

CLIMATE – CLIMATE VARIATIONS

- Climate. The climatic system and its components (atmosphere, hydrosphere, cryosphere, lithosphere, biosphere)
- Climatic scales of time and space
- Climatic factors in both hemispheres
- Planetary radiation and energy budgets
- Greenhouse gases (sources/distribution/variations). Global warming potential.
- Planetary circulation and climate systems.
- Climate variability and sensitivity – forcing mechanisms and feedback mechanisms.
- Climate models – initial and boundary conditions – climate equations – models categories (1D/2D/3D, coupled, regional and global).
- Climate changes: Natural and anthropogenic – climate variations – temperature and precipitation trends – frequency and intensity of extreme weather events – climate predictions, including accuracy assessment.
- Assessment of the impact of climate change to the natural and anthropogenic environment.
- International framework for the protection of climate. Policies to keep below a 2 deg Celcius temperature increase.