IEDRO

INTERNATIONAL ENVIRONMENTAL DATA RESCUE ORGANIZATION

IEDRO's Cooperative Approach to Data Rescue for the Development of Worldwide Environmental Databases

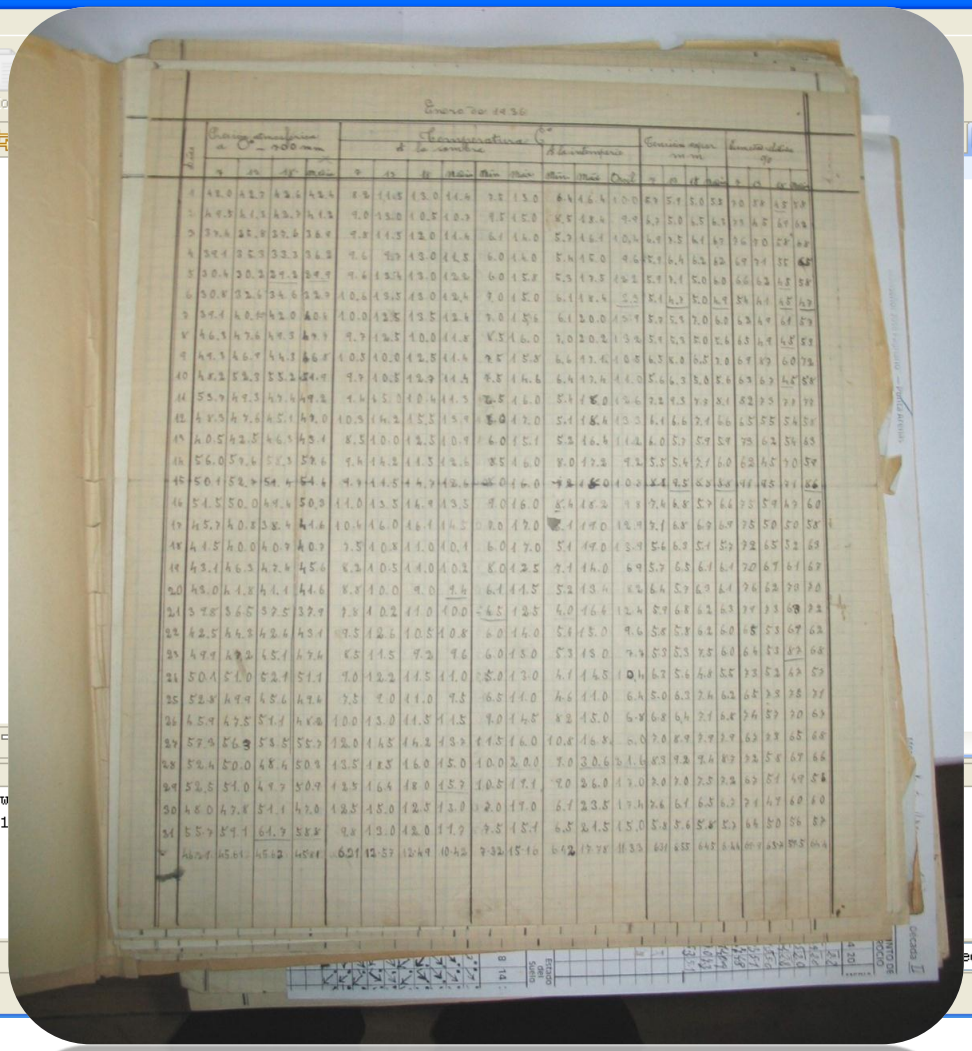
WHAT IS DATA RESCUE?

"Basis for meaningful research…"

