

Investments in Monitoring

(to WMO, World Bank, with engagement of CLRTAP, AMAP, other experts)

- **Financing for Monitoring Infrastructure Expansion and Improvement**
 - Should be made in a globally coordinated fashion through the World Bank and other development agencies with guidance from WMO.
 - Should be shared in a way similar to other major research infrastructure investments (e.g., major physics experimental facilities).
 - Should be multipollutant; include an appropriate mix of supersites and distributed sites, active and passive sampling, urban/rural/remote sites, new sensor technology; and be coordinated with new satellite observation capabilities as appropriate.
- **Investments need to be accompanied by Engagement**
 - Design of infrastructure should be appropriate for local needs and circumstances.
 - Value of monitoring information needs to be demonstrated to local decision makers

Investments in Emissions & Scenarios

(to UNEP, emission scientists (GEIA, CLRTAP), scenario developers (IPCC, CLRTAP, AMAP, CCAC))

- Improve Consistency and Alignment of Emissions Inventories for Multiple Pollutants for Modeling and Assessment
 - Increase Transparency of Drivers/Methods
 - A Role for the “Clearinghouse”?
- Evaluate Emissions through Inverse Modeling
 - Particularly taking advantage of new and planned satellite capabilities
 - Engage in the IGAC/GEIA AMIGO Methods Intercomparison
- Coordinate the Development of Future Emissions Scenarios
 - Between Air Pollutants, GHGs, Hg, POPs
 - Identify packages of measures of interest to different policy forums or stakeholder groups for wider community to analyze.

Investments in Model Development & Application

(to CLRTAP, AMAP, other Conventions)

- Coordinate Models at Different Scales/Processes/Complexity
 - Regional to Global linkages, downscaling techniques
 - Seamless prediction from AQ to Climate
 - Evaluate Fitness for Purpose
- Continue Move Towards Earth System Modeling
 - Multi-Pollutant, Multi-Compartment
 - Climate Scenarios
- Further Develop Attribution Methods and Tools
 - Source/Process/Policy Attribution
 - A priori Evaluation of Costs and Benefits of Measures
 - A posteriori Evaluation of Outcomes and Effectiveness