



Republic Of South
Sudan



Ministry of Transport

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Outline

- Geographical Location of South Sudan
- Climate of South Sudan
- Background Overview
- NWP Products and other Data for Weather Analysis and Interpretation
- Sever Weather Event in South Sudan
- Challenges Facing South Sudan Meteorological Services
- Plans and Future Vision

Geographical Location of south Sudan

- South Sudan is the world's newest country. It is a landlocked country located on the continent of Africa in northeastern [Africa](#) north(See FIG -1).
- South Sudan is bordered by [Ethiopia](#) to the east, [Kenya](#) to the southeast, [Uganda](#) to the south, the [Democratic Republic of the Congo](#) to the southwest, the [Central African Republic](#) to the west, and [Sudan](#) to the north (See FIG .

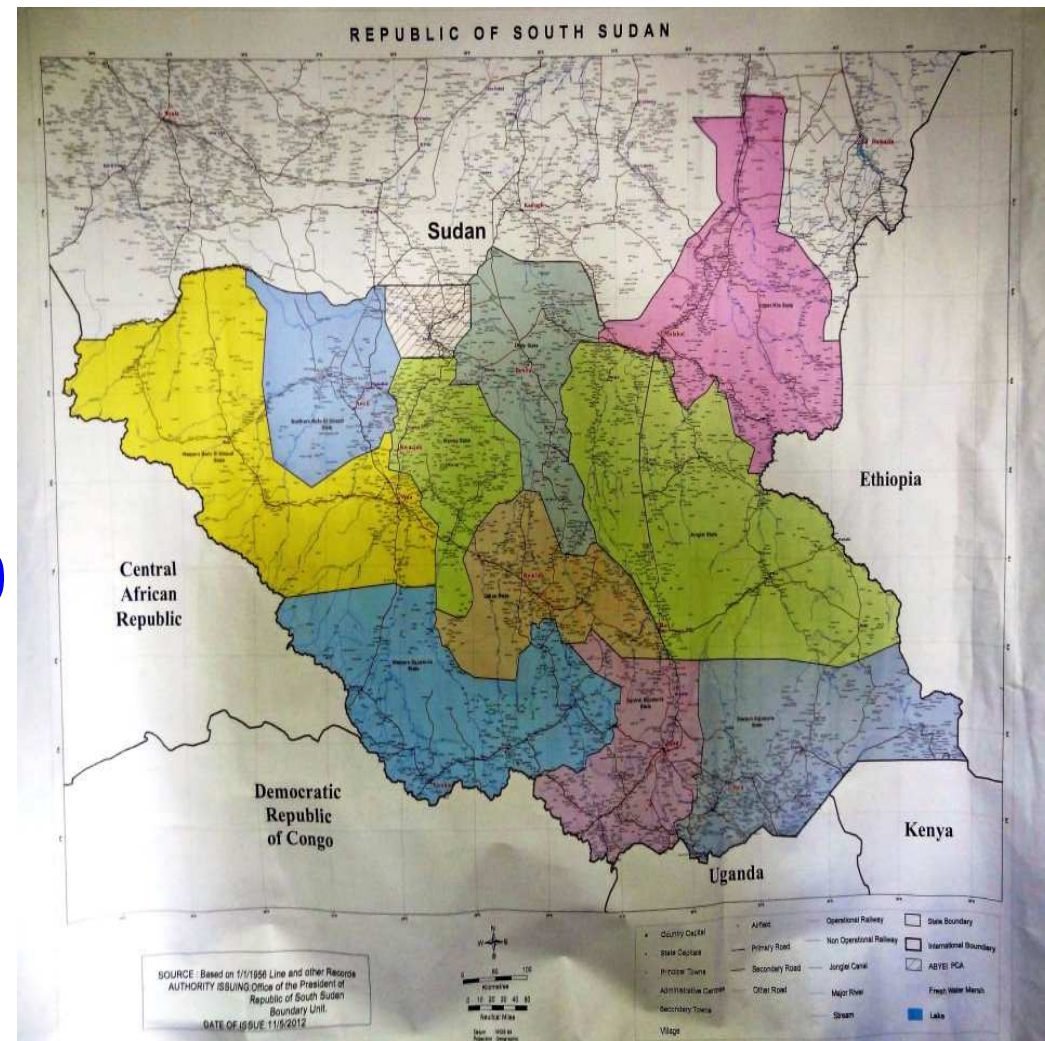


Geographical Location of south Sudan

- South Sudan lies between latitudes 3° and 13° N, and longitudes 24° and 36° E. It is covered in tropical forest, swamps, and grassland.
- The White Nile passes through the country.
- South Sudan is located near the Equator in the tropics much of its landscape consists of tropical rainforest; its rich biodiversity includes lush savannas, swamplands and rainforests that are home to many species of wildlife

Geographical Location of south Sudan

➤ South Sudan became an independent nation on 9th July, 2011 after a January 2011 referendum regarding its secession from Sudan passed with around 99% of voters in favor of the split. Its current capital is Juba, South Sudan have 10 states



Climate of South Sudan

- The climate of South Sudan varies but it is mainly tropical, its similar to an Equatorial or tropical climate, characterized by a rainy season of **high humidity** and large amounts of **rainfall** followed by a drier season
- the most rainfall in South Sudan is between the months of **April** and **October** and the average yearly total for rainfall is approximately **953** mm.