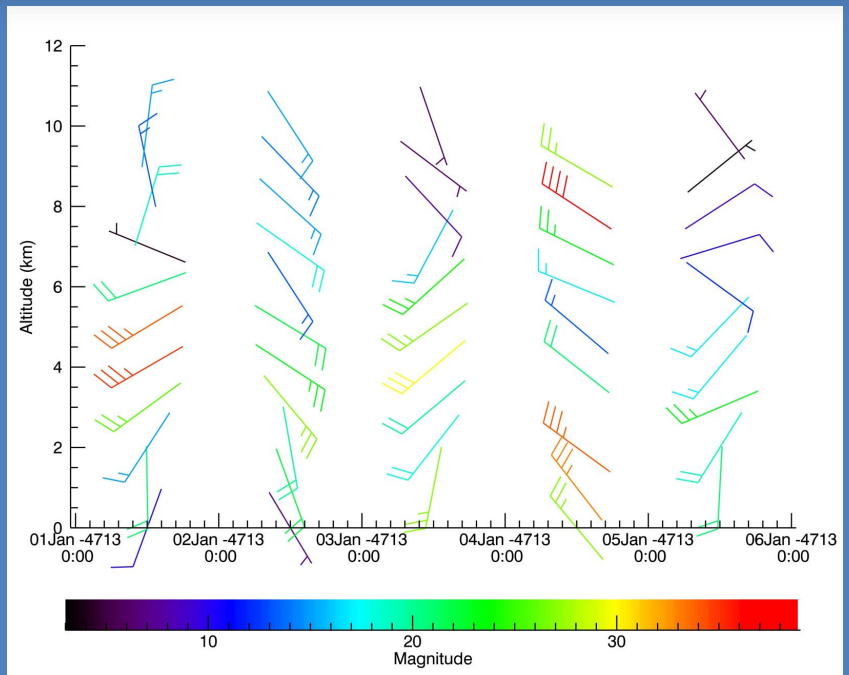
…that hopefully leads to meaningful applications!

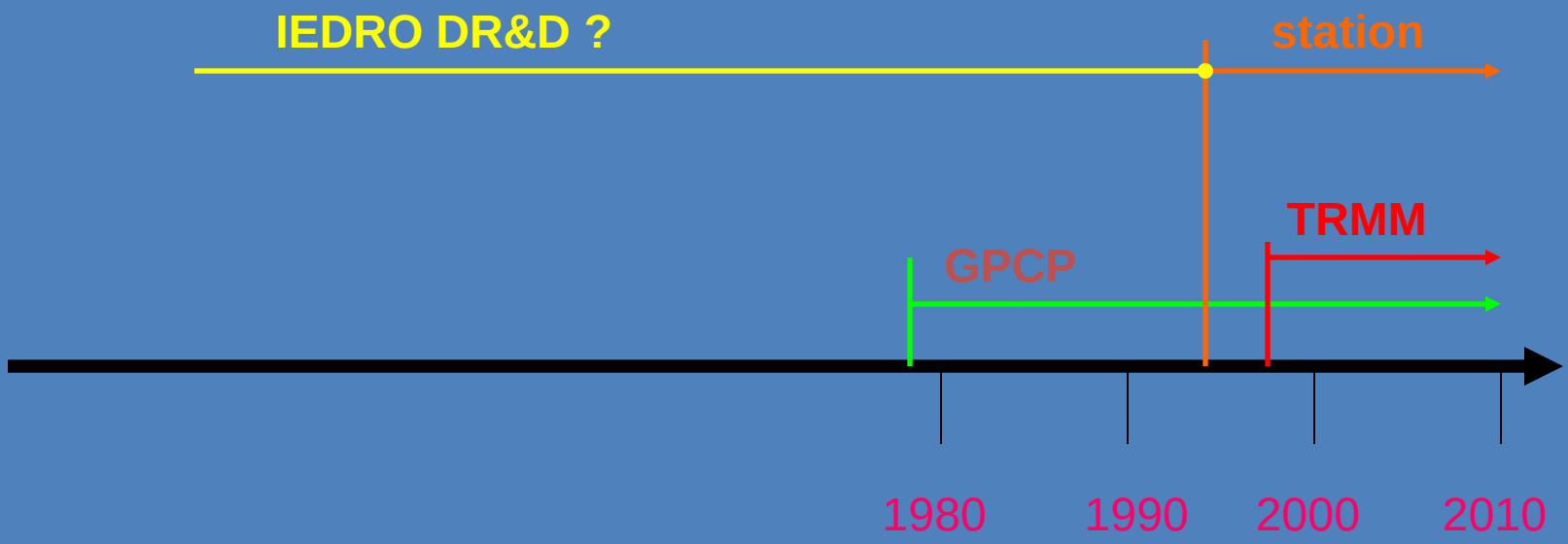
- **human health: dengue, malaria, cholera**
- **life saving agricultural statistics: subsistence farming, floods / droughts**
- **severe event statistics: devastating floods, flood forecasting**
- **climate change trends / statistics**

