

Response in the Netherlands to the GCOS IP

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1. Why contribute to climate monitoring

- Global monitoring is collective task rich countries
- Existence of teleconnections implies collective global interest
- Participation guarantees excess to global datasets
- Active participation helps developing expertise
- Capacity building is task of rich countries

2. KNMI Climate Monitoring Strategy established in January 2006

Principles

- Long-term commitment
- GCOS IP as guidance (incl. ECV's and monitoring principles)
- WMO guiding for national network
- Promote free and unrestricted exchange of data

Ambition

- Optimise existing non-satellite observations: BSRN, Clouds, ARGO, Ozone
- Further develop Cabauw/CESAR Observatory
- Further develop Paramaribo to GAW/upper-air station
- Consolidate internat. position satellite observations
- Continue leading role in ECA&D

3. Project to coordinate climate monitoring activities of institutes in the Netherlands (April 2006)

Playing a central role in the Netherlands in climate change research, one of KNMI's key activities is the monitoring of a variety of climate parameters. Climate monitoring is a multidisciplinary activity, because of the complexity of the climate system. Naturally, other institutes in the Netherlands also contribute to monitoring of parts of the climate system, such as atmospheric composition and vertical structure (RIVM¹), GHG concentrations (ECN²), in-situ ocean monitoring of currents, temperature and salinity (NIOZ³), sea level, river discharges and wave climate (RIKZ⁴, RIZA⁵), land cover and related CO₂, CH₄ and N₂O emissions and concentrations (WUR⁶) and changes in the hydrological system, e.g. groundwater change, droughts and flooding (TNO⁷). The CESAR⁸ consortium operates various in-situ and remote-sensing instruments at the Cabauw Observatory for the atmospheric profiling of wind, temperature, water vapour, cloud characteristics and aerosols. To develop an optimised national Implementation Plan, national coordination between these institutes is necessary.

¹) National Institute for Public Health and the Environment, www.rivm.nl/en

²) Energy Research Centre of the Netherlands, www.ecn.nl/en

³) Royal Netherlands Institute for Sea Research, www.nioz.nl

⁴) National Institute for Coastal and Marine Management, www.rikz.nl/home/NL/index_e.html

⁵) Institute for Inland Water Management and Waste Water Treatment, www.rijkswaterstaat.nl/rws/riza/home/english/index.html

⁶) Wageningen University and Research Centre, www.wur.nl/UK

⁷) TNO Built Environment and Geosciences, www.tno.nl/bouw_en_ondergrond/index.xml

⁸) Cabauw Experimental Site for Atmospheric Research, www.cesar-observatory.nl