

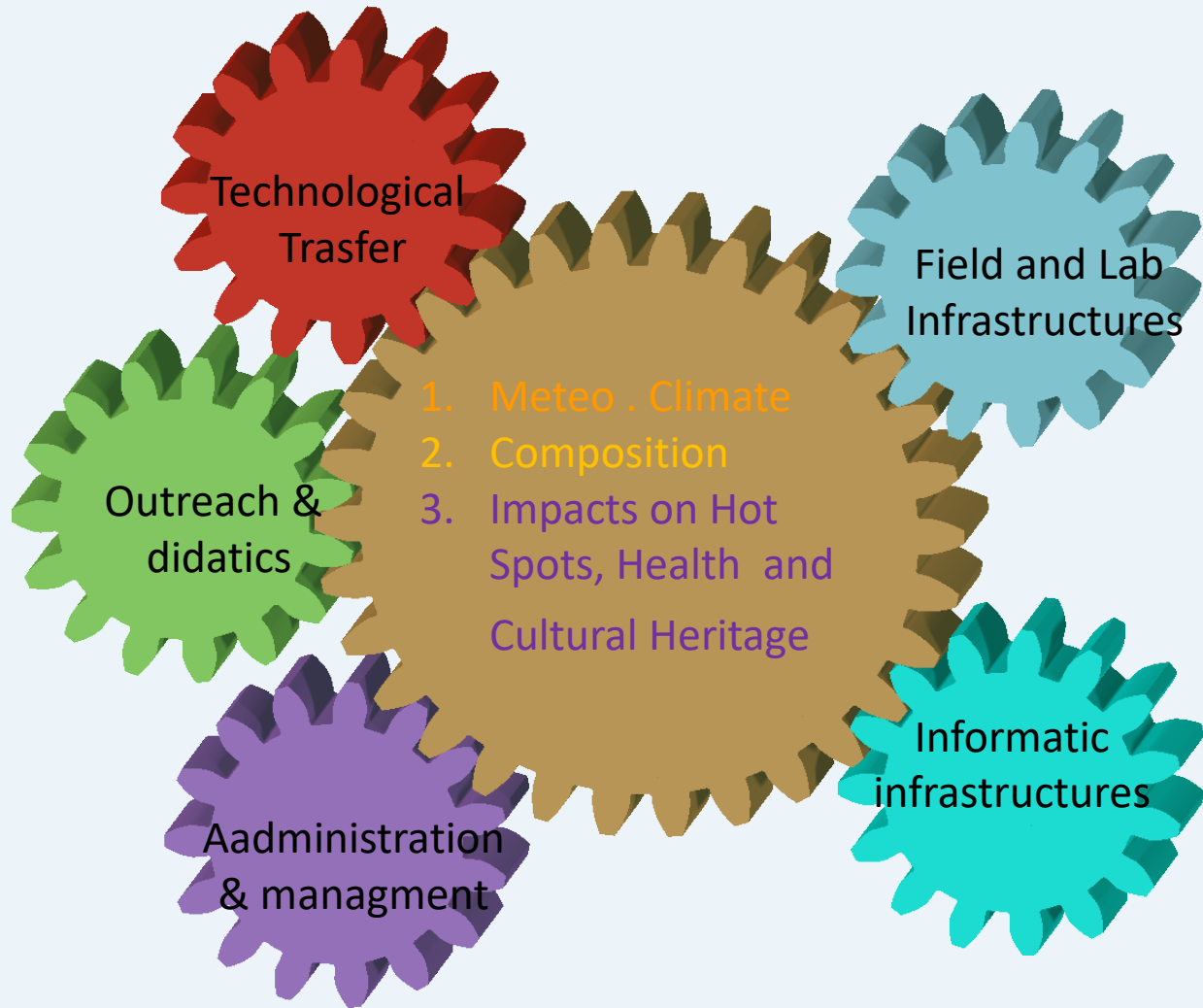


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# Observations and Models for Meteorology and Climate (CAMEO)



- Integrated approach to the understanding of (past and current) global changes by means of high quality observations, conceptual modeling of fundamental processes (including dynamics), state-of-the-art NWP and Earth-system models.



# Atmospheric Composition, Climate Forcing, Air Quality (CAFCA)

- Atmospheric composition. Water vapor and trace gas dynamics, aerosol formation and dispersion, from the planetary boundary layer to the upper atmosphere, on scales from local to global. Planetary atmospheres.



