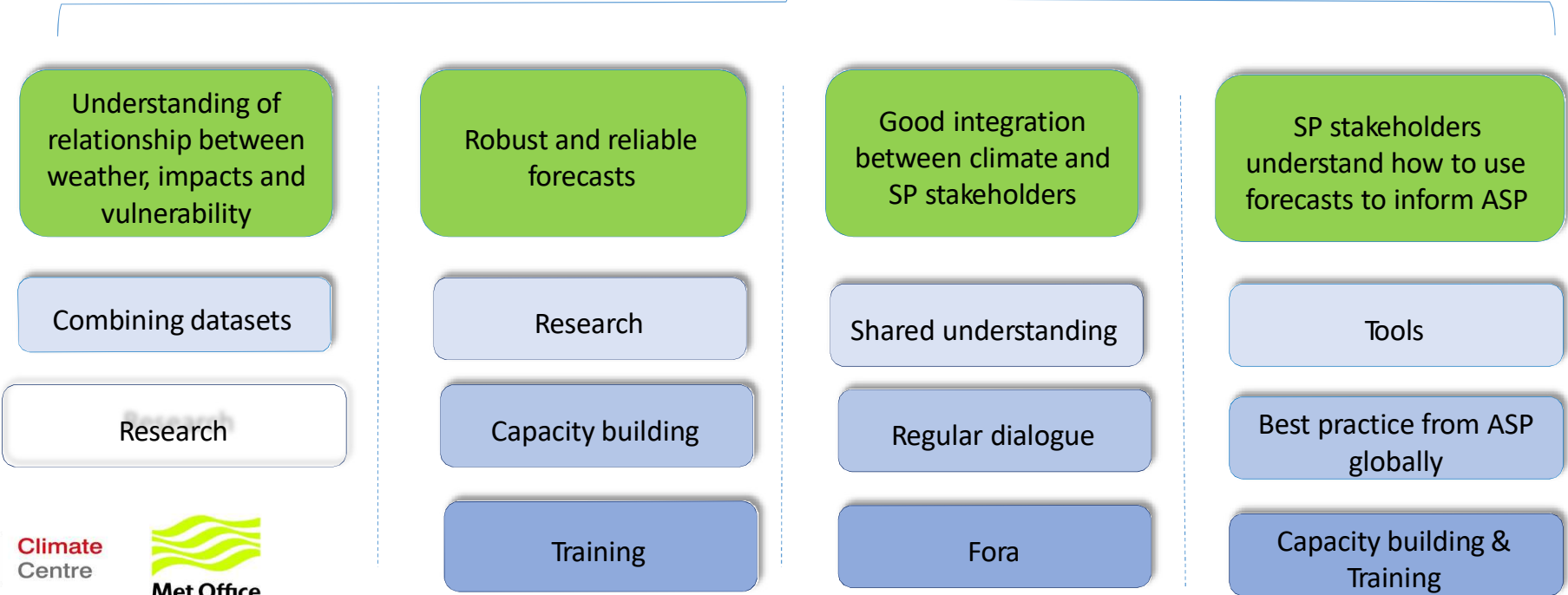
Climate information (across timescales) has the potential to inform the design, targeting and scale up or out of social protection mechanisms. For example, in theory a regular cash transfer to a household could be increased if a drought is expected.

This is reliant on:

- Clear entry points for climate information to inform social protection.
- Reliable forecast information - Seasonal forecasts likely to be most relevant to informing forecast based early action (including ASP) but they need to be generated in an objective way which is informed by skilful forecast models.
- Good understanding of **impacts** of weather (e.g. on livelihoods, food security etc)
- Good understanding of Adaptive Social Protection and climate by SP stakeholders and vice versa.

Transformation towards a national level adaptive risk management system
(DRM, ASP, humanitarian....)

What needs to be in place
for climate information to
inform Adaptive Social
Protection



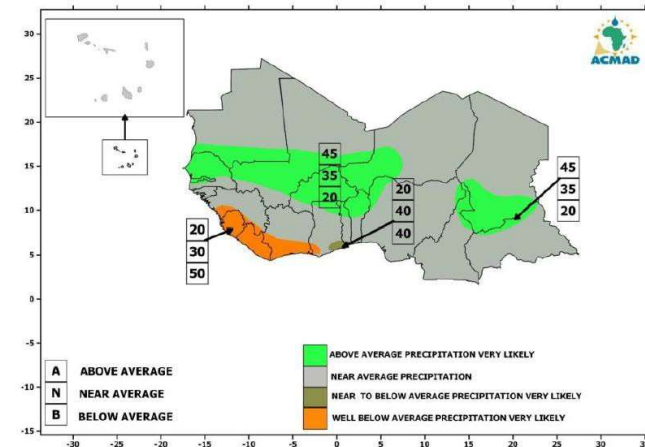
Research on seasonal forecast skill



Research : How good are seasonal forecasts for Sahelian West Africa?

