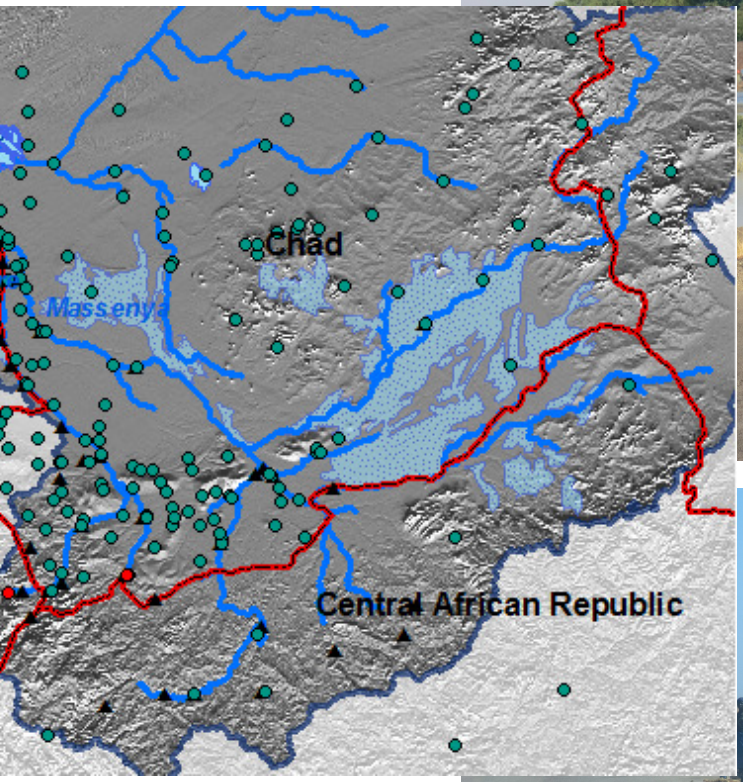
Lake Chad Basin Flood and Drought Early Warning System

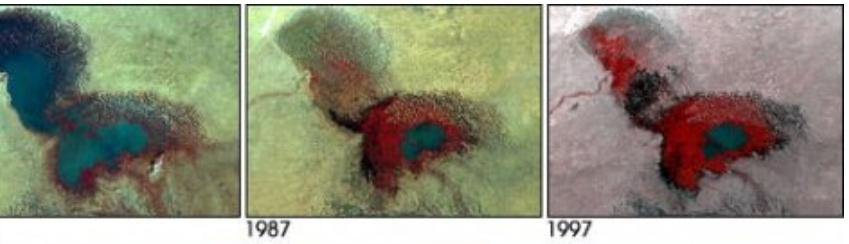
Project proposal submitted at the GEOSS Joint Asia – Africa Water Cycle Symposium in Tokyo, Japan, 25 – 27 November 2013

