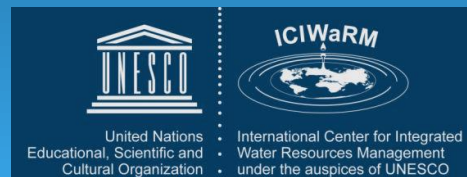


User-Friendly, Neural Network Based, Global Rainfall and Climate Applications from UNESCO G-WADI

*In: Apps for environmental monitoring: fostering
citizen scientists or just another consumer product?*

William S. Logan, PhD
Director – International Center for
Integrated Water Resources Management (ICIWaRM)
(Under the auspices of UNESCO)
Will.logan@usace.army.mil



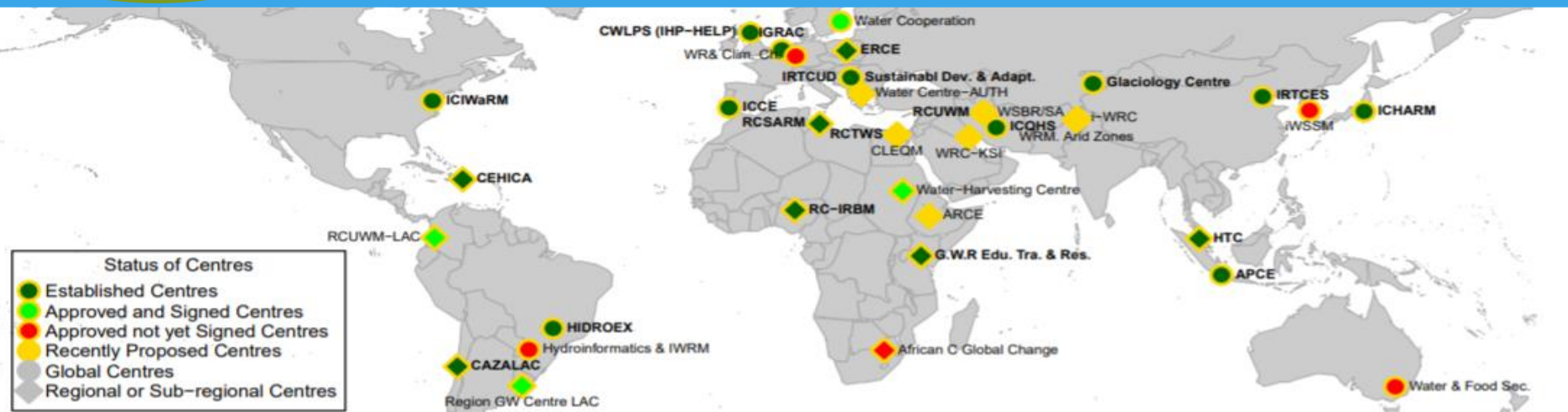
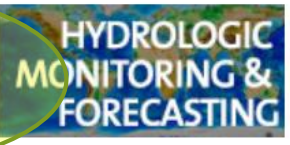
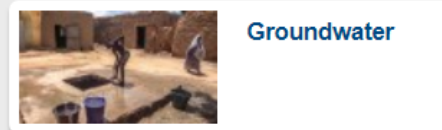
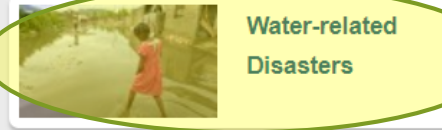
Context: UNESCO-IHP's G-WADI Network

Hydrology (IHP)



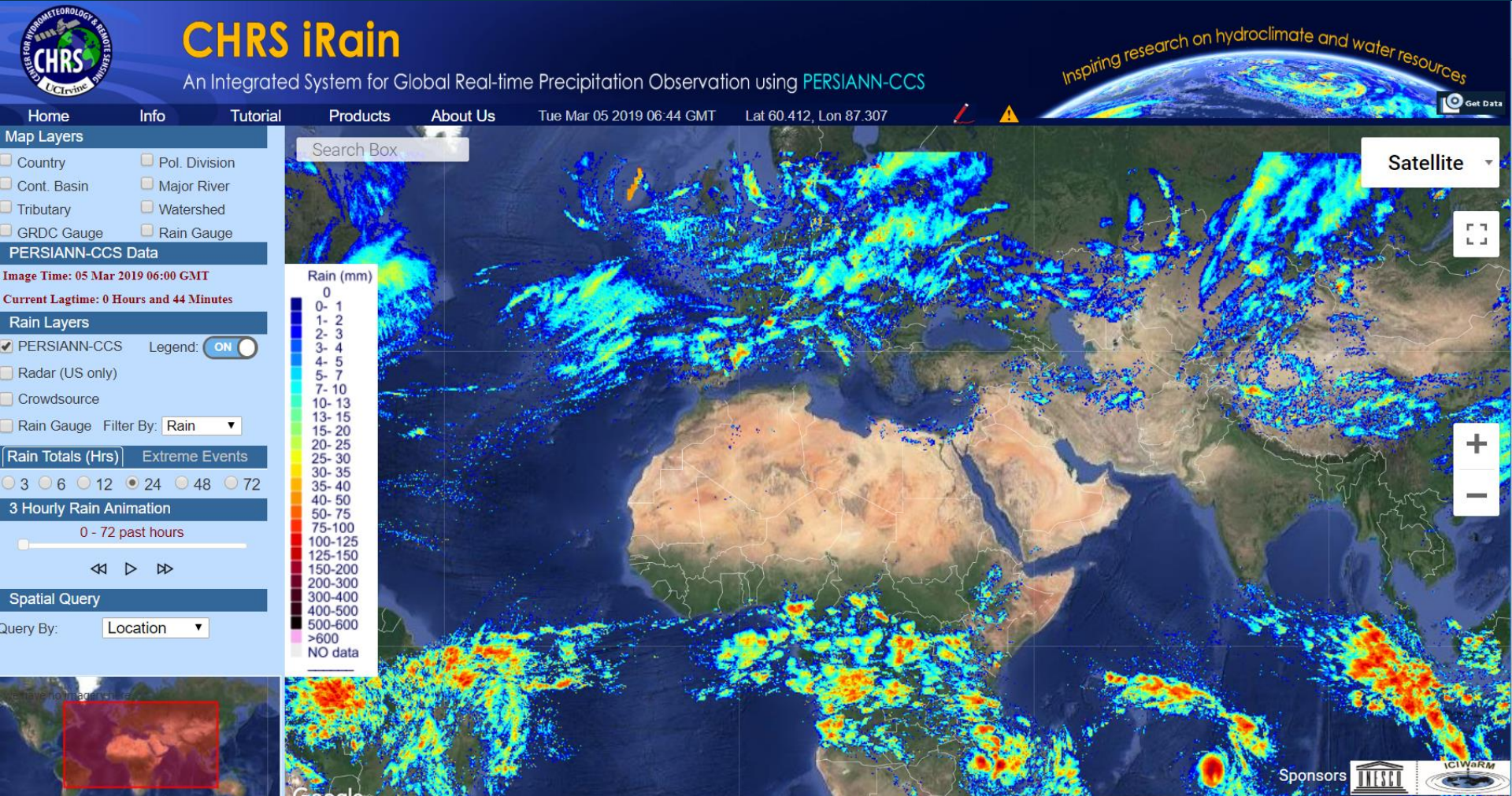
The International Hydrological Programme (IHP) is the only intergovernmental programme of the UN system devoted to water research, water resources management, and education and capacity building. Since its inception in 1975, IHP has evolved from an internationally coordinated hydrological research programme into an encompassing, holistic programme to facilitate education and capacity building, and enhance water resources management and governance.