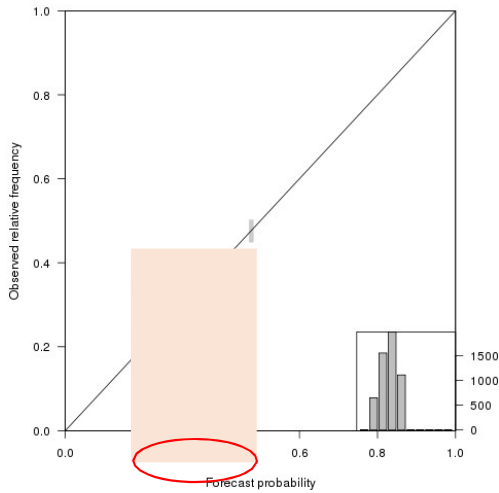
Regional climate outlook forum (PRESASS) seasonal forecasts

- Example “consensus” forecast
- Combines statistical methods, dynamical models, and forecaster experience
- Issued as forecast probabilities of season total precipitation falling into one of three “terciles”
- Probabilities are calculated compared to climatology - with no information, each category would be 33%

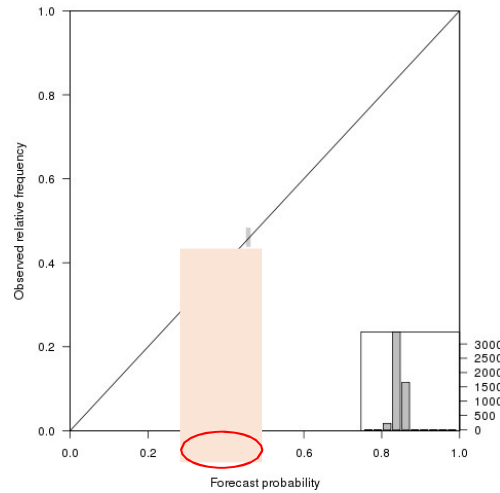


Reliability of PRESASS seasonal rainfall forecasts – July, Aug, Sep

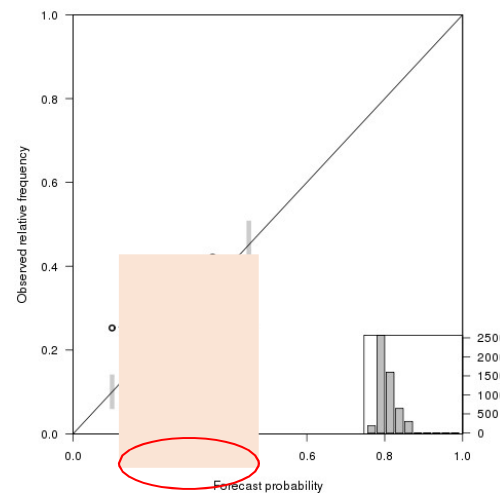
Perfect reliability = points all on diagonal line



