

Frequently Asked Questions (FAQ)

1. *What are the parameters needed to run CIRH?*

a) Climatic Data ('Localidades')

1. Mean Minimum Temperature (°C)
2. Mean Temperature (°C)
3. Mean Maximum Temperature (°C)
4. Relative Humidity (%)
5. Solar Radiation ($\text{cal} \cdot \text{cm}^{-2} \cdot \text{d}^{-1}$)
6. Wind Speed (m s^{-1})
7. Average Precipitation (mm)
8. Sunshine (h)
9. Wind Distance (km d^{-1})
10. Evaporation (mm d^{-1})

b) Precipitation Data ('Precipitacion')

Monthly Precipitation amounts for at least 30 years (1970-2000)

2. *What if not all parameters are present?*

Depending on the parameters present an evaporation formula will be used

- Ø Only mean temperature: Formula of Thornthwaite
- Ø + Relative humidity: Formula of Ivanov
- Ø + Solar Radiation: Formula of Turc
- Ø + Wind Speed or Distance and + Sunshine: Formula of Penman-Monteith
- Ø + Precipitation: calculation of hydrological indicators
- Ø + Evaporation: comparison between measured and calculated values

The formula of Penman-Monteith is preferred over all other formula. The estimation given by the formula of Thornthwaite is inadequate to be used in further calculations.

3. *Which data are already available for my country?*

Two data sources are available.

1. FAO World-Wide Agroclimatic Database (2001)
6847 climatic stations in LAC, but only 8% is complete.
Period: 1900-1990, but mostly unknown or from a smaller period
2. FAO Agroclimatic Data of Latin America and the Caribbean (1984)
799 stations in LAC, most are complete. Period: 1931-1960.

4. *How can I use these data?*

These data are incomplete and should be revised before use. It can be used as a base and completed with more recent data. The period should be specified if data are added or updated.

The data are presented in the CIRH format, allowing to practice the methodology and to test the CIRH software before starting with your own, new data.

5. *How do I format the climatic data to be used in CIRH?*

The easiest way is to construct an excel file for every parameter and add data from all stations to this file (using the value -99 if it is missing for a particular

station). Afterwards the 10 excel files (one for every parameter) can be merged into one CIRH input file.

6. *How to construct a map from the CIRH output?*

The CIRH program calculates various hydrological parameters using the best possible formula. These are exported to Excel and have to be converted to georeferenced data. This means that every station ('localidad') has to be located on the country map and that the hydrological parameters have to be linked to these georeferenced stations. This can be done using Arcview© (ESRI) or Idrisi (Clark Labs) software. Finally, the hydrological parameters have to be interpolated to construct a continuous map of hydrologic zones.

7. *Where do I ask more questions?*

The first points of contact are the subregional coordinators. A list of contacts can be found [here](#).

For more general questions or remarks that can be a benefit to all participants the forum can be used, which can be accessed [here](#). The questions are then open to all participants and the answers can be read by all.

For more information about the CIRH program, please read the [User Manual](#) first.

Information about the proposed methodology can be found in the 'Methodological guideline for the construction of a regional map of arid, semi-arid and sub-humid zones in Latin America and the Caribes', which can be found [here](#).