IHP facilitates an interdisciplinary and integrated approach to watershed and aquifer management, which incorporates the social dimension of water resources, and promotes and develops international research in hydrological and freshwater sciences. UNESCO's International Hydrological Programme, founded in 1975 and implemented in programmatic time intervals or phases, is entering its **eighth phase** to be implemented during



iRain: the Real-time version of the PERSIANN Family of Products

iRain.eng.uci.edu

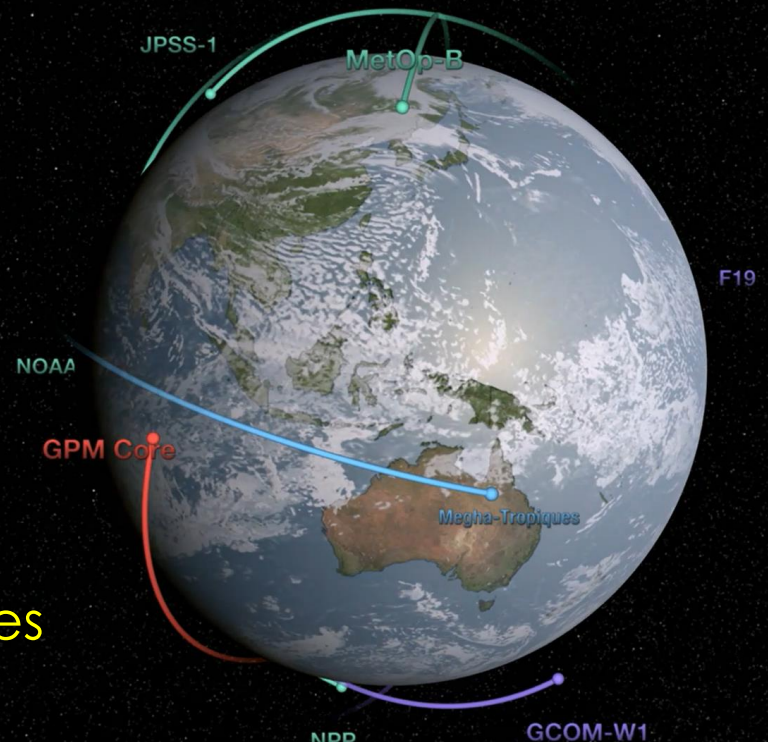


The PERSIANN products use Cloud-top Temperature data from Geostationary Satellites and are partly trained by Microwave information from Low Earth Orbiting (LEO) Satellites

Geo Satellites



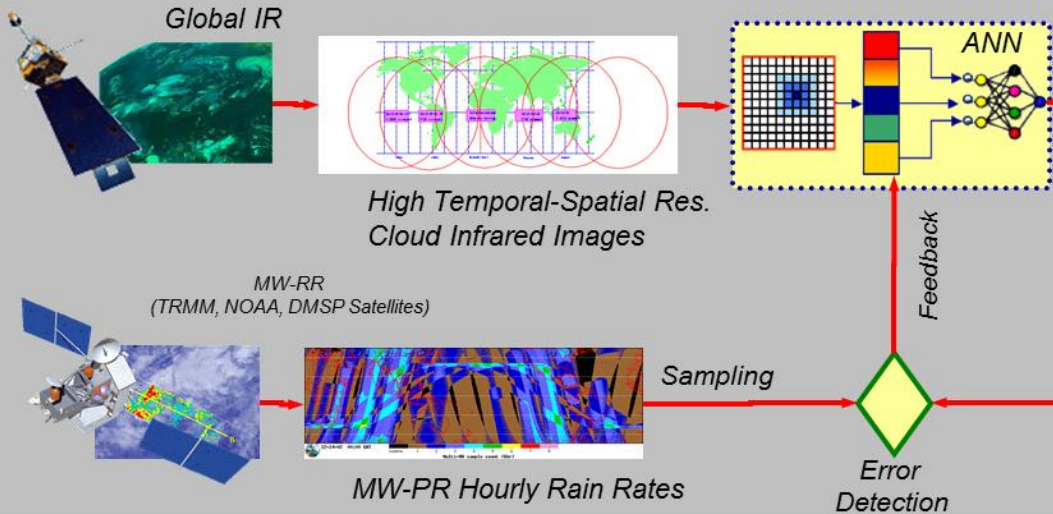
LEO Satellites



Precipitation Estimation from Remotely Sensed Information using Artificial Neural Networks (PERSIANN)

