

# IMPACT OF CLIMATE CHANGE ON THE DYNAMICS OF WETLANDS: THE CASE OF NAKANBÉ-MANÉ IN BURKINA FASO

## BACKGROUND

Wetlands are diverse and rich environments, with multiple functions and values that are now widely recognised. They are essential in order to maintain the good condition of water resources and biodiversity, and they play a part in socioeconomic development. They also play a crucial role in combating the effects of climate change. However, there is a continuous degradation of these ecosystems and the ecosystem services they provide. This is the combined result of climatic and anthropogenic factors. Burkina Faso, and in particular the Nakanbé-Mané wetland, is one of the regions that is most affected by the degradation of ecosystems. Characterised by a continuous decrease in water surfaces, local residents are concerned that it will disappear. This degradation particularly affects the resilience of local populations. In order to promote the sustainable management of the Nakanbé-Mané wetland and its functions, a local, integrated, appropriate and participatory management plan for the site is being developed. The overall objective of the project was to support advocacy with decision-makers to encourage the inclusion of a climate change dimension when developing the integrated wetland management plan. Specifically, the impact of climate change on the dynamics of surface water resources in the Nakanbé-Mané wetland was analysed.

## DESCRIPTION

The methodology was based on three main steps:

- Analysing the dynamics of the water surfaces of the Nakanbé-Mané wetland using the Google Earth Engine platform.
- Determining the explanatory climatic factors. Collecting and analysing data on precipitation, temperature and potential evapotranspiration from the Ouagadougou synoptic station during 1991–2020.
- Field visits to meet with the first farmers.
- The results of the analysis show a clear downward trend in the seasonal and permanent water surfaces of the Nakanbé-Mané basin wetland.

The likely causes of these changes are (i) the long period from 1991 to 2009 – twenty years of intense, persistent droughts, (ii) the concomitant rise in average annual temperatures by 1.5°C and in potential evapotranspiration by 16%, and (iii) the increase in extreme events such as extremely intense rainfall during the period from 1991 to 2020.

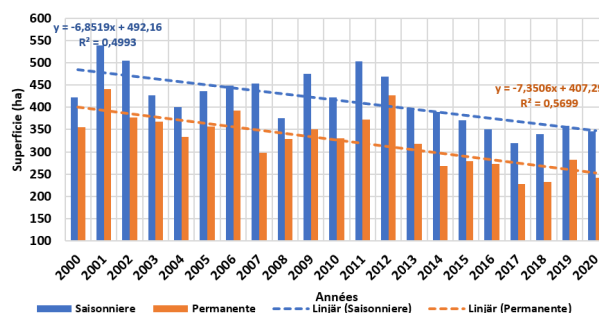


Figure: Dynamics of water surfaces.

## IMPACT

A workshop was held to present the results of the study to decision-makers (technical services of the Ministry of the Environment, the local wetland management committee, etc.) and land and river users (market gardeners, fishermen, livestock breeders, women, gold washers).

## LESSONS LEARNED

Gaining approval and technical and financial support from superiors is essential. It is also crucial to obtain the necessary data for the study, and to ensure a participatory, inclusive working methodology, as climate change issues need to be addressed in a holistic manner.

**Country:** Burkina Faso

**Sector:** Environment

**Key words:** Wetlands, climate change dynamics

## Contact details:

Mrs YAMEOGO, W. Virginie Marie  
kabyamvivi@gmail.com