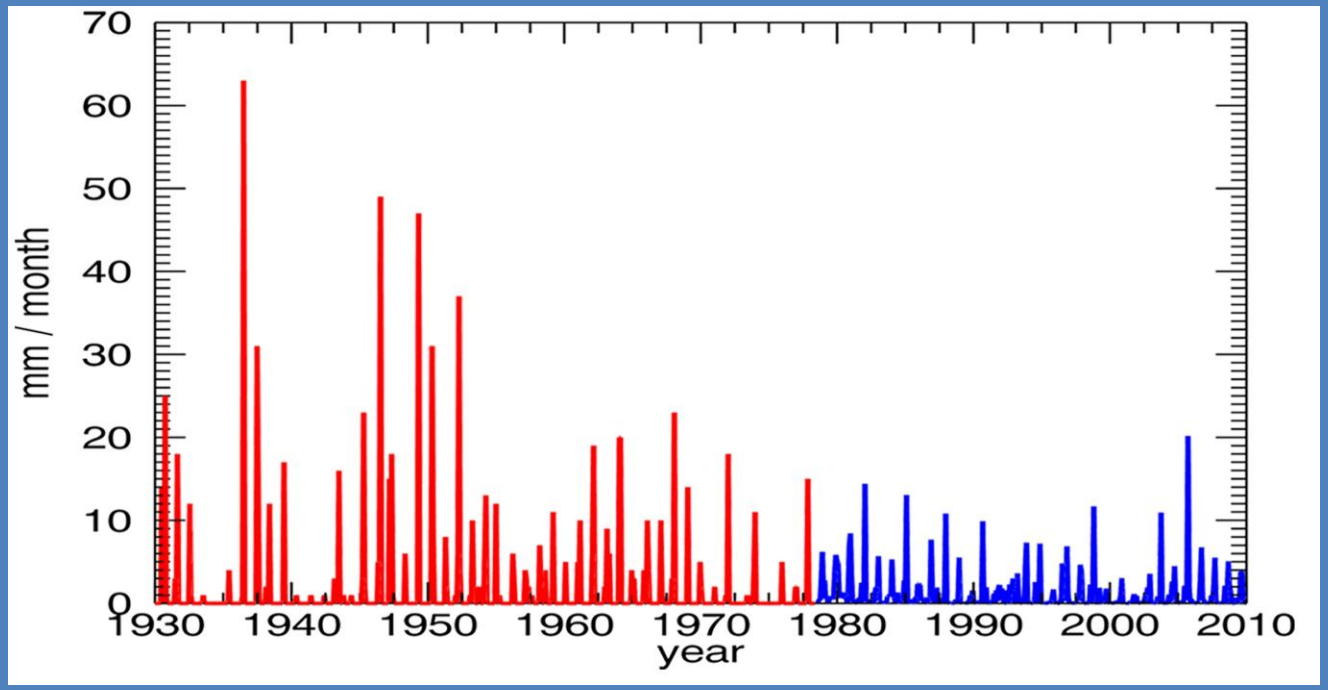
INGESTION OF DATA INTO
COMPUTATIONAL SOFTWARE
ORIGINAL RAW PIBAL DATA



…a picture is worth a thousand “numbers.”