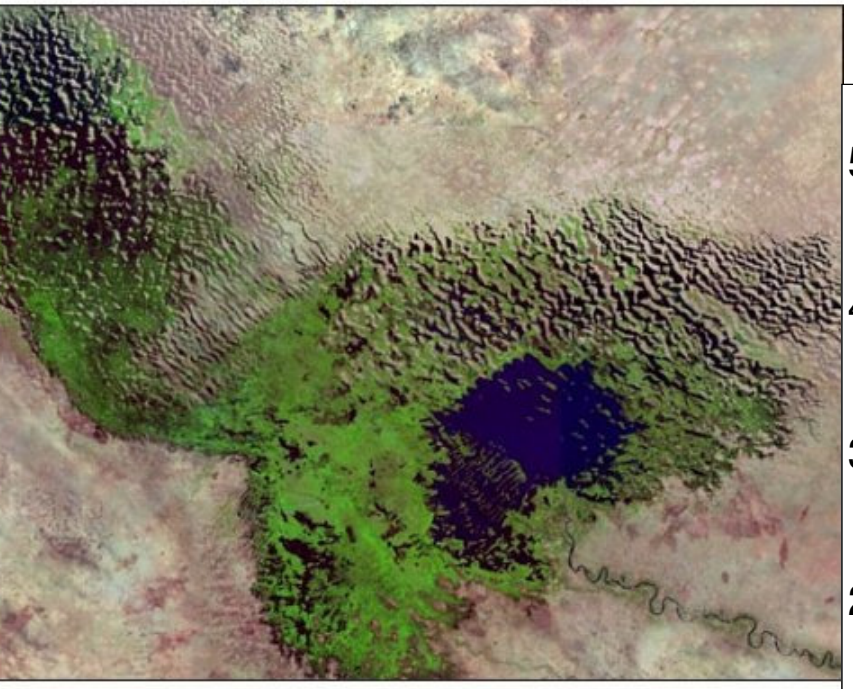
eka! Moment

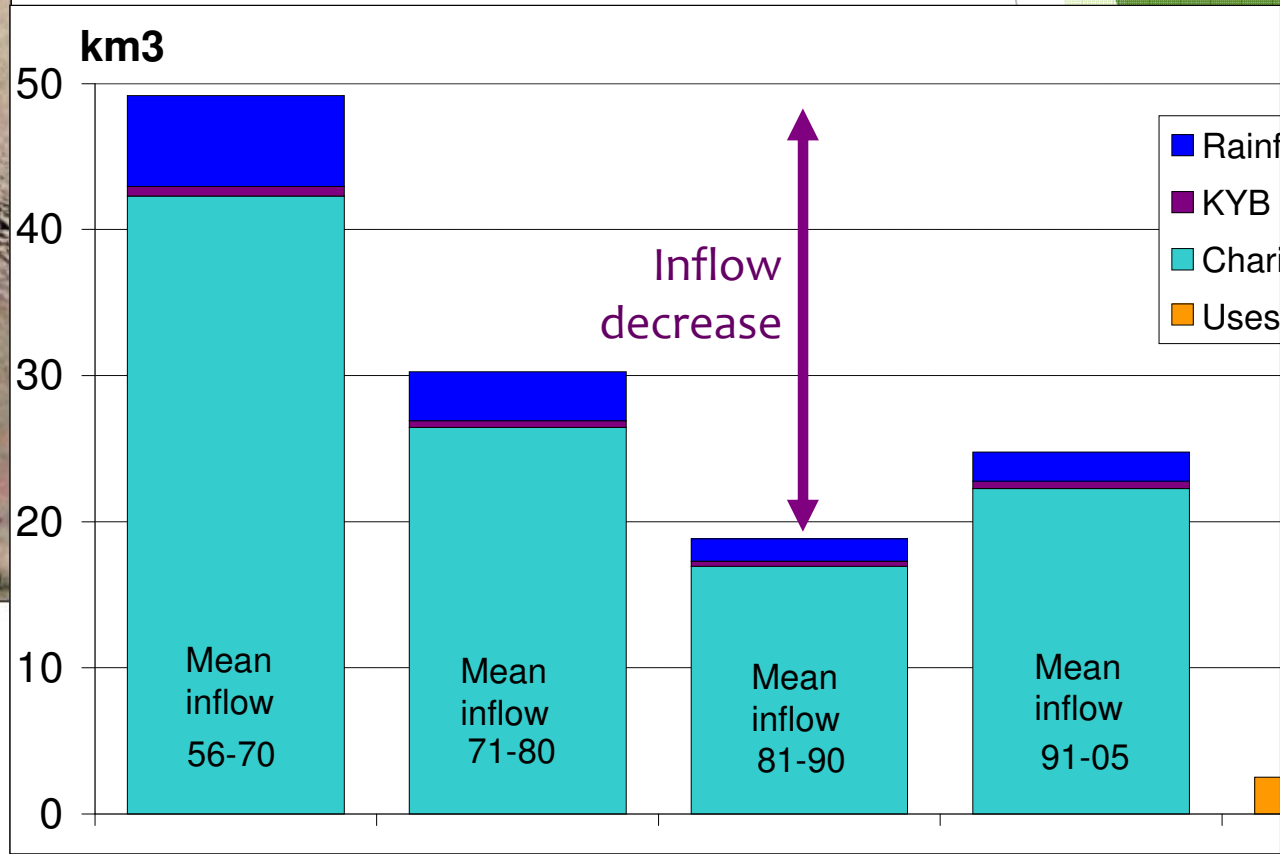


weeks lead time
8 rainfall stations & 24 runoff stations upstream
Availability of archive of daily satellite precipitation

ackground


1987
1997




km3
50
40
30
20
10
0
Inflow
decrease
Rainf
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56-70
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inflow
71-80
Mean
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81-90
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91-05

