

Passive sampler inter - comparison study for the Malé Declaration

Options open to the Malé Declaration:

1. Laboratory in the region registered to analyse IVL passive samplers
2. Conduct study to find suitable alternative passive sampler that can be produced and analysed in the region



To obtain high quality monitoring results in remote areas with low concentrations need to consider:

- the passive sampler design and chemical absorbent used
- the quality of the laboratory analysis for the pollutant absorbed



Examples of passive samplers used in the region

- i. India, CPCB, uses passive samplers based on a German design which they analyse
- ii. Pakistan passive samplers based on Japanese design are analysed in the country
- iii. Sri Lanka samplers based upon Australian and NBRO designs are being used
- iv. Others?



Components of study

- (i) Compare all chosen samplers at University of Singapore as part of RAPIDC's Composition of Asian Deposition (CAD) Network activities
- (ii) Expose samplers at other chosen sites in South Asia with contrasting conditions
- (iii) Parallel analysis between University of Singapore and Malé Countries

Considerations?

- (i) how many replicates will be necessary to create a valid comparison?
- (ii) Will the time of year of exposure make any difference?
- (iii) How long should the exposure be?
- (iv) Which pollutants should be tested?
- (v) What should the pollutant concentrations in the chosen site be?
- (vi) Is there an accurate active sampler at the site as a comparison?



Project Management:

UNEP are responsible for the Malé Declaration and contact with NIAs

Rajasekar Bala, University of Singapore, will be responsible for organising and undertaking the sampling and analysis

IVL will provide their samplers and analysis

SEI will help in the development of the project



Timeframe

March-May 2006

Organise study for all sites and all sampler designs

June 2006-June 2007?

Undertake comparison

July 2006-Dec 2007

Analyse results and write report