Background Overview

- South Sudan Meteorological Service (SSMS) was formed in **9th July, 2011** as a result of the independence .
- The young Meteorology service is a governmental Institution which falls under the **Ministry of Transport**.
- After our separation on 9/7/2011 , the department of meteorology in the new borne Republic of South Sudan has to start from **nothing (zero)**, because all our meteorological working instruments and weather forecast ,we get them from old **republic of Sudan** , but now south Sudan is starting to establish weather forecast section **in juba** .

Background Overview

- South Sudan had 7 Surface Meteorological stations distributed as follow:
 - Agro met station in Renk (Upper Nile State),
 - Irrigational stations which included:
 - a. Raja, in Western Bhar El Ghazal State.
 - b. Bentiu in Unity State and.
 - c. Rumbek in Lakes State. .
 - Synoptic stations
 - a. Juba Met Station (Central Equatorial State).
 - b. Malakal Met Station (Upper Nile State).and
 - c. Wau Met Station (Western Bhar Ghezal State).

Background Overview



NWP Products and other Data for Weather Analysis and Interpretation

NOAA/COLA

- ▶ 850 hpa windflow and humidity for day 1, and day 2
- ▶ 700 model analysis for vertical wind velocity
- ▶ Convective available potential Energy and Perceptible water
- ▶ short term climate outlook for precipitations
- ▶ 700 hpa precipitation and vertical wind velocity
- ▶ Precipitation Forecast outlook for 0-7 days.

ECMWF / UK.MET-Office

- ▶ Regional Map for Precipitation forecasts
- ▶ Forecasts for different parameter

EUMETSAT products

- ▶ Imagery in infrared channel
- ▶ Imagery in water vapour channel
- ▶ Imagery in Visible channel

Severe Weather Events in South Sudan

- South Sudan is **impacted** by a number of **severe weather** and **extreme events**, some of them are as follows:
- Rainstorms
- Strong wind
- Floods
- Drought

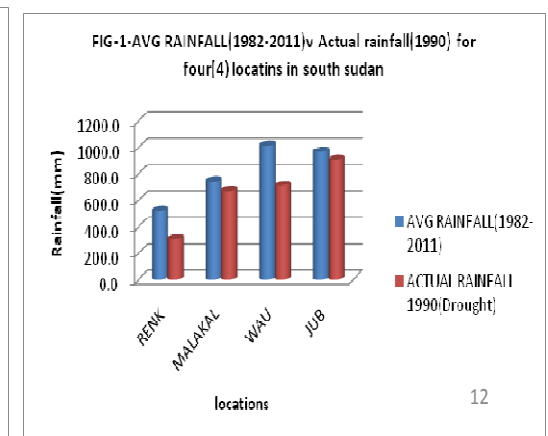
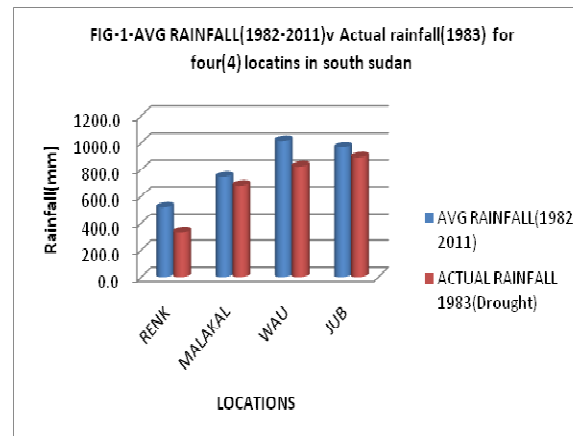
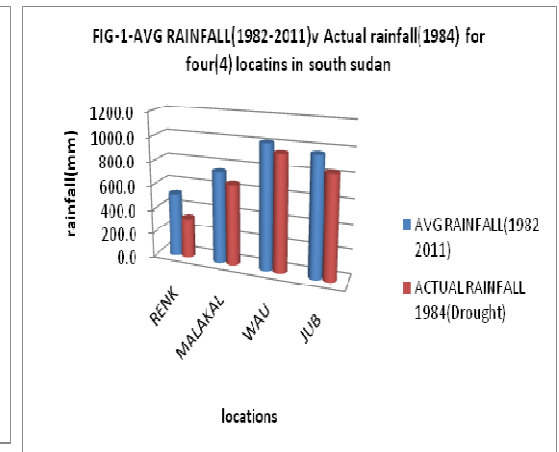
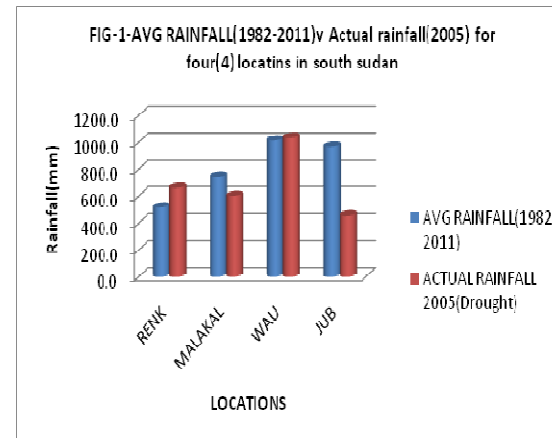
Examples of Impacts of Severe Weather in South Sudan

