



# Science-policy interaction Experiences from ASTA

International and National Abatement strategies for Transboundary  
Air Pollution and

Peringe Grennfelt  
5-7 October 2005





# ASTA

<http://asta.ivl.se>

- 8 year research program (1999-2006)
- Scientific research in support of policies on transboundary air pollution
- Improve the role of science in the policy process through developing concepts, forming consensus and improve communication between policymakers and the scientific community.

# Clear identification of target processes

- The Convention with its subgroups
- Later The European Commission and its CAFE programme

# Science and policy closely linked during the whole history of transboundary air pollution

Discovery

Consensus

Cost-efficient strategies

Inclusion of dynamic aspects



Science

Policy

The first alarm  
Odén 1967

1970

Sweden's case study

OECD projekt 71-76:  
"Acid rain is a transboundary problem"

Convention on Long-range Transboundary Air Pollution

1980

Soil acidification verified

First Sulphur Protocol

Introduction of critical loads

1990

Multipollutant integrated assessm. model

Second Sulphur Protocol

Gothenburg Protocol

2000

Dynamic modelling of effects

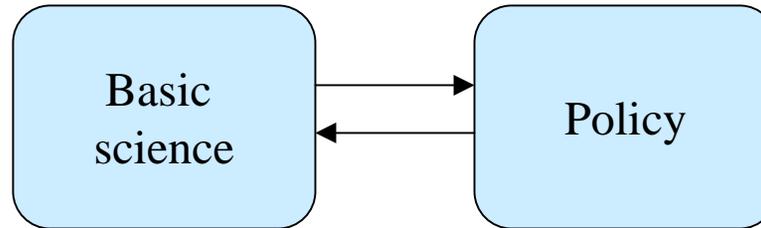
NEC Directive

EU CAFE Proposal

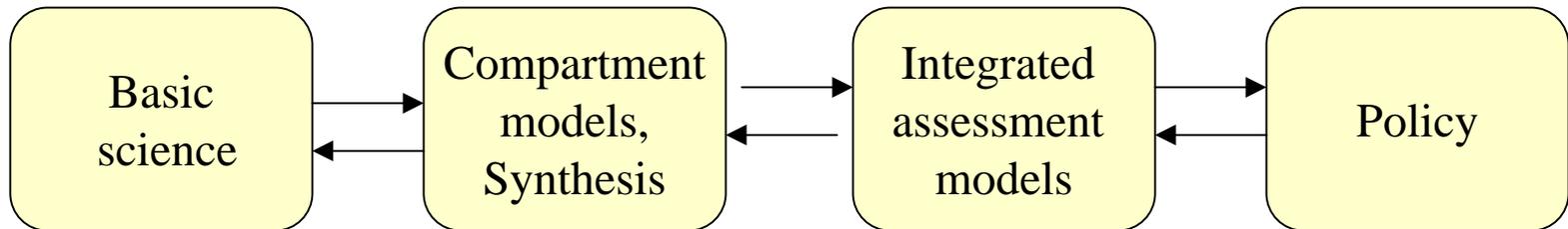
CLRTAP revision



## Relations between science and policy have changed



**1970-80**

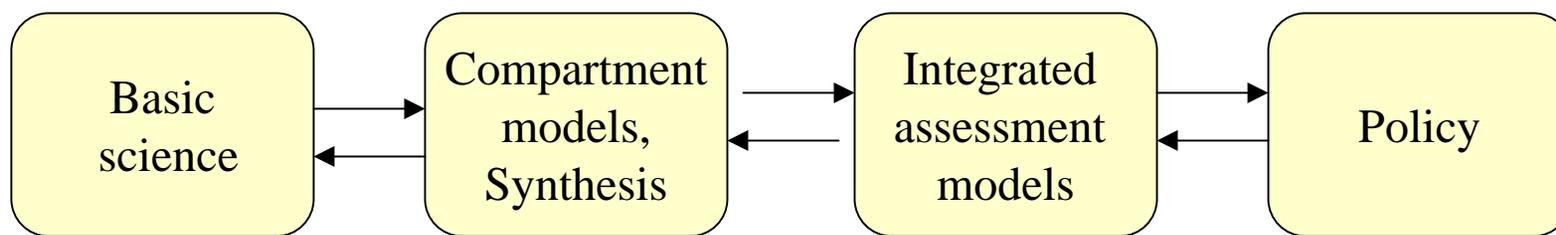


**Today**





ASTA has mainly focused on basic research compartment models and synthesis



Basic research on N effects and particles

Concepts for ozone effects.  
Dynamic models for acidification and eutrophication





