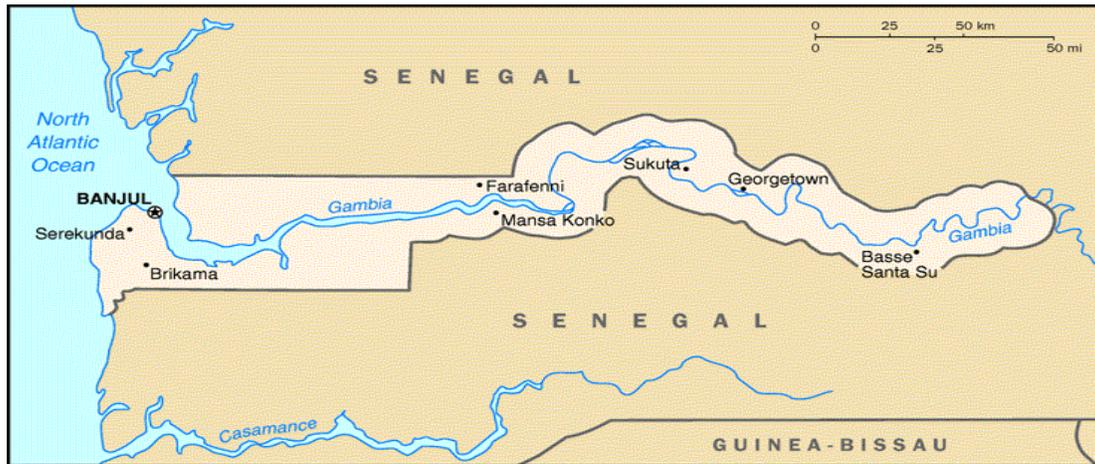


Katie Wilkinson Scholarship Report

Long Term Trends in the Rainfall Patterns of the Gambia

by Tijani Bojang



Map of the Gambia

Data collection was a key step for this research which prompted me to travel to the Gambia in June 2007 thanks to Katie Wilkinson Research Scholarship award. The trip occurred at a time when air tickets were extremely expensive and my travel would have been very difficult without this funding.

I spent three weeks in the Gambia extracting data which included;

1. Rainfall quantity
2. Crop yields (groundnut & rice)
3. Fisheries production
4. Gambia River run off
5. Ecological diversity species
6. Forest density

However, some of the targeted data required (i.e. Gambia River flow, ecological diversity species and forest density) were not available due to lack of archive and/or continuous data record from various departments. Nonetheless, historical information of some of the disciplines that are of potential benefits was enhanced to be integrated into literature review.

I was able to collect thirty years record of **rainfall quantity**, **crop yields (groundnut & rice)** and twenty five years record of **fisheries production**. Significant progress has been made in the analyses of these data where correlation was looked into between rainfall quantity and the rest of the data. A very interesting and positive result emerged which is within the context of the aims and objective of this research.

Since 75% of the population depends on rainfed crops and livestock for their livelihood, the specific objective of this study was to promote and develop the knowledge of application of meteorological and

climatological data and information on agriculture and water resources management so as to enhance economic and social development, assist in the investigation and mitigation of the effects of extreme weather phenomena. Secondary aims were to look into long term factors responsible for climate variation, modification of the environment and the apparent shift in precipitation patterns in the Gambia. With the present global issue, it is indeed pertinent to look into impact of rainfall variation, global warming and preparedness for combating poverty.

The analyses depicted relationships between the trend of the rainfall pattern with crop yields and fisheries production. With 30 years of record, the analysis also proved the general notion wrong that rainfall quantity was decreasing in the Gambia as we progress into the twenty first century. The analysis gave an overview of the period of the rainy season, the expected time of the onset and cessation, a vital tool that can be used to advise farmers/agriculturalists when to start cultivation and the type of crops recommended for the short rainy season.

At the Department of Wild Life & Conservation, the country report on ecological and biological diversity species indicated disappearance of many species, others extinct whilst some are under threat. The forest inventory revealed severe environmental degradation, unprecedented bush burning and deforestation. This generally put the lives of ecological species at risk and also enhanced global warming.

In a nutshell, one of the objectives of this research was to use the information as a tool in regards to early warning for;

- Food security
- Policy making
- Water Resources Management
- Combating environmental degradation

It is important to note that this research is at its advanced stage and will undoubtedly go a long way in improving the living standard of the impoverished 1.5 million populations of the Gambians. The research project was completed in December 2007.

Here, I would like to deeply express my heartfelt condolences to the parents of Katie Wilkinson for her untimely demise. Setting up a trust fund of this nature in her memory is one of the best thought for her parents and much more rewarding for the decease. The unprecedented rate that this research will benefit about 2 million Gambian populations will undoubtedly elevate the esteem of Katie Wilkinson in her eternal peace. Katie Continue to rest in perfect peace!