# Impacts on Environment, Cultural Heritage and Human Health (IMPEACH)

- Impact of natural and anthropogenic events on human environment, health and cultural heritage. Application-driven research



# ISAC OBSERVATIONAL INFRASTRUCTURES

## ▲ Mt. Cimone “O. Vittori”

*GAW-WMO Global station*

**Climate and air quality**

**Long term observations**

**Model validations**

**Instrumentation tests**

Atmospheric composition

## ● Roma Tor Vergata

*CIRAS observatory (CNR  
Isac Rome Atmospheric  
Supersite)*

Atmospheric remote-  
sensing and for  
operational processing of  
satellite data. Data

## Nepal Climate Observatory – Pyramid (Himalaya)

*GAW-WMO Global station*

**Climate and air quality**

**Long term observations**

**Model validations**

**Instrumentation tests**

Atmospheric composition

Aerosol chemical composition,  
physical and optical  
characterization

Surface radiation budget



## ● S. Pietro Capofiume

**Air quality**

Aerosol studies

Atmospheric composition

Atmospheric radiation

## ● Bologna “Supersito”

**Air quality and health**

Aerosol monitoring

Atmospheric radiation

## ● Lecce

*GAW-WMO regional station*

**Climate and Air quality**

**PBL dynamics**

Atmospheric composition

Atmospheric radiation

## ● Lamezia Terme

*GAW-WMO regional station*

**Climate and Air quality**

Atmospheric composition

PBL dynamics

Vertical aerosol and wind  
profile

## ● Capo Granitola *(in collaboration with IAMC Institute)*

*GAW-WMO regional station*

**Climate and Air quality**

**Air-sea interactions**

Atmospheric composition





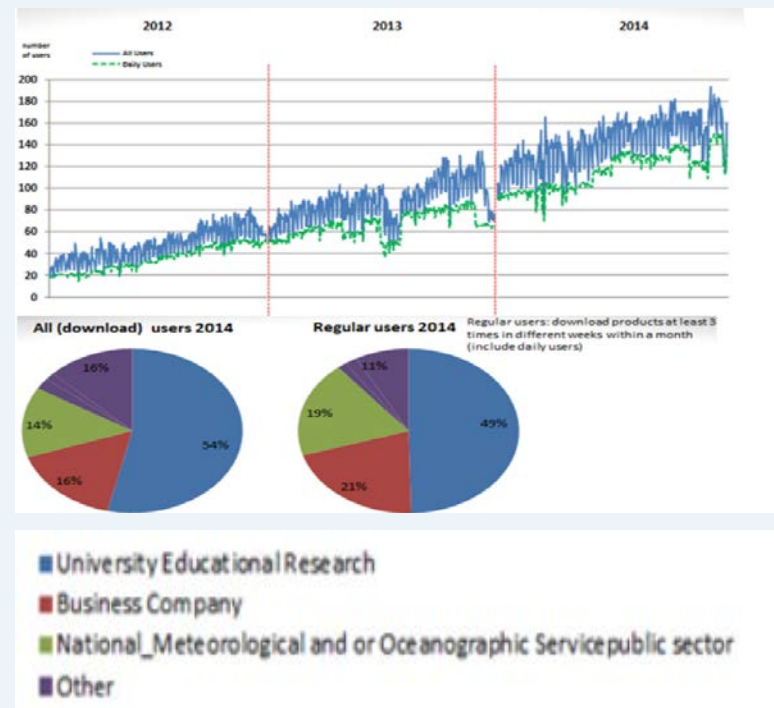
## Two real time receiving stations for meteorological satellite.



Clouds and precipitation radars:

- 1 C-band polarimetric radar (Roma),
- 2 C-band precipitation radars (Torchiarolo, Mesagne),
- 1 Ka-band (35 GHz) mobile cloud radar,
- 1 Ku-band radar for snow cover and air-sea interface studies.

The **CNR-ISAC Distribution Units (DU)** is linked with the **CMEMS - the Copernicus Marine Environment Monitoring Service Infrastructure** web portal and give access to the satellite marine observation covering the global ocean and the European regional seas.



Dataset distributed are ocean essential variables: SST, chlorophyll, optical properties of the ocean surface and winds.

Area coverage: global ocean, Atlantic, Arctic, Mediterranean, Baltic, Black Sea.