ackground

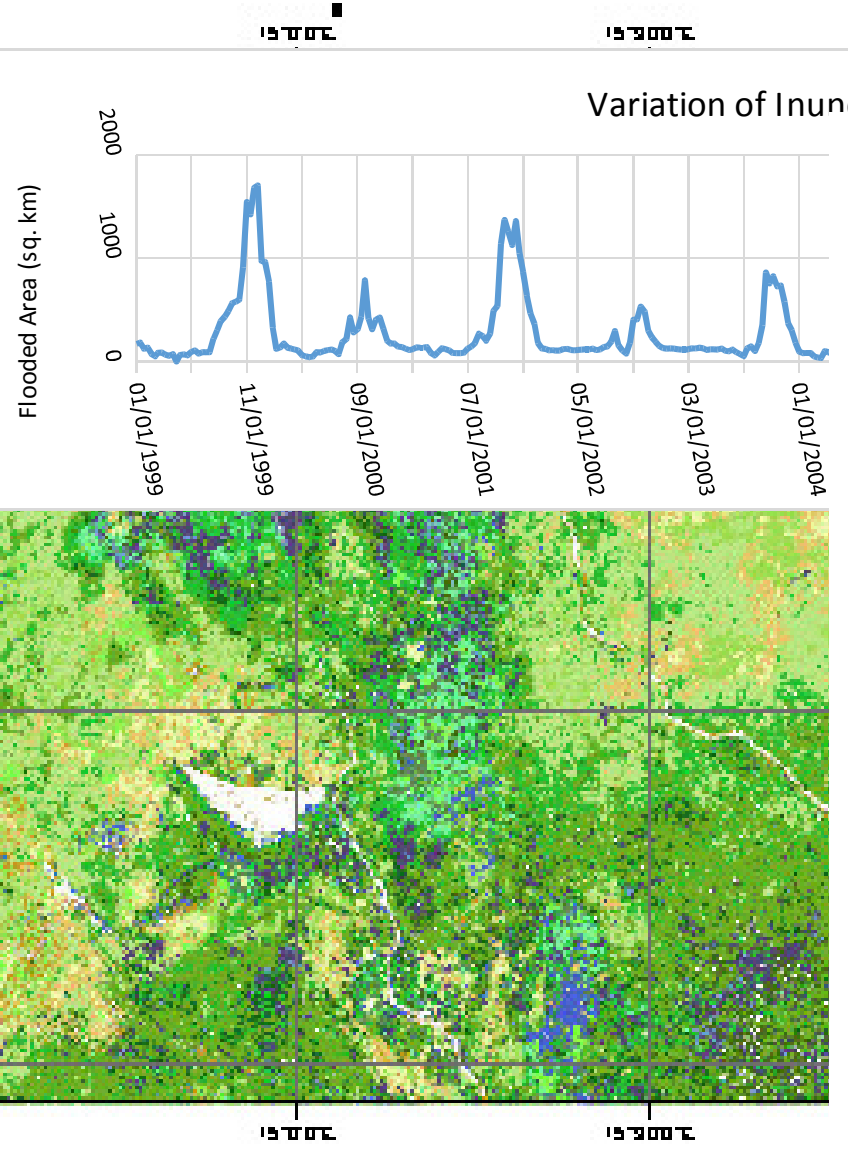
TRIMM data has shown that since 2004, the Lake Chad Basin has been experiencing an increase in rainfall.