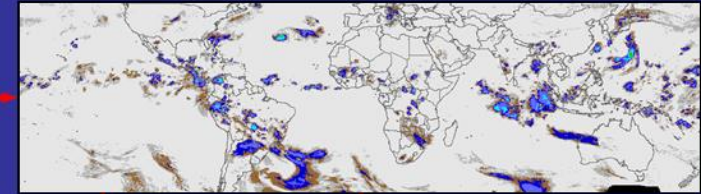
PERSIANN System "Estimation"

Satellite Data



Products

Hourly Global Precipitation Estimates



Hourly Rain Estimate

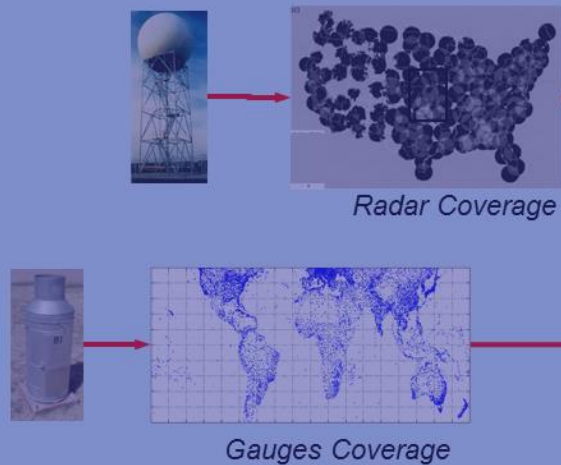
Quality Control

Merging

HyDIS WEB



Ground Observations



iRain UCI

By University of California, Irvine

Open iTunes to buy and download apps.



View in iTunes

This app is designed for both iPhone and iPad

Free

Category: Weather
Updated: Oct 29, 2016
Version: 2.0.2
Size: 36.3 MB
Language: English
Seller: University of California, Irvine
© CHRS UC Irvine
Rated 4+

Compatibility: Requires iOS 9.0 or later. Compatible with iPhone, iPad, and iPod touch.

Customer Ratings

We have not received enough ratings to display an average for the current version of this application.

More by University of California, Irvine



UCIOTA
View in iTunes



GeriTeam
View in iTunes

Description

Welcome to iRain version 2.02!

The app is licensed to the Center for Hydrometeorology & Remote Sensing (CHRS) at the University of California

[iRain UCI Support](#)

...More

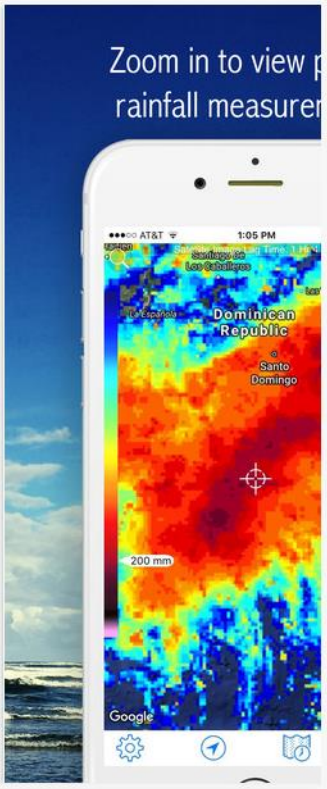
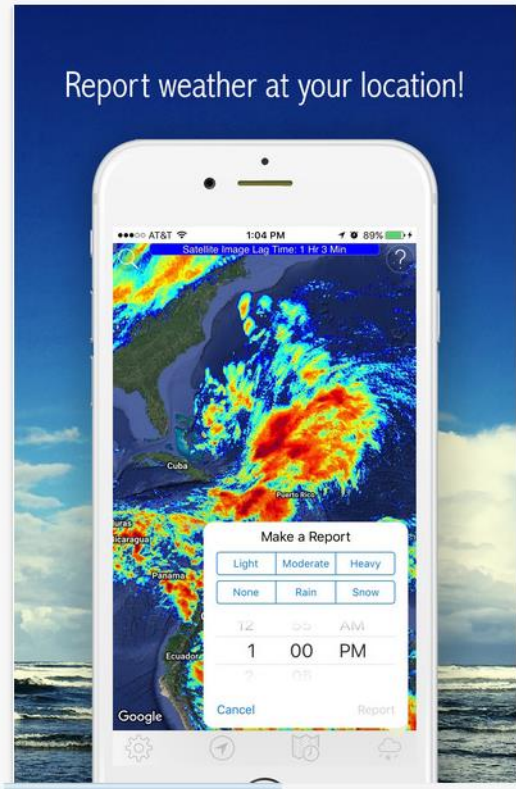
What's New in Version 2.0.2

- Loading centroids has been made more reliable.
- Added the version number at the bottom of the "About" page.
- Improved the animation of the search bar.

