WCRP CONFERENCE FOR LATIN AMERICA AND THE CARIBBEAN: DEVELOPING, LINKING AND APPLYING CLIMATE KNOWLEDGE

FORMATTING AND AVAILABILITY OF DATA OF THE INPE DCP FOR THE INTERNATIONAL SURFACE TEMPERATURE INITIATIVE

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INTRODUCTION

The Center for Weather Forecasts and Climate Studies (CPTEC) a part of the National Institute For Space Research (INPE) is one of the collaborators of "The International Surface Temperature Initiative" project, endorsed by the World Meteorological Organization (WMO) Commission for Climatology at its 15th session.
The main purpose of the DataBank is to unite the efforts of several organizations to build a repository of global surface observations by creating a of high quality and high resolution data set.
For more information visit: http://www.surfacetemperatures.org/
For the Center to participate in the project, providing its historical surface temperature data series, it was necessary to develop a Perl script that allowed these files to be put into the standard required by the project .

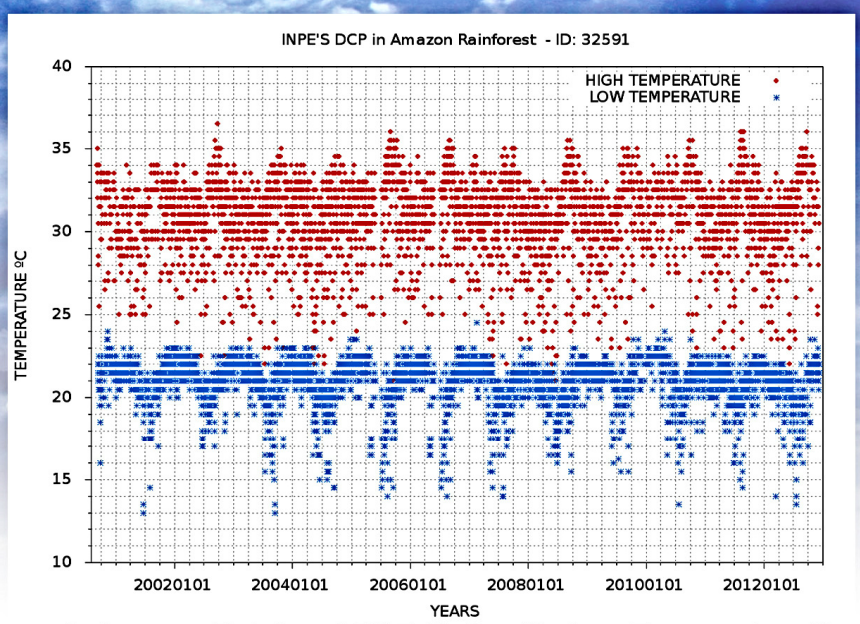

Figure 1. Amazon Rainforest DCP Station Surface Temperature Graph.

METHODS

The CPTEC has a database with about 500 automatic stations over the Brazil territory. This database is known as Institute's DCP (Data Collection Platform). Over one million data observations were extracted from the DCP Database from 1995 to 2013. This means about 61 thousand observations per year, considering a significant annual increase in the number of stations.
In order to format the whole time series according to the DataBank project standards, we developed a Perl script , which reads the time series the Center generates as output ASCII files with said standards, containing the fields: station ID , latitude , longitude , altitude , flag stage 0 , flag stage 1, flag type, flag mod , flag mot, date, time , maximum temperature , minumum temperature , average temperature. Each participating organization has received individual identification numbers for their respective flag fields.

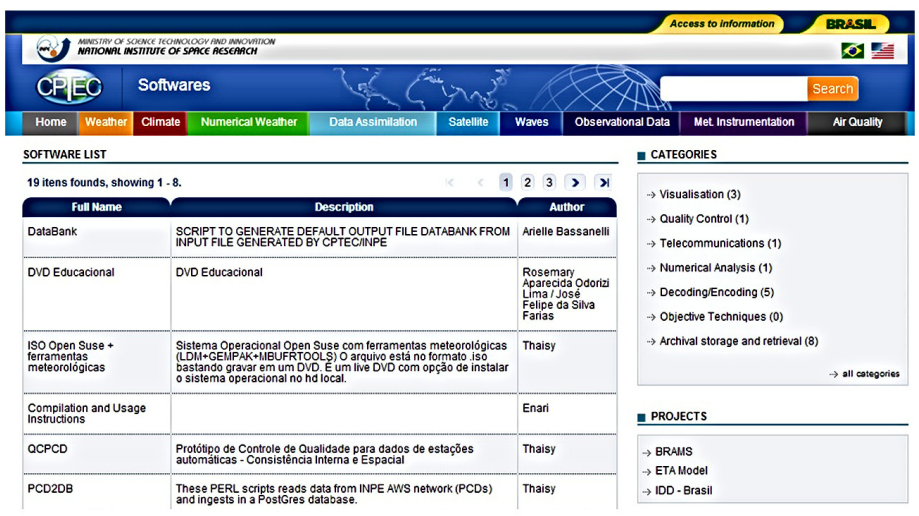

Figure 2. Website containing the script for download.

RESULTS

For a better visualizatiobn of the available data in the Institute's database please look at the following DCP station graph (ID: 32591; Lat: -7,6 ; Lon: -72.77) located in the amazon rainforest region.
The following picture can be accessed at the link below, which also contains the script mentioned in this paper:
http://downloads.cptec.inpe.br/publicacoes/distribuicao.jsp

CONCLUSION

All the code created by the CPTEC developers is available to potential collaborators who wish to join the Data Bank project. This way, they can use the scripts to format and make their surface temperature observations series available quickly and easily.
The data set available in the Data Bank is still experimental, so it is only available to project participants, such as CPTEC-INPE. In the future it will be open for free access, helping future work related to this field of study.

INPE CPTEC International Surface Temperature Initiative

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