**Strategy workshops**

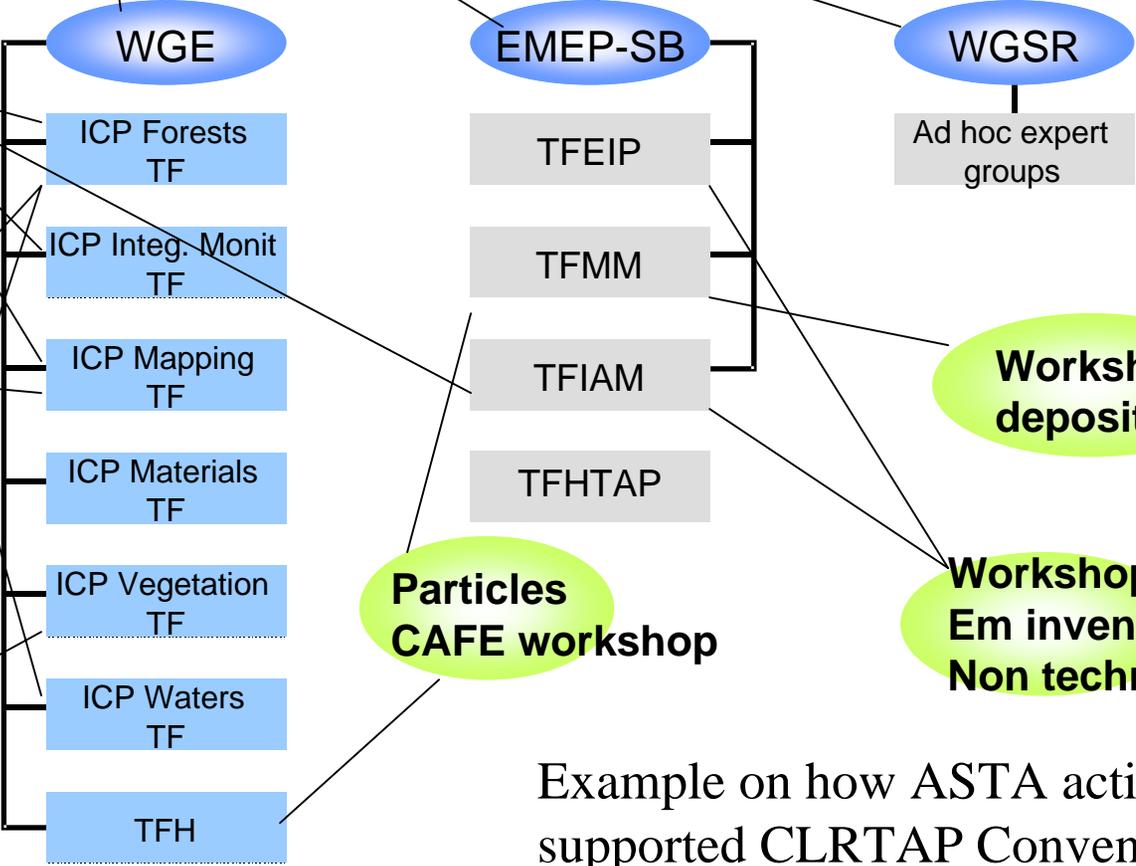
**Executive Body**

Implementation Committee

**Acidif. Expert group dyn mod**

**Eutroph. Concept workshops**

**Ozone Concept workshop**



Example on how ASTA activities supported CLRTAP Convention



# Communication an important part of ASTA

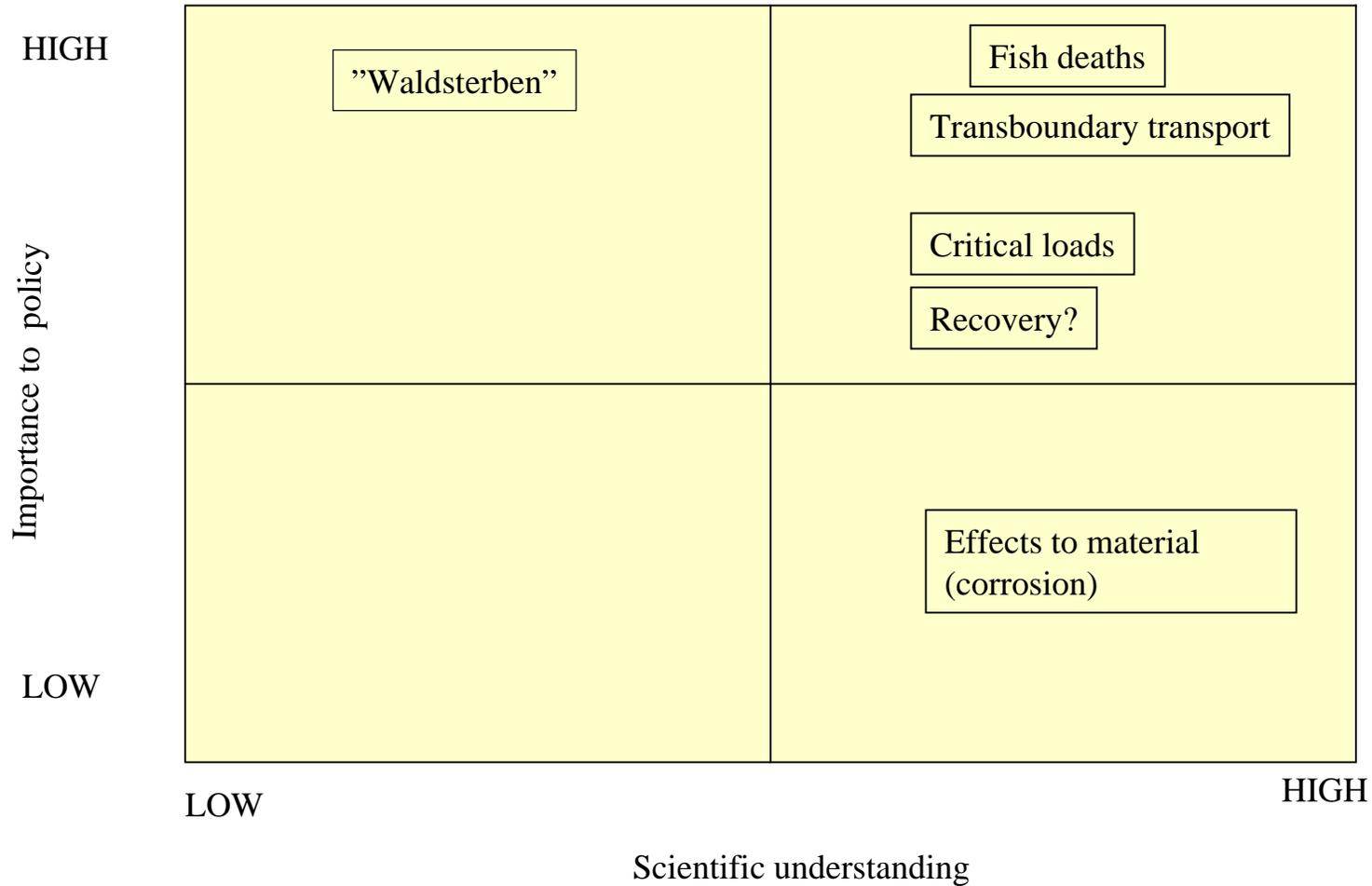
- **Support to the development of the CLRTAP and CAFE agenda**
  - Workshop at Saltsjöbaden April 2000
  - Review of the strategies for EU and CLRTAP Oct. 2004
- **The introduction of dynamic aspects for acidification**
  - Conference in Copenhagen Nov. 1999
- **Organisation of specific workshops and expert meetings**
  - Five meetings on dynamic modelling 2000-2004
  - Seven additional workshops on validation of emission inventories, new concept for ozone effects, health effects from particles, deposition of base cations, science - policy interactions and non-technical measures

# The role of social science in ASTA

- Improved our understanding of our roles and the way we are working
- Bridges between science and policy (critical loads)



## Scientific understanding and importance for policy for some concepts within transboundary air pollution





# Some experiences

- The **process** often as important as the outcome.
- **Transparency** and **participation** crucial
- **Timing**. Windows of opportunity.
- **Visualisation** of experiments and results
- It takes time. **Credibility** is mostly achieved through long term relations.



# Some experiences

- **Common concepts.** Critical loads helped bridging the gap between science and policy. Concepts do not need to mean the same for scientists and policymakers.
- National initiatives often questioned. Better to use “independent” organisations (Nordic Council of Ministers, international workshops, IIASA, international projects).
- Maintaining **scientific quality** has not been a problem (results mainly published in peer reviewed journals).