

## CLIMATE CHANGE MITIGATION AND ADAPTATION

# PROCEDURAL MANUAL FOR THE PRODUCTION AND EVALUATION OF SEASONAL AGRO-CLIMATIC FORECASTS IN BURKINA FASO

### BACKGROUND

Seasonal forecasts play an important role in planning activities and investments ahead of the rainy season in Burkina Faso. Given the complexity of the West African Monsoon (WAM), producing seasonal forecasts requires an understanding of ocean-atmosphere interactions and their influence on precipitation in West Africa in general.

Nowadays, however, there is extensive non-synthetic information about seasonal forecasts. This means that, in an operational setting, extracting relevant information is a slow process because the forecaster has to make use of multiple articles or journals to find the necessary information.

Also, in the current context characterised by the strong interannual variability of the WAM, it is of crucial importance that the forecaster has a tool that can guide forecast production. This will ensure the consistent quality of seasonal forecasts for end-users.

### DESCRIPTION

Drafting this procedural manual primarily required bibliographical research on several topics, such as the West African Monsoon, the interactions between ocean basins and pluviometry in West Africa, statistical forecasts and evaluating seasonal forecasts. We then proceeded to synthesise the various articles in order to reveal the scientific principles behind these concepts as simply as possible.

We have therefore summarised the influences of the individual ocean basins on precipitation in West Africa. For each basin (Pacific Ocean, Atlantic Ocean, Indian Ocean and Mediterranean Sea), we have listed its state (hot or cold), its influence on precipitation variability, and the physical or meteorological process responsible for this. We have also managed to compile links to sites for the major global centres for downloading data from the global circulation models used to produce seasonal forecasts.

### IMPACT

This project plays an important role in climate change adaptation. Within the current context of climate change, this guide represents a useful information base for forecasters. It gives them access to all the useful information and resources for producing seasonal forecasts, in a single document. This guide is therefore a valuable tool for ensuring the consistent quality of seasonal forecasts produced from one year to the next.

### LESSONS LEARNED

A project of this type could not be carried out without demonstrating the ability to synthesise and overcome language barriers. (The majority of the articles are in English.)

**Country:** Burkina Faso

**Sector:** Water

**Key words:** West African Monsoon, seasonal forecasts, variability, ocean basins, sea surface temperatures (SSTs)

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