...More

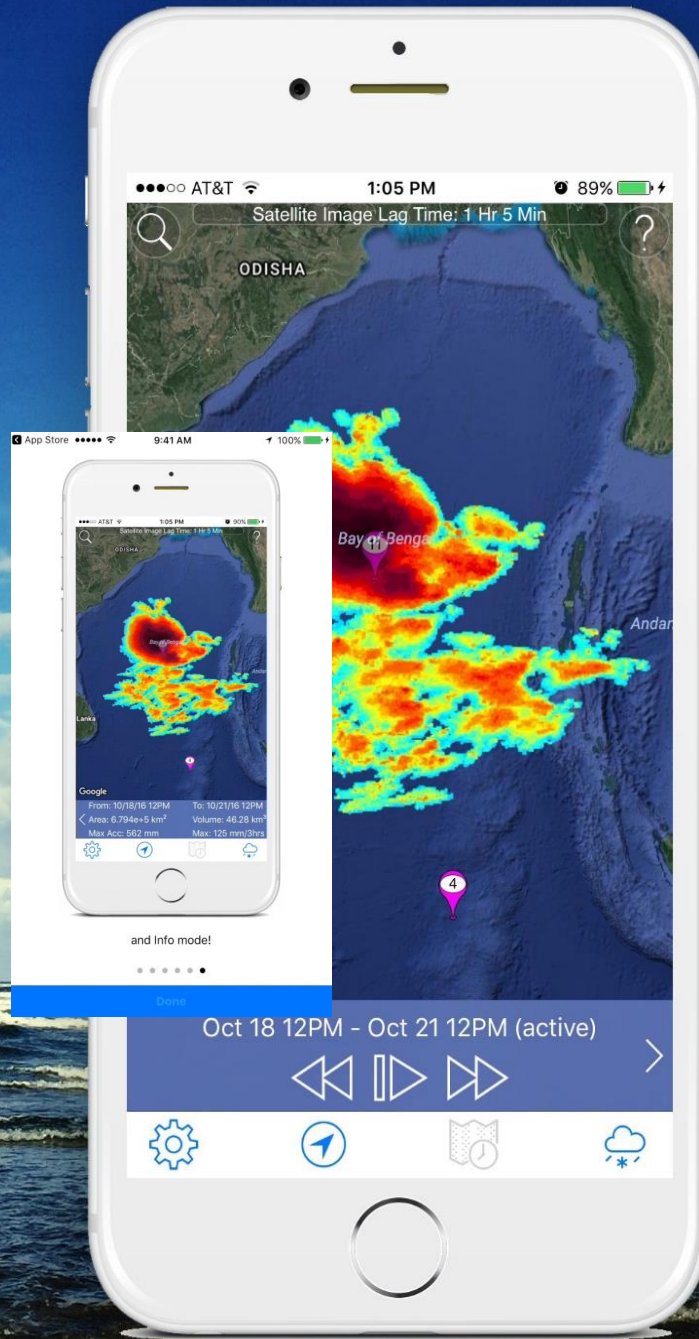
Screenshots

iPhone | iPad

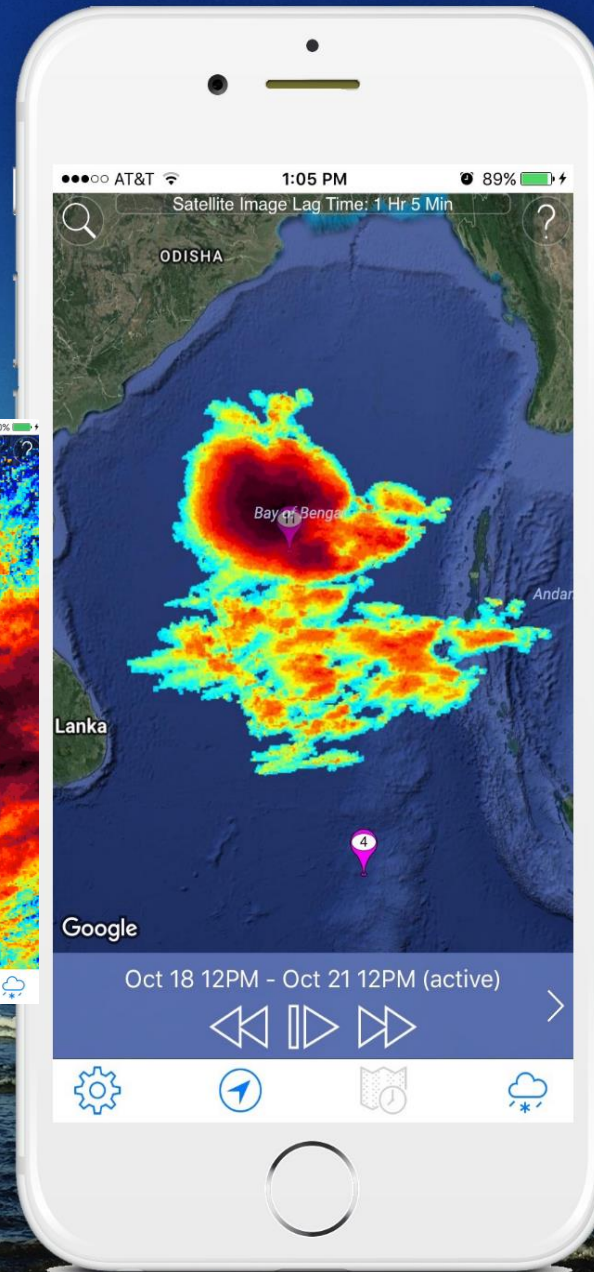
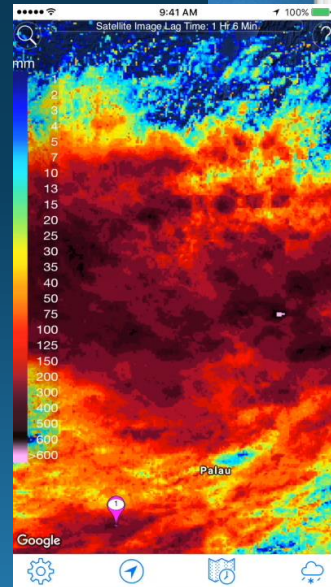


