

# Liberia Data Rescue Report

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## Introduction

Under the WMO LoA 2024, IDEMS supported Liberia's NHMS in recovering historical climate records lost during the civil war. This initiative was part of IDEMS's mandate to assist Liberia and two other member countries in initiating data rescue activities in 2024.

During the inception meeting, Liberia's situation was identified as unique. Unlike Uganda and Bangladesh, Liberia lacked historical climate records necessary for assessing climate variability and estimating risks. IDEMS focused on engaging international data centers to access available historical climate data for Liberia. IDEMS provided remote support, with communication between IDEMS, international data centers, and Liberia's NHMS conducted primarily via email. The datasets obtained by IDEMS were shared with Liberia's NHMS.

This report details the datasets acquired on behalf of Liberia's NHMS. In addition to station data, it describes satellite-derived daily rainfall and temperature datasets that IDEMS obtained and shared. These satellite data were considered a valuable alternative, particularly for locations where station data was unavailable. The satellite data may be used in its original form or after calibration, depending on further analysis to assess its alignment with station data.

## Station Datasets

Table 1 lists the station datasets obtained and shared with Liberia. Most of these were obtained with support from WMO.

Station	Element	Level	Start	End	Source
Roberts Field	Temperature	Monthly	1960	1996	Germany Met
Roberts Field	Rainfall	Monthly	1960	1996	Germany Met
Roberts Field	Rainy days (>1mm)	Monthly	1968	1996	Germany Met
Roberts Field	Sea level pressure	Monthly	1960	1996	Germany Met
Roberts Field	Relative Air Humidity(%)	Monthly	1960	1967	Germany Met
Roberts Field	Vapour pressure	Monthly	1968	1996	Germany Met
Roberts Field	Sunshine duration	Monthly	1976	1996	Germany Met
Roberts Field	Air pressure at station	Monthly	1983	1996	Germany Met
	Rainfall	Hourly	1974	2012	NOAA
	Temperature	Hourly	1974	2012	NOAA
Monrovia	Rainfall	Monthly	1933	1993	NOAA
Harbel	Min Temperature	Monthly	1936	1970	NOAA
Harbel	Max Temperature	Monthly	1936	1970	NOAA



Monrovia	Min Temperature	Monthly	1953	1964	NOAA
Monrovia	Max Temperature	Monthly	1953	1964	NOAA

Additional datasets are anticipated from ACMAD's regional centre, pending a positive response to our request for access to Liberia's data

## Satellite-Estimated Datasets

The satellite datasets shared with Liberia include CHIRPS, CHIRP, CHIRTS, and AgERA5. These products were selected based on IDEMS's experience with satellite-station comparisons across Africa, where they have demonstrated reliability for various applications.

Further evaluation is needed to assess the performance of these products in Liberia, as their accuracy may vary by region. The datasets were extracted from a rectangular grid spanning specific longitudes and latitudes and are archived in IDEMS's Google Drive, with access shared with Liberia's NHMS.

## Conclusion and Next Steps

This initiative has successfully enabled Liberia's NHMS to recover lost station data from external sources, improving their climate database. However, additional records may still be accessible, and sustained efforts will be required to obtain them.

Satellite-estimated data also hold great potential for bridging gaps during the civil war period. It is essential to equip Liberia's NHMS with the skills to evaluate these datasets for specific applications, ensuring they are utilized effectively.

As more data becomes available, these records can be leveraged to analyze climate variability, assess risks, and inform decision-making across various sectors. IDEMS remains committed to supporting Liberia's NHMS in these efforts.