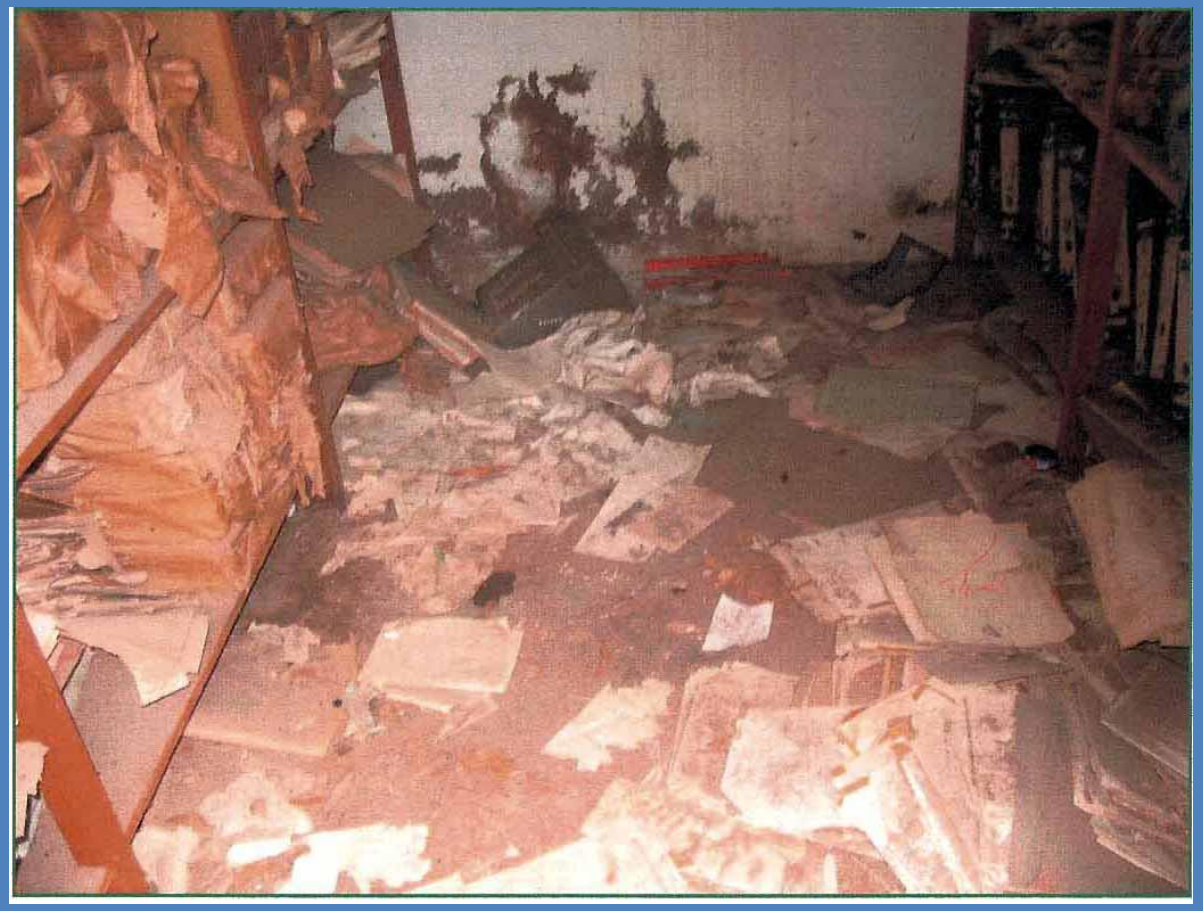

IEDRO DR&D ?
station
TRMM
GPCP
1980
1990
2000
2010


70
60
50
40
30
20
10
0
mm / month
1930
1940
1950
1960
1970
1980
1990
2000
2010
year

The magnitude of any Data Rescue effort depends on the condition or status of record archival.

some may be difficult to access and use

Some countries have very poor storage conditions.



With access and use almost impossible or even useless.

Unfortunately, paper, microfiche, microfilm and magnetic tape records are all deteriorating storage media and are in danger of being lost forever over time.

Cooperative Approach to DR&D

- The IEDRO approach to DR & D is designed to work in **cooperation** with the participating countries.
- The four phase approach to the program is as follows:
  - **–Phase 1 – Pre-processing / Inventory**

Cooperative Approach to DR&D

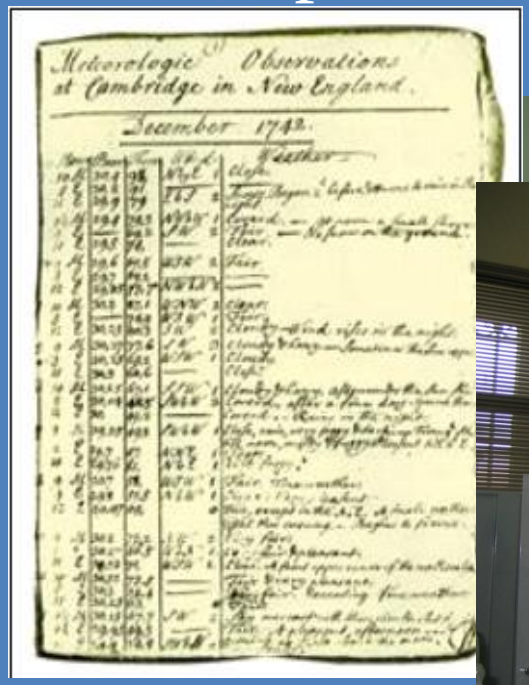
- Final products include:
  - Long lasting and easily retrievable electronic images
  - Reduction in valuable storage space
  - Digitized databases
  - Useful software for use with electronic images and digitized data

