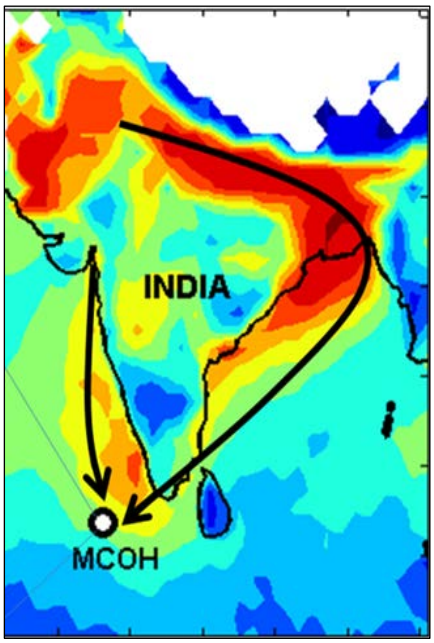


# The Maldives Climate Observatory at Hanimaadhoo (MCOH)

**(A receptor/background observatory for atmospheric and climate studies in South Asia)**

The Maldives Climate Observatory – Hanimaadhoo (MCOH), is a background site for atmospheric and climate studies in South Asia, strategically located south-west of the subcontinent in the Indian Ocean. It is owned by the Government of Maldives and jointly operated by the Maldives Meteorological Services (MMS) and the MCOH international Science Team through a MoU with the United Nations Environment Programme (UNEP). The MCOH provides state-of-the-art measurements of the composition of atmosphere over the Indian Ocean. It is a receptor site of long-range transport of pollutants (the atmospheric brown cloud) from emission regions of South Asia, Middle East and Africa. MCOH has now accumulated an invaluable 10-yr time series record and is regularly hosting intensive campaigns (e.g., ABC, MAC, CARDEX). MCOH-related research has inspired fundamental new knowledge on anthropogenic and natural aerosols and their interaction with clouds, the monsoon system and other parts of the perturbed regional climate system (see MCOH literature list at the back). There are good opportunities to expand MCOH activities in the near future, including for studies of aerosols, aerosol-cloud interactions, greenhouse gases, radiation – coupled to synoptic observations at sites on the mainland.

## Current MCOH instrumentation

**Radiation:** Pyranometers, Pyrheliometers, High-speed Ground-based UV Radiometer, Sun Photometer

**Aerosol Physics:** 3-wavelength Nephelometers, 7-wavelength Aethalometers, Aerodynamic Particle Sizer Spectrometer, Condensation Particle Counter (CPC), Differential Mobility Particle Sizer (DMPS).

**Aerosol and Gas Chemistry:** High-volume TSP and PM 2.5 filter Samplers, Automatic Rain Water Collector (Glass and Plastic), CO analyzer [filter samples subject to multiple post-collection chemical and optical analyses].

## Current staffing of MCOH

Currently MCOH have 7 technical support staff (technicians, security guards, caretaker etc) supported financially by the Maldives Met Service. The MCOH Science Team is financing the Crutzen International Climate Fellow and Resident Scientist (2-year rotation position).

## Partner Organizations of MCOH

| | Name of organization | Name of lead PI |
|---|---|---|
| | Maldives Meteorological Service E | Dr. Zahid<br>zahid@met.gov.mv |
| UNEP | United Nations Environment Programme (UNEP), Regional Office for Asia and Pacific, Bangkok | Iyngararasan Mylvakanam<br>Iyngararasan.Mylvakanam@unep.org |
| SCRIPPS | Centre for Clouds, Chemistry and Climate, Scripps Institute of Oceanography, University of California, San Diego | V. Ramanathan<br>vramanathan@ucsd.edu |
| Stockholm University | Stockholm University – Bolin Centre for Climate Research and Dept. of Environmental Science and Analytical Chemistry | Ö. Gustafsson<br>orjan.gustafsson@itm.su.se |
| NASA | NASA Goddard Space Flight Center, Greenbelt, MD, USA | Brent Holben<br>brent.n.holben@nasa.gov |
| FMI | Finnish Meteorological Institute (FMI), Helsinki | Eija Asmi<br>Eija.Asmi@fmi.fi |
| | Indian Institute of Science (IISc), Bangalore | S.K. Sateesh<br>profsks@gmail.com |
| इसरो isro | Indian Space Research Organization, Trivandrum | Suresh Babu<br>sureshsplvssc@gmail.com |
| ENVIRONMENTAL PROTECTION AGENCY EPA Republic of Maldives | Environmental Protection Agency of the Maldives | Ahmed Murthaza<br>ahmed.murthaza@epa.gov.mv |
| | Maldives National University; Malé | Mizna Mohamed<br>mizna.mohamed@mnu.edu.mv |

## Contacts for more information

Prof. Örjan Gustafsson
Director, MCOH Science Team
Dept. Environ. Science and Analytical Chem. The Bolin Centre for Climate Research, Stockholm University,
orjan.gustafsson@itm.su.se

Prof. V. Ramanathan
Deputy Director, MCOH Science Team
C4, Scripps Institute of Oceanography, University of California, San Diego
vramanathan@ucsd.edu

Insert Photo Dr. Zahid

Dr. Zahid, Director
Climate Division
Maldives Meteorological Services
Male', Republic of Maldives,
ahmed.murthaza@epa.gov.mv

Dr. Krishnakant B. Budhavant,
Crutzen Fellow, Resident Scientist,
Climate Observatory, Hanimaadhoo,
Republic of Maldives
Mob: +960 7537185, Office: +960 6520512, kbbudhavant@gmail.com

# MCOH-related literature list


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