iRain available on App Store/Google Play Store

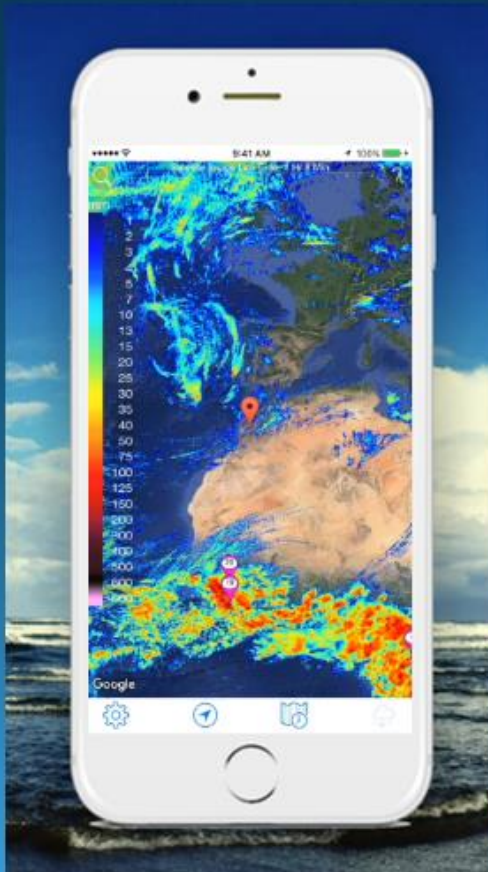
Show rain totals
from 3 hours to 3
days



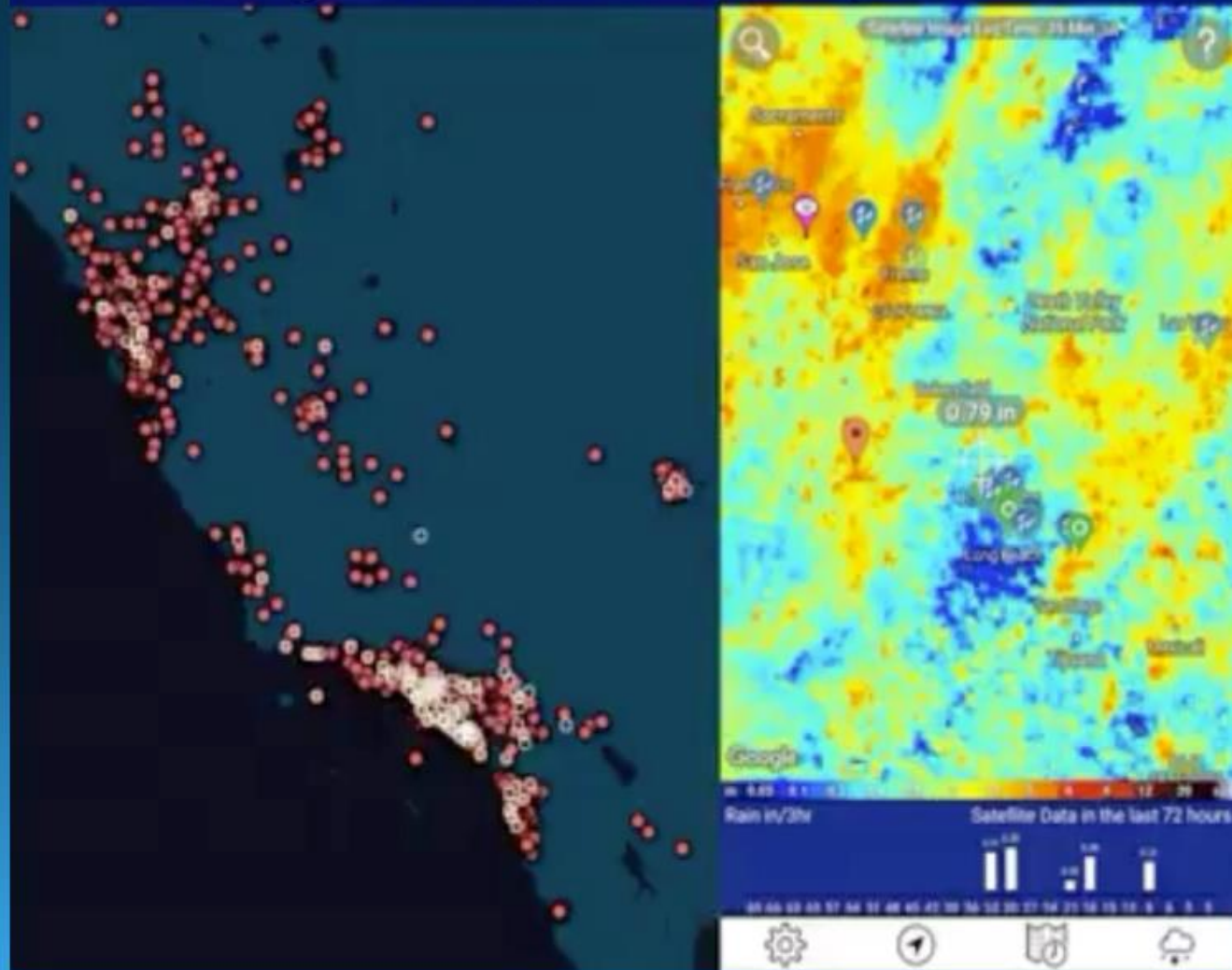
Zoom in to see
precise rainfall
measurements