- Frequency and Intensity of drought in south Sudan is **1983**, **1984**, **1990**, **2010** in all country and **2005** in equatorial states (east and central)



Drought

Drought in south Sudan



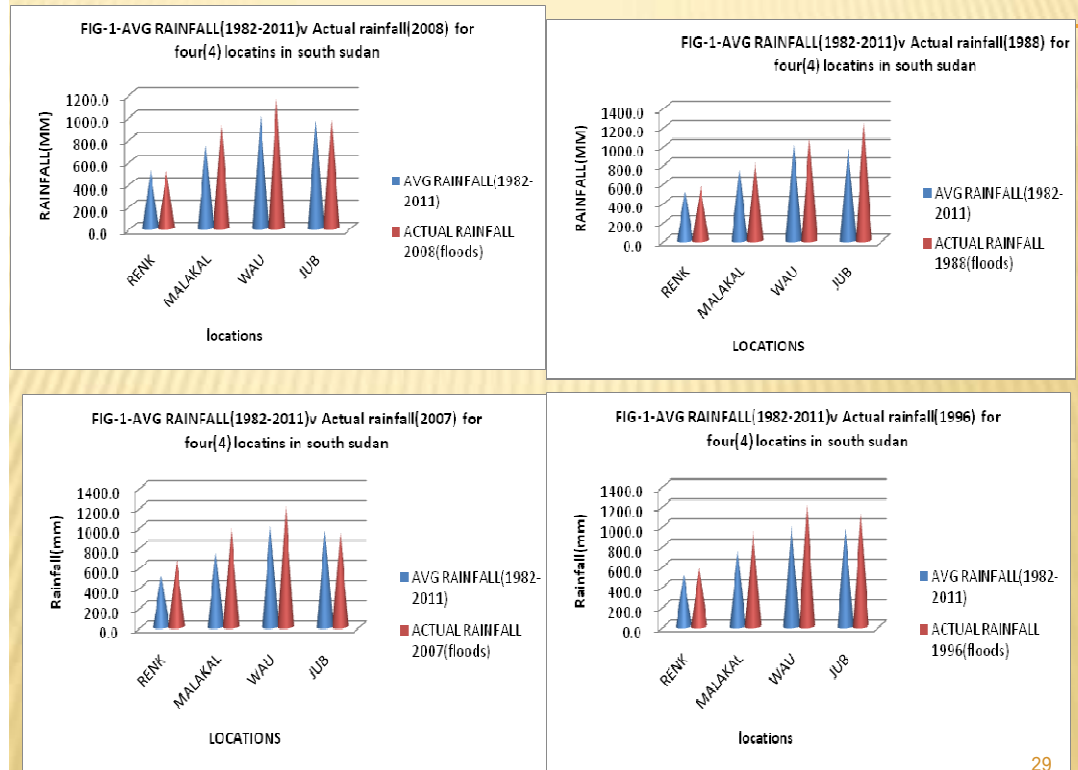
Examples of Impacts of Severe Weather in South Sudan

floods in the South

- The frequency of floods in the South Sudan has increased in the last two decades. The years 1988, 1996, 2007 witnessed flood incidences of relatively high intensities
- A major one occurred during 1988 and affected nearly the entire country (Sudan).



FLOODS IN SOUTH SUDAN



Challenges Facing South Sudan Meteorological Service

- ▶ **Lack** of essential meteorological communication networks to the regional distribution and international centers.
- ▶ **Lack of Telecommunication** link between weather forecast section in Juba and MET.offices in the states.
- ▶ Difficulty in **delivery** of early **warnings information** for disaster Risk Management needed by users.
- ▶ There is a need to **raise awareness** among users on using and **interpretation** of weather information and warnings.

Plans and future vision

- **Full establishment** of National Meteorological Service.
- Strengthen of database system.
- improvement the quality of **weather products** and **services**.
- **Establishment** of upper air observation stations.
- Channels for submitting forecasts and climatologically information.
- Installation of **advanced technology** to dissemination and delivery weather information and **severe weather warnings** via **Television** , **Radio** , **mobile phones**, **Websites** and **newspaper**.

A large, dark, stormy cloud formation looms over a green field of crops, with trees in the foreground.

Thank you

16 April 2013