Above Normal

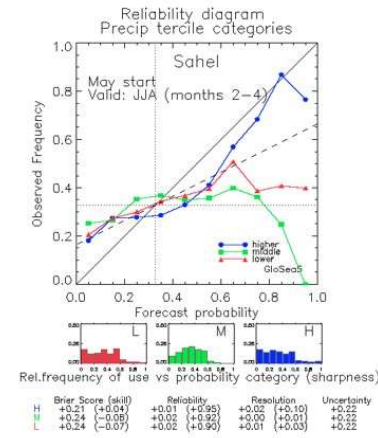
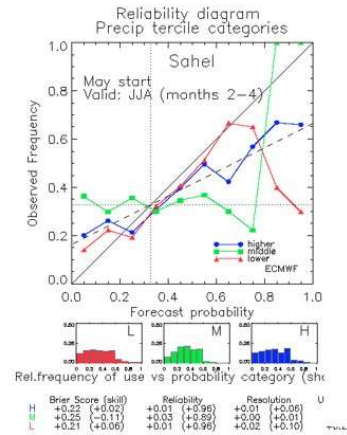
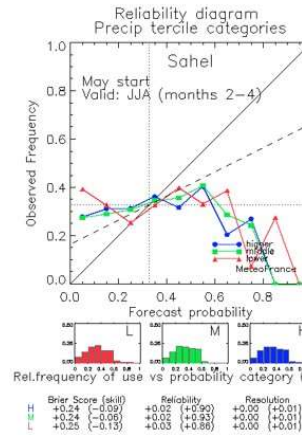
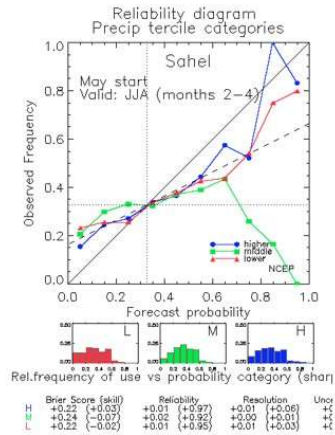


Near Normal



Below Normal

Skill of dynamical models



Rainfall/crop yield association

Indicates that crop yield could be forecast on a seasonal basis **but only** on national to sub-national scale. More local data found not to be correlated to rainfall (using FAO local data).

Who could use this information to inform food security decisions?

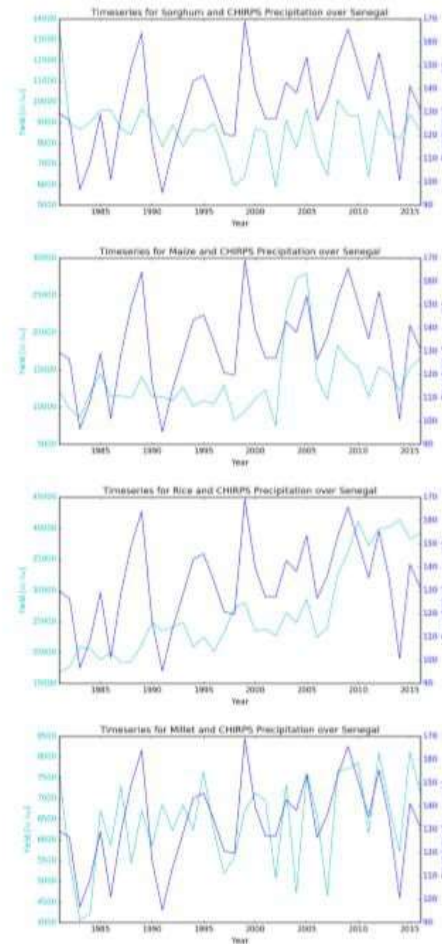


Figure 11: Time series plots that compare FAO crop yield (cyan) and CHIRPS precipitation (blue) over Senegal.

Insights from Senegal

A specific work for Senegal was conducted to examine the relationships between seasonal climate parameters (total precipitation and average temperature) and crop yields, during the main rainy season (July to September). Using observations covering 1981-2013, the strength of these relationships was assessed for the four main food crops in Senegal: maize, millet, sorghum and rice.

Results showed significant correlations between both season total precipitation and seasonal average temperatures on one side and, on the other side, yields of maize, millet and sorghum, but not for rice. The lack of significant correlations for rice may be due in part to its growth in paddy fields, giving it reduced sensitivity to interannual sensitivity in precipitation and temperature. The correlations are shown to remain broadly significant using the standard June to August period as well as using different observational data sets, different historical periods, and other crop parameters (total production and area harvested).

Assessment of the relationship between seasonal meteorological variables and crop parameters in Senegal, WISER, July 2019

Lessons so far

Climate information (across timescales) has the potential to inform the design, targeting and scale up or out of social protection mechanisms. For example, in theory a regular cash transfer to a household could be increased if a drought is expected. **However....**

- Has been challenging to identify clear entry points for climate information to inform social protection.
- Seasonal forecasts likely to be most relevant to informing forecast based early action (including ASP) Limited understanding of **impacts** of weather (e.g. on livelihoods, food security etc)
- Limited understanding of Adaptive Social Protection and climate by SP stakeholders and vice versa.



THANKS FOR YOUR ATTENTION

kane@climatecentre.org

cheikh.kane@ird.fr