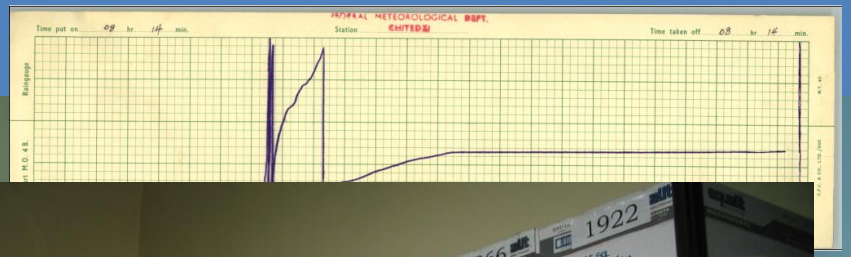
How do we locate and prioritize potential records for rescue?

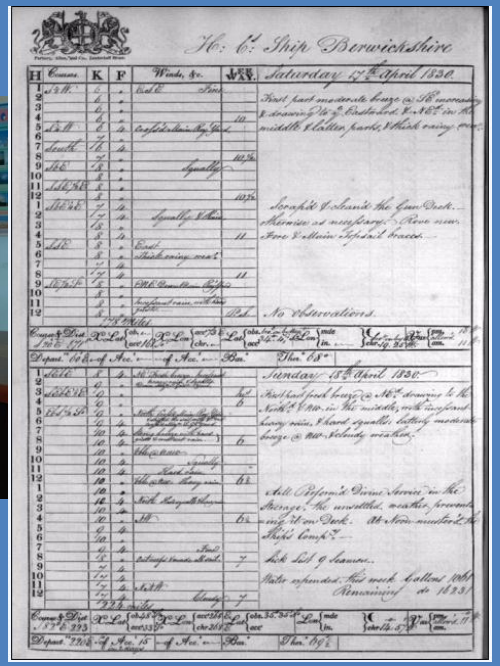
- Actually look at **ALL** of the records in the country's possession.
- Determine the Periods Of Records (**PORs**) available for each record set.
- Evaluate the status / conditions of each data set media.
- Examine the PORs already digitized and archived in the World Data Center databases **and** within the country.
- Determine what the major priorities are for the country.
- Consider the most urgent needs of public, academic and research communities.
- Only work on ONE data set at a time or per team.

Phase 1 - Pre-processing / Inventory Procedures

- Locate, review, identify projects and their scopes (volume).
- Prioritize all records to be imaged.
- Set-up a dedicated work area with little or no