Report rainfall
at your
location

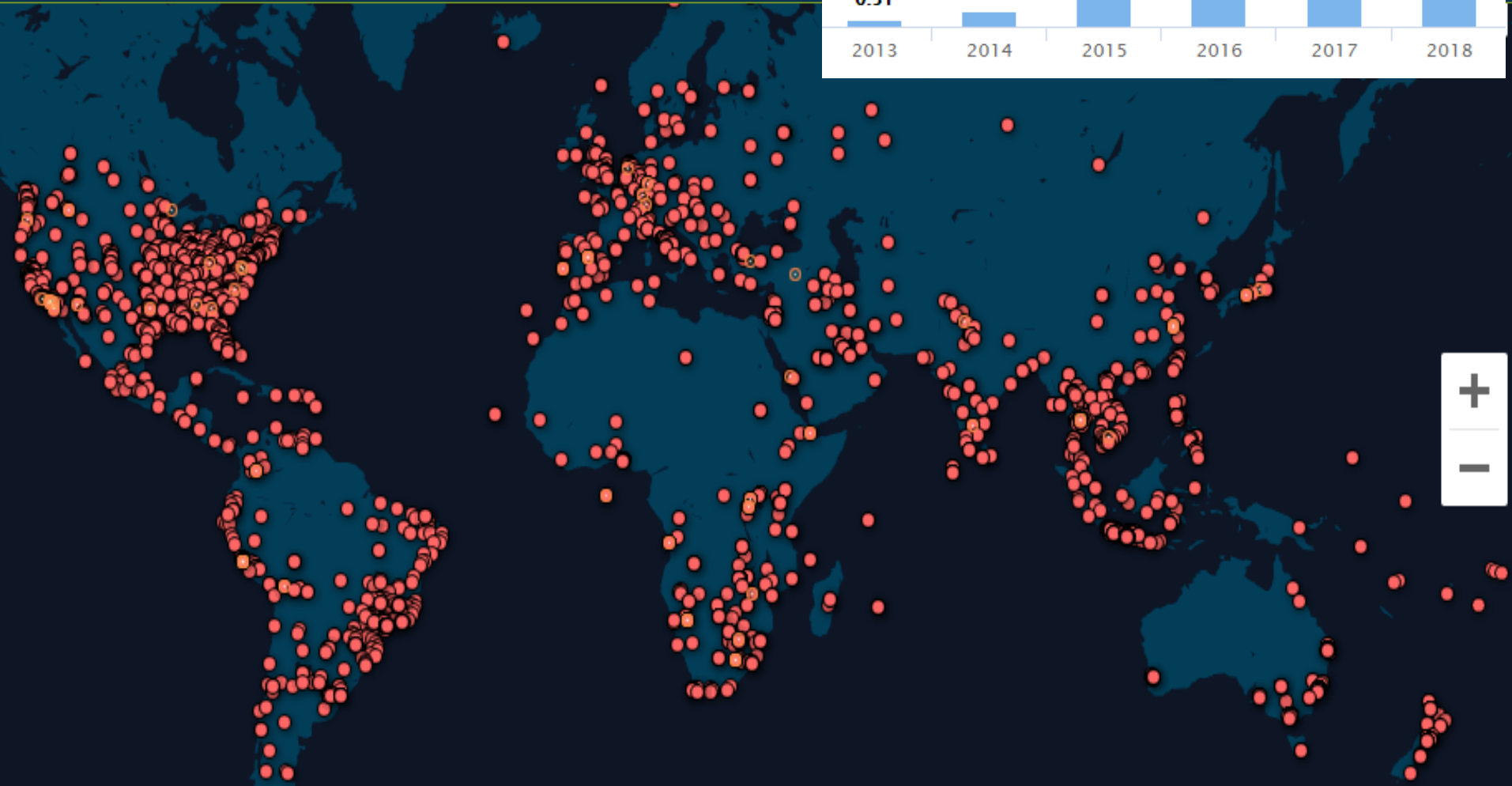
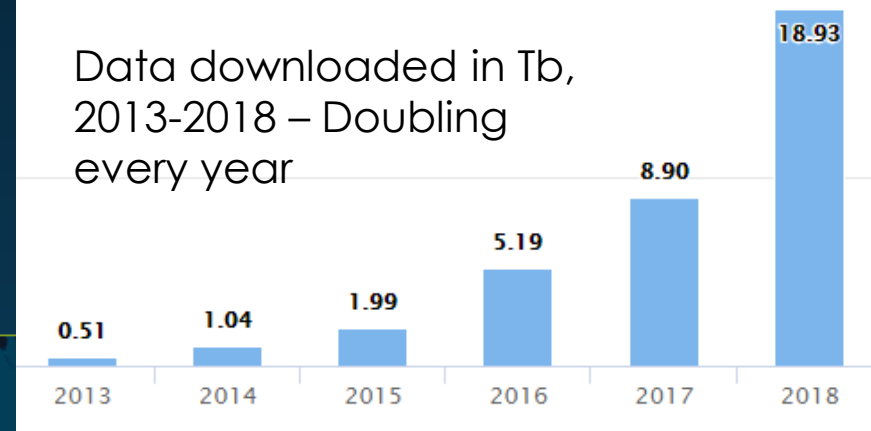


CHRS saw a storm of users on the west coast
during the downpour on January 8th, 2018



Who is Using iRain and Related Products?