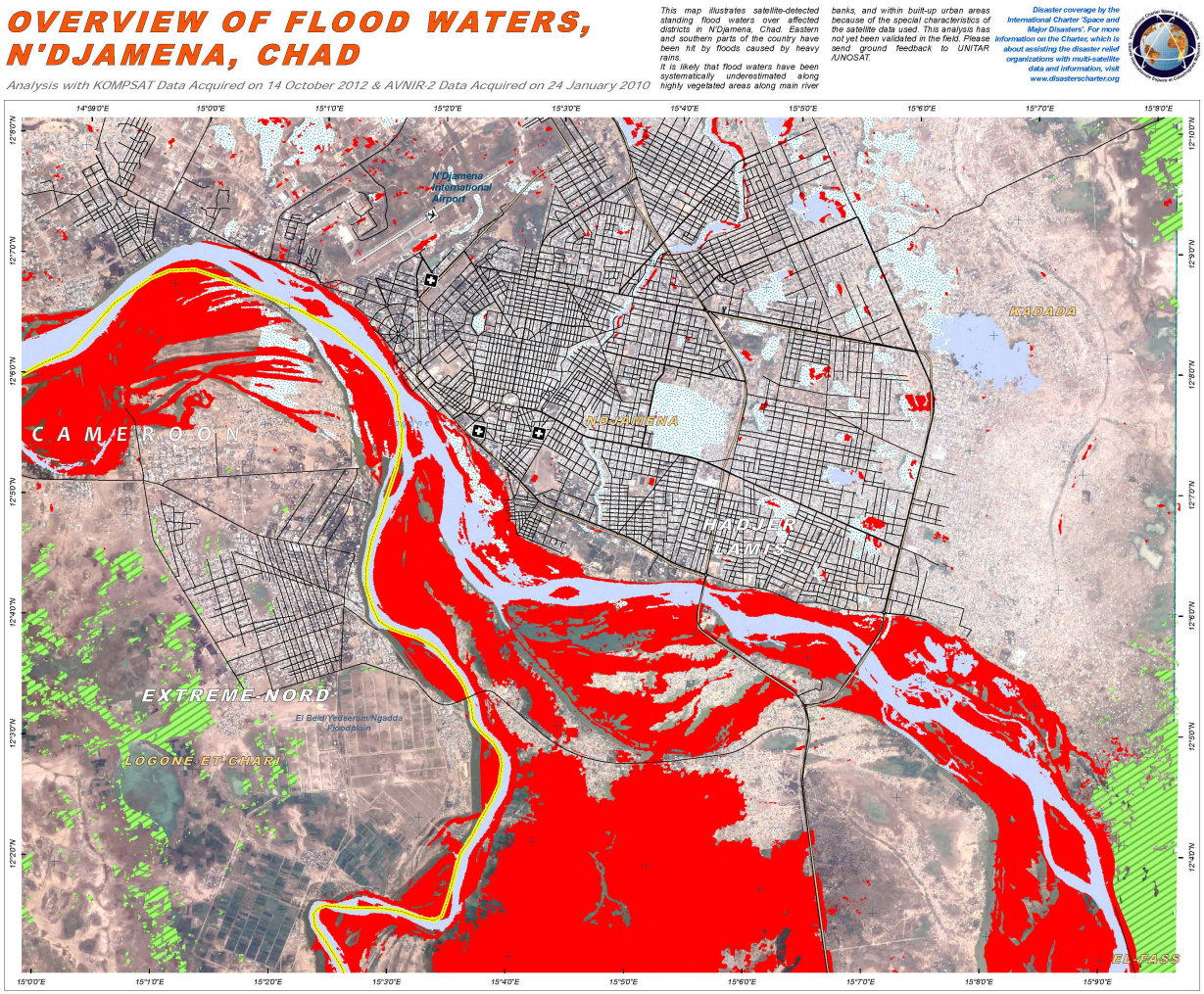
The resurgence in rainfall has resulted in four major floods that has resulted in economic loss in the years 1999, 2004, 2010 and 2012.

The pattern of this resurgence in rainfall and its spatial impact is not clearly understood because of the deterioration in the hydro-meteorological observation network occasioned by conflict, poor maintenance, and lack of investment.

In 2012, in central and southern regions of Chad 700,000 people affected, 255,000 hectares of cropland flooded, 96,000 houses destroyed and 34 people dead. The cities and settlements of Ndjamena Kousseri and Bongor were flooded during the year.

looding in Yaere Floodplain (1999 - 2012)





oal & Purpose

Goal of Project

Reduction of meteorological and hydrological disasters and the promotion of effective use of water resources in the Lake Chad Basin.

Project Purpose

An operational forecasting system is established and made operational in the Lake Chad Basin to support flood and drought disaster prediction and to provide the knowledge to adapt to climate change in water resources management.

xpected Outputs

- Demonstrate quantitative and qualitative improvement of water cycle observations in the Lake Chad Basin
- Operational flood and drought early warning system is established for the Lake Chad Basin
- Assess climate change impacts on floods, droughts and water-nexus
- Prototype data and information integration and sharing system for the Lake Chad Basin
- Improve observational, modeling and application capacity in the Lake Chad Basin

otential Partners

LCBC

- Lead organisation. Coordinates partnerships and Member States inputs using our data sharing agreement and protocol

WMO - Provide climate data archive

DIAS - Provides technical and scientific support

JAXA - provides access to satellite data

GEO - Disseminate lessons learnt

UNESCO IRBM Regional Center

- Participate in the delivery of training modules for continuous training at the regional/local level

JICA - Glues everything with funds

Thank you for the attention