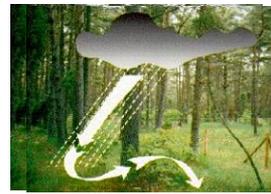




# Future plans and activities, IM

## Reoccurring standard activities

- Task Force meeting
- Submission of national data to programme center
- Produce IM Annual report
- Report of IM activities to WGE.



# Future plans and activities, IM

## Cooperations and reports

- Cooperation with other ICPs, esp. dynamic modelling, cause-effect relationships in terrestrial systems, and surface waters (ICP Waters).
- Cooperation with external organisations (e.g. LTER, LifeWatch).
- Develop concepts for multi pollutant – multi effect relationships (NO<sub>x</sub>, O<sub>3</sub>, acidity, heavy metals, POPs, etc).
- Call for IM Data for an assessment of the role of catchment-related nitrogen parameters to inorganic N leaching in IM catchments
- Heavy metal and mercury assessment in ICP IM sites.



# Future plans and activities, IM

## Scientific papers/reports

- Effects of N enrichment on forest vegetation. A co-operation between ICP IM and ICP Forests.
- Impacts of internal catchment-related nitrogen parameters to TIN leaching
- Relationship between critical load exceedances and empirical ecosystem impact indicators
- HM trends in concentrations and fluxes across ICP IM sites in Europe
- Recovery in the epiphytic lichen community after the abatement of S deposition.
- Preliminary: Climate change effects in understory vegetation, test of new indicator concept developed by LTER Europe



# Potential review of the Gothenburg protocol (highlights from WGSR)

## Elements meant to address gaps:

- Appropriate steps towards reducing emission of black carbon, ozone precursors not yet addressed, such as methane, and emissions from shipping (with due consideration for IMO policies and measures);
- An integrated approach to addressing air pollution through a multi-pollutant, multi-effect approach, that includes the potential interaction with climate change, the nitrogen cycle and biodiversity, that can achieve multiple goals and benefits, and avoid potential unintended consequences of proposed actions for other environmental problems.



# Cont.

## Scientific and technical inputs

- Quality and consistency of inventories, and in particular black carbon emissions inventories, and condensables in PM, including emissions factors;
- Definition for black carbon;
- Additional types of non-forested terrestrial ecosystems for monitoring and modelling the effects of air pollution;
- Update of the critical loads for the analysis of the efficiency of policies;
- Effects of air pollution on biodiversity as a basis for critical levels/loads calculations;
- Metrics for assessing ozone damages on crops and ecosystems and the interactions with other pollutants and climate change;



# Cont.

## Scientific and technical inputs

- Accounting for linkages with climate change and land use in effects indicators;
- Analysis of costs and benefits, including costs of inaction;
- Further input from TFHTAP, on ozone and ozone precursors and particulate matter, including in response to questions proposed by the Working Group on Strategies and Review and recommended control strategies for further TFHTAP modeling;
- Definition of human health impact metrics;
- Trend analysis in emissions/concentrations/depositions/impacts at the multi-scale dimension, and consideration of impact of international policies on trends;
- Ways to address barriers to implementation, including for existing sources.