Data downloaded in Tb,
2013-2018 – Doubling
every year



HYDROLOGICAL SERVICES NAMIBIA

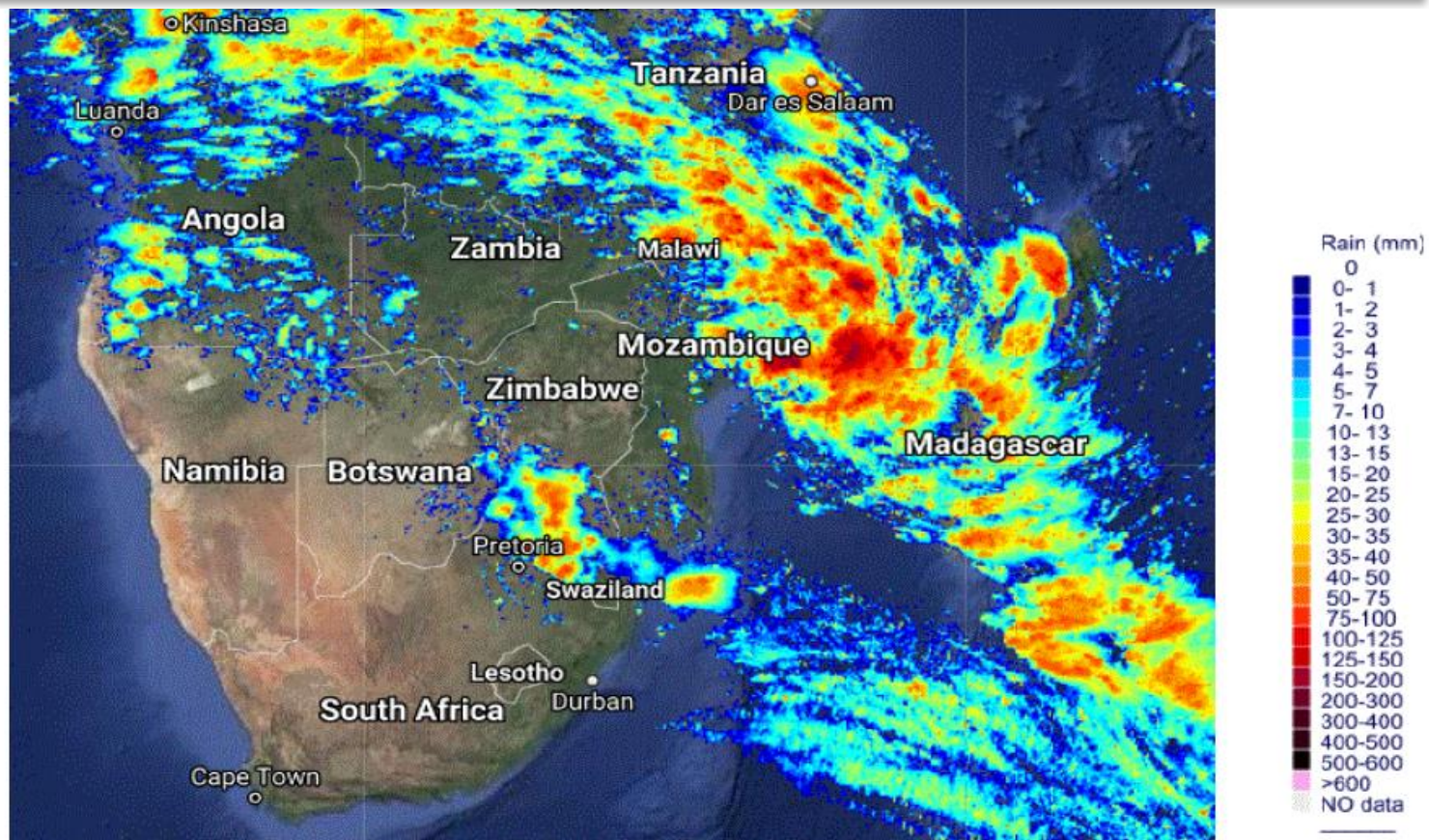
DAILY FLOOD BULLETIN

04 March 2019

Private Bag 13184, Ministry of Agriculture, Water and Forestry, Government Office Park, Namibia

Satellite images indicate isolated light showers over the northern border areas of Namibia. Good rains are also observed in southwestern parts of Angola.

CHRS iRain-rainfall accumulation for the past 24 hours preceding 08h00 on 04.03.2019

