

Towards robust European air pollution policies
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**SCIENCE-POLICY INTERACTIONS
WITHIN THE CONVENTION ON LONG-
RANGE TRANBOUNDARY AIR
POLLUTION**

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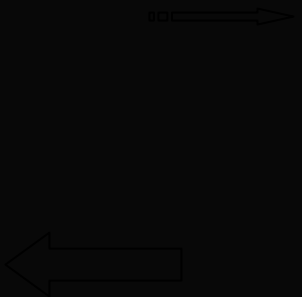


SCIENCE-POLICY INTERACTIONS WITHIN CLRTAP

- How do science and policy interact?
- How has the interface developed in CLRTAP?
- What has contributed to its success?
- What lessons can we learn for the future?



Science



Policy