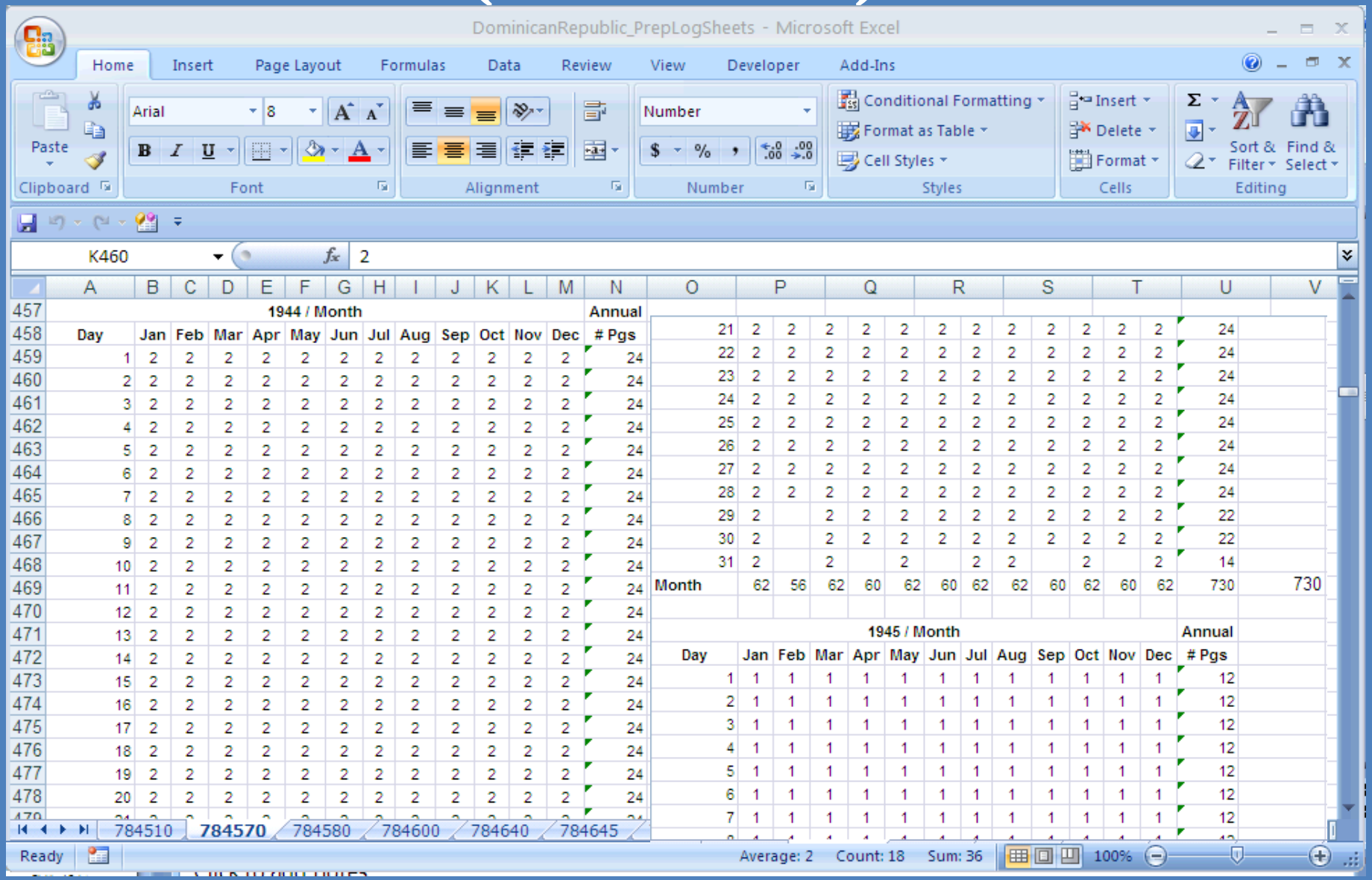






- Find & image samples of forms when they changed formats throughout POR.

Pre-processing and Inventory Phase (Continued)



Phase 2 - Imaging Phase

- IEDRO will buy, set-up and test computer, software and cameras.

- Train personnel on:
  - How to use of the Microsoft Excel spreadsheet program, **if necessary**.
  - Operational procedures for the computer and camera.
  - Downloading of images to the PC.
  - Procedures for imaging, copying and QC of the images.

Phase 2 - Imaging Phase (Continued)

- The record imaging operations process by country personnel will begin and continue until completed.
- Country personnel must visually **QC** all the images (or an adequate representative sample) **BEFORE** copying to storage media.
- Images and ".xls" files are periodically copied to CDs, thumb drive or other storage media and sent to IEDRO HQs.
- The next graphic display depicts what happens with imaged records.