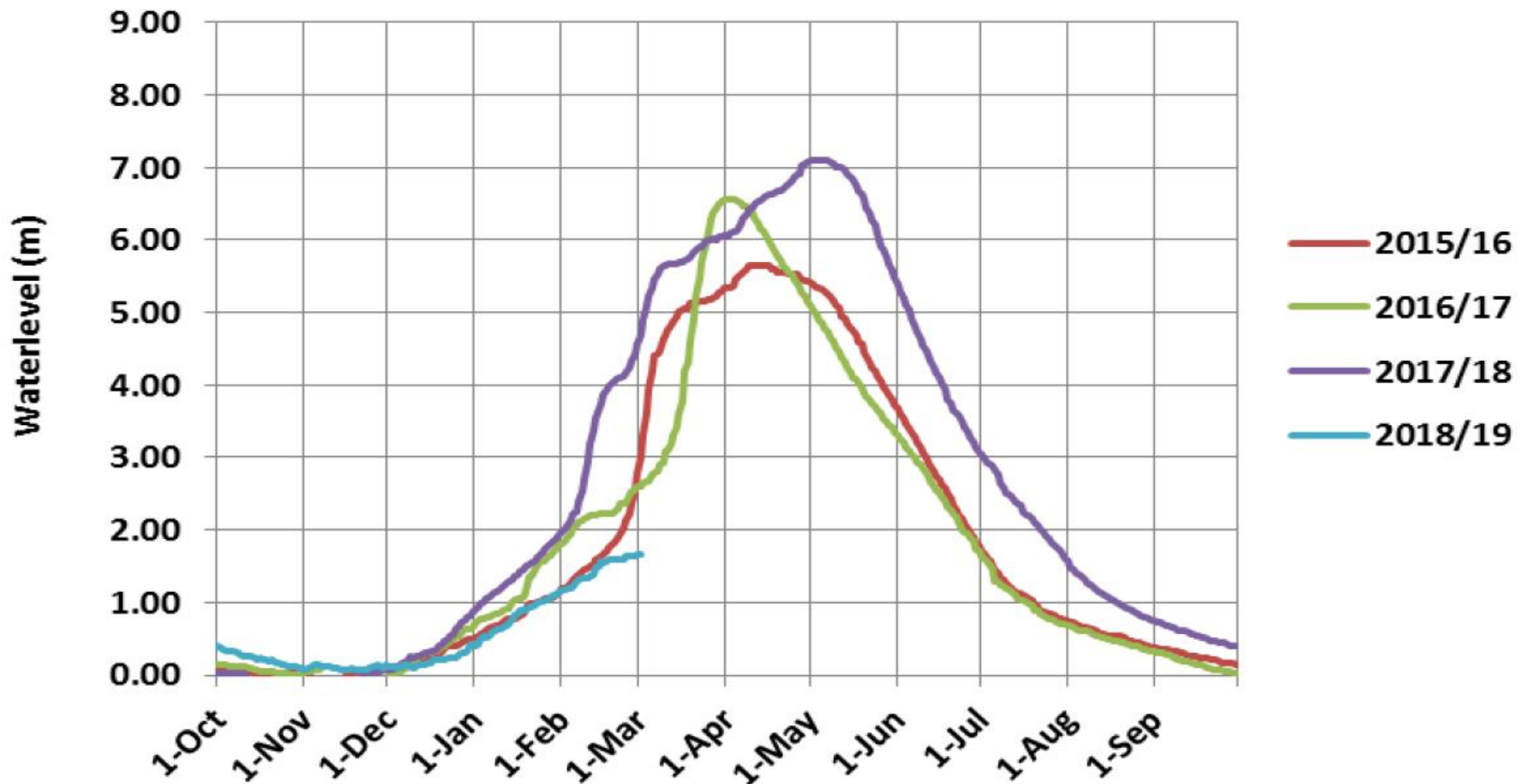


HYDROLOGICAL SERVICES NAMIBIA

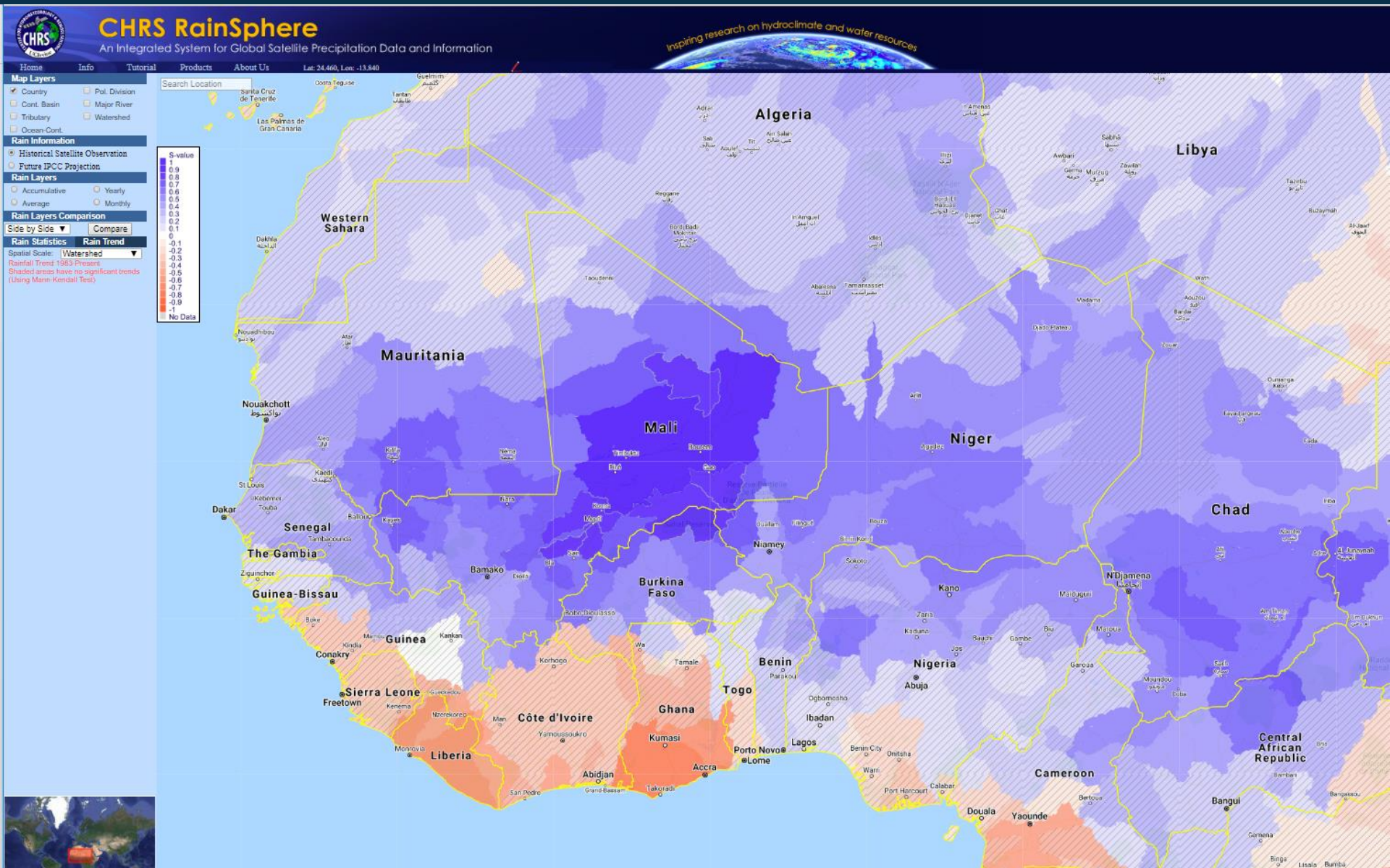
DAILY FLOOD BULLETIN

01 March 2019

Zambezi River at Katima Mulilo



35-year dataset for climate studies - Rainsphere



Yearly Rain

- Linear Trend $y = 5.78x + 549.83$
- ⋯ Average (648.12 mm)
- MKT: **INCREASING TREND**, alpha: 0.05, P: 0.00
- Temperature

