



# Audits performed during 2006-2007

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## Audits has been performed in

- **Bhutan** September 2006
- **Nepal** May 2007
- **Bangladesh** June 2007
- **Sri Lanka** June 2007
- **Maldives** October 2007

## Bhutan - September 2006

- Bhur site - rural, but not remote, due to some local interference (cook shack)
- Problems with instrumentation maintenance and power quality ⇒ move site closer to Thimpu?
- Diffusive sampling - OK
- HVS - moved to Thimphu in Oct 2005. Possible to run with solar panel?
- Bulk and w/o collectors not working since Jan. 2006
- Met. equipment not functioning properly
- NEC has no field manpower. Current person at Bhur belongs to Met. Dep., in Thimpu on contract
- Person at site requires re-training in operating instruments, QA/QC, data handling and reporting

## Nepal - May 2007

- Laboratory is spacy and air conditioned
- Technician at site well trained
- No copy of the manual available at the site, only "Wet Deposition Monitoring, Practical Manual (Water Analysis)"
- A log book written in English is available, but no QA activities have been performed
- Battery for w/o sampler is not working
- Risk that splash from the roof over HVS will come into the wet only collector.
- Recommended to use both bulk samplers and compare results also with w/o
- Diffusive sampling - OK
- Problems with power failure for HVS
- Concentrations for  $SO_2$  and  $NO_2$  using HVS do not agree with diff.sampling results
- Met. equipment - logger is out of order

## Bangladesh - June 2007

- Short of electric energy. At sampling site, Sathkira, electric wires not yet installed.  
Otherwise laboratory is suitable.
- Site not affected by local pollution
- No QA/QC programme prepared yet
- Problem with deionised water
- HVS stored at DoE in Kuhlna
- Battery for w/o is not working
- Recommended to use the second bulk collector, not too close to the house, and to compare results between the collectors
- Grazing animals close to the site should be avoided (might affect ammonium deposition)
- Technical manual not available at site
- SOP (Standard Operating Procedures) should be written in Bengali
- Technicians not trained, only the assistant (trained in Kuhlna)
- Diffusive sampling - OK

## Sri Lanka - June 2007

- Short of power at Dutuwewa site, transport problems etc ⇒ move to Mihintale
- No problem with human resources, technicians well trained.
- No QA/QC programme adopted. DQO not determined. Own SOPs for IC and AAS.
- HVS has not been used
- Quickly break down of plastic material for precipitation collectors
- Some battery and rain sensor problems with w/o samplers have been solved locally
- Diffusive sampling - OK

## Maldives - October 2007

- All the laboratory equipment is stored at the site, but no chemical analyses have been performed.  
Lack of proper laboratory facilities (racks, benches etc.)
- Problems with human resources, difficult with accessibility and to get skilled people to the site. Technicians at site only trained via ABC project.
- NIA lacking information (manuals, list of equipment etc). Failure in transfer of knowledge from the former project manager.
- No manuals available at the site
- Diffusive sampling - OK, but the site has to be moved to avoid impact from near-by tree grown up
- HVS has not yet started, since it might affect particle sampling at ABC site a separate fundement is needed
- no bulk sampling is performed - possibly large influence from sea spray
- wet-only collector is used within the ABC project, daily sampling is performed and analyses are done at MISU
- Recommended to start up bulk sampling for pH and EC to get familiar with the instruments
- Recommended to investigate the possibility to have the precipitation samples analysed at the health laboratory in Malé