



SAFAR - India

SYSTEM OF AIR QUALITY & WEATHER FORECASTING AND RESEARCH

ISO 9001:2008

BACKGROUND

In view of current scenario of air pollution problem, the Union Ministry of Earth sciences, Govt. of India commissioned an ambitious project namely SAFAR early warning system to provide air quality forecast along with Health advisories and to spread environmental awareness for the citizens. The project has been conceived, developed and implemented by Ministry's constituents, namely, Pune based Indian Institute of Tropical Meteorology in association with India Meteorological Department in close cooperation with Municipal Corporations of DELHI, PUNE and MUMBAI.

Air is a mixture of various gases, important for survival of human race and life on the Earth, but when the local concentrations of air pollutants exceed certain threshold limit, it can have adverse effect on the health of human beings, plants and animals. The location and city based advance (forecast) information on air quality along with associated advisories greatly benefit citizens to plan their outdoor activities and to prevent themselves from its adverse effects.

WHAT "SAFAR" PROVIDE FOR SOCIETY?

Providing location specific information on current and 1-3 day's advance forecast for air quality and weather parameters along with ultraviolet radiation index. Disseminating the information in public friendly format along with health advisories for the benefit to society.

SAFAR COMPONENTS

- (1) Monitor weather and air pollutants (24x7) in and around city limits using dense network (10).
- (2) Developing high resolution emission inventories of pollutants.
- (3) Online weather forecasting Model.
- (4) Online chemistry transport model to produce forecast at a resolution of 1.6x1.6 km.
- (5) Translate Data to Information by developing the concept of Air Quality Index.
- (6) Disseminate information in public friendly format to citizens.
- (7) Basic research and innovative science.



*The SAFAR-Mumbai dedicated to nation on 23rd July 2015 by **Dr. Harsh Vardhan**, Hon'ble Union Minister for Ministry of Science & Technology and Ministry of Earth Sciences, & **Shri Devendra Fadnavis**, Chief Minister of Maharashtra.*

SAFAR-PRODUCTS

Translating technical data into Information:

- **AIR QUALITY:** Color-coded Index based Current & 3-days forecast with health advisories.
- **HARMFUL RADIATION:** Severity of UV radiation (UVI) with associated skin advisories.
- **WEATHER:** Current & 3 days advance forecast, sea, tide and severe weather.
- **EXTREME EVENTS:** Alert for extreme pollution and weather events.
- **EMISSION SCENARIO:** Accounting location-wise sources of air pollution.

COMMUNICATION MEDIA for SOCIETY

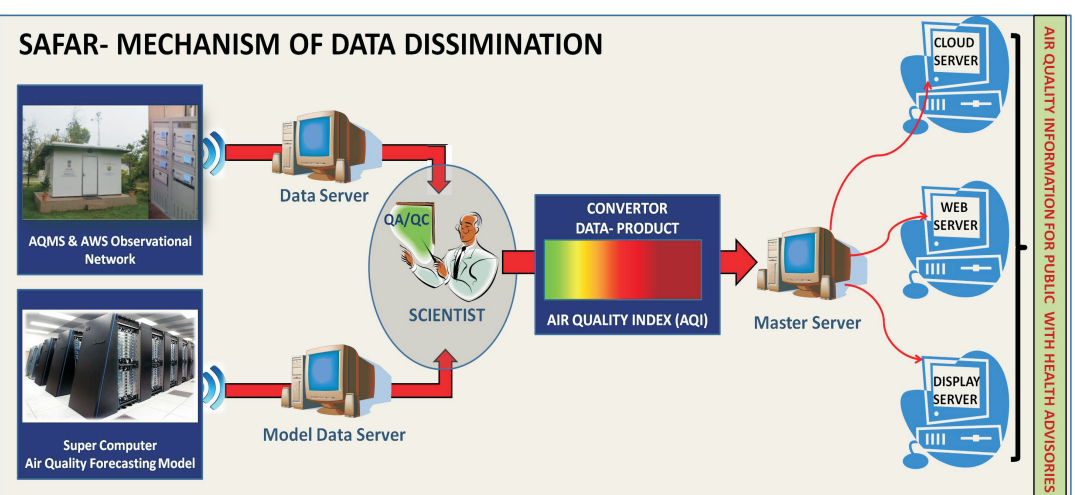


WHY SAFAR?

Air is a mixture of various gases, important for survival of human race and life on the Earth, but if the composition of air alters then elevated concentration of certain trace gases can lead to detrimental effects on human health, environment and other form of life.

HOW SAFAR -SYSTEM FUNCTIONS?

GPRS /3G BASED REAL TIME SAFAR COMMUNICATION



SAFAR- BENEFICIARIES

Major Beneficiaries are Citizens of India, Health Sector, Local Executive Agencies like corporations, Disaster Management Unit, Environment Department, Educational Institutes, Research Community and policy makers.

<http://safar.tropmet.res.in>