Bolivian Image/Keying Data Rescue Project
Image and Data Flow

Keying Specs. and formats are Issued

Data Keyed

Verify, QC & correct keyed data

Images are Inventoried and Verified

"Hyper-linked" / interactive Calendar inventory (Excel) Created

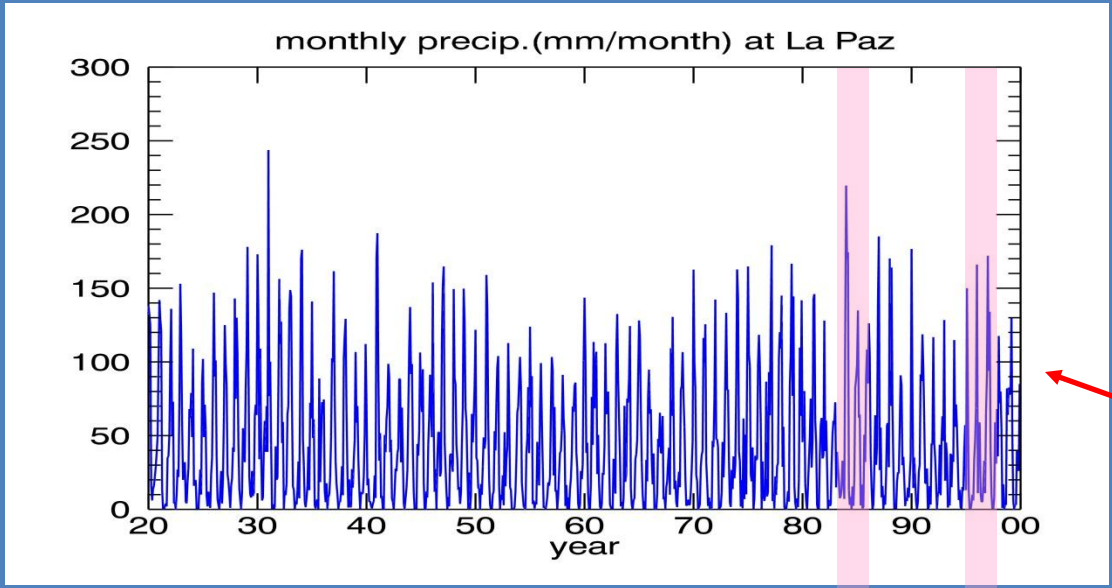
IEDRO HQs

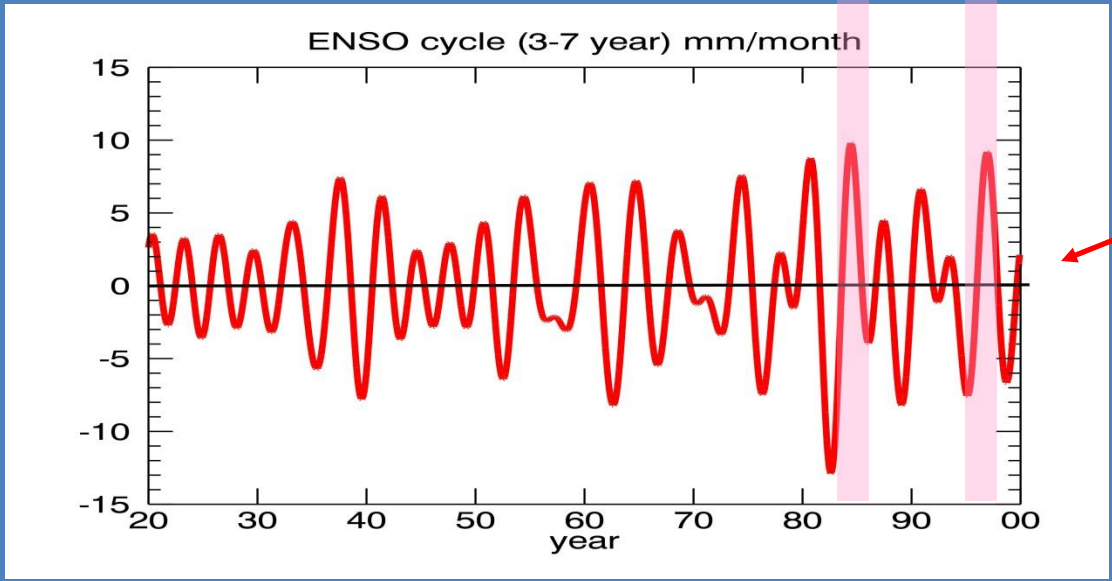
IEDRO reformats the data and submits to NCDC World Database

Images Burned to CD-ROM

Burned to CD_ROM

Climate Applications





How does El Nino affect rainfall in La Paz?

1920 – 1999 Monthly Rainfall at La Paz

3-7 Year Filtered Rainfall Time Series

(El Nino Cycle)

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This Concludes The Presentation
Any Questions or Comments?