

Site Selection Criteria

The selection of the sites for monitoring transboundary air pollution should be done with due diligence in order to fulfill the programmes objectives. The criteria are summarized under.

1. Two types of sites are required for monitoring transboundary air pollution--deposition monitoring sites for monitoring wet and dry deposition, and ecological monitoring sites where soils, vegetation, water bodies and aquatic ecology would be monitored. Deposition monitoring should not be done in forests as vegetation will absorb a part of the pollutants, thus giving erroneous results.
2. Monitoring of transboundary air pollutants should be done at remote sites as close to the border as possible and at least 50 km away from the nearest town/ large industry and 25 km away from the nearest highway/ small industry.
3. To the extent possible, there should be no human habitation/activity or other emission sources close to the site. Population density around the sites should be low and should be expected to remain low in future.
4. The sites should be downwind of major emission sources in neighboring countries and upwind of major emission sources in the country in which the monitoring is being done.
5. The sites for monitoring the ecological parameters should be in a good natural forest which is likely to remain undisturbed in future.
6. Unless unavoidable, the sites should be sufficiently inland to avoid the influence of coastal breezes.
7. The terrain between the emission sources in the neighboring country and the monitoring sites should preferably be flat.
8. Ecological sites should have a fresh water lake that does not receive polluted water from any source.
9. The sites should be accessible and secure from wild animals and human marauders. The sites should also preferably have a power connection and should be habitable for short periods, if necessary.
10. The sites located in flat terrain should preferably have a meteorological station within about 25 km of them.
11. The site should preferably be within 12 hours travel time from the place where the samples (other than passive samplers) will be analysed.
12. A few of the ecological monitoring sites should be in areas which are at high risk to acidification effects, eg, acidic soils and those high in iron and aluminium content.

It is probable that all the above criteria will not be met at all the monitoring sites. However, a judicious choice must be made, and to the extent possible, the first six criteria should be met.