CLIMATOLOGY & CLIMATE CHANGE

QUALITY THROUGH INNOVATION AND DESIGN

March 2017

Energy, Water, Environment.
Global Sustainable Solutions.

04 Climatology & Climate Change – HydroMET System

The climate system is a complex, interactive system comprising the atmosphere, land surface, snow and ice, oceans and other bodies of water.

But the atmospheric component of the climate system is what people refer to as Climate, which is described in terms of the mean and variability of three parameters: temperature, precipitation and wind over a period of time, ranging from months to millions of years, so it is often defined as 'average weather'.

The difference between Climate and Weather is really a matter of time. Weather is what happens over a short time, and Climate is the behaviour of the atmosphere over a longer period. A 30 year period is considered as the most adequate for comparison in climate behaviour.

METEODATA/HYDRODATA - 3000CM

ENEA Grupo® offers the necessary instruments for the measurement of all the parameters directly related with the Weather as: Temperature, Precipitation and Wind, but also for the rest of meteorological parameters such as Atmospheric Pressure, Solar Radiation, Relative Humidity, Dew Point, etc. ENEA Grupo® Automatic Weather Stations (AWS) or Automatic Meteorological Stations Model METEODATA - 2000/3000 are the most advanced technical solutions for such purpose.

Carbon dioxide (CO2) is a strong attenuator of infrared radiation and is believed to be important in trapping heat in the lower atmosphere, contributing to global climate change. It is a matter of fact that carbon dioxide in the atmosphere is rising significantly, so ENEA Grupo® also offers suitable solutions for the CO2 measurement in air and soils, as well as the NET carbon exchange, defined as the Gross Primary Production

(GPP) minus the ecosystem respiration (Reco). It is a key variable for understanding the carbon balance of an ecosystem.

Understanding how sources and sinks for CO2 vary in both time and space can be important in evaluating the potential impacts of different land covers and management practices on the environment and human health. One approach to characterizing this variability is to integrate spatial data with concurrent observations of CO2 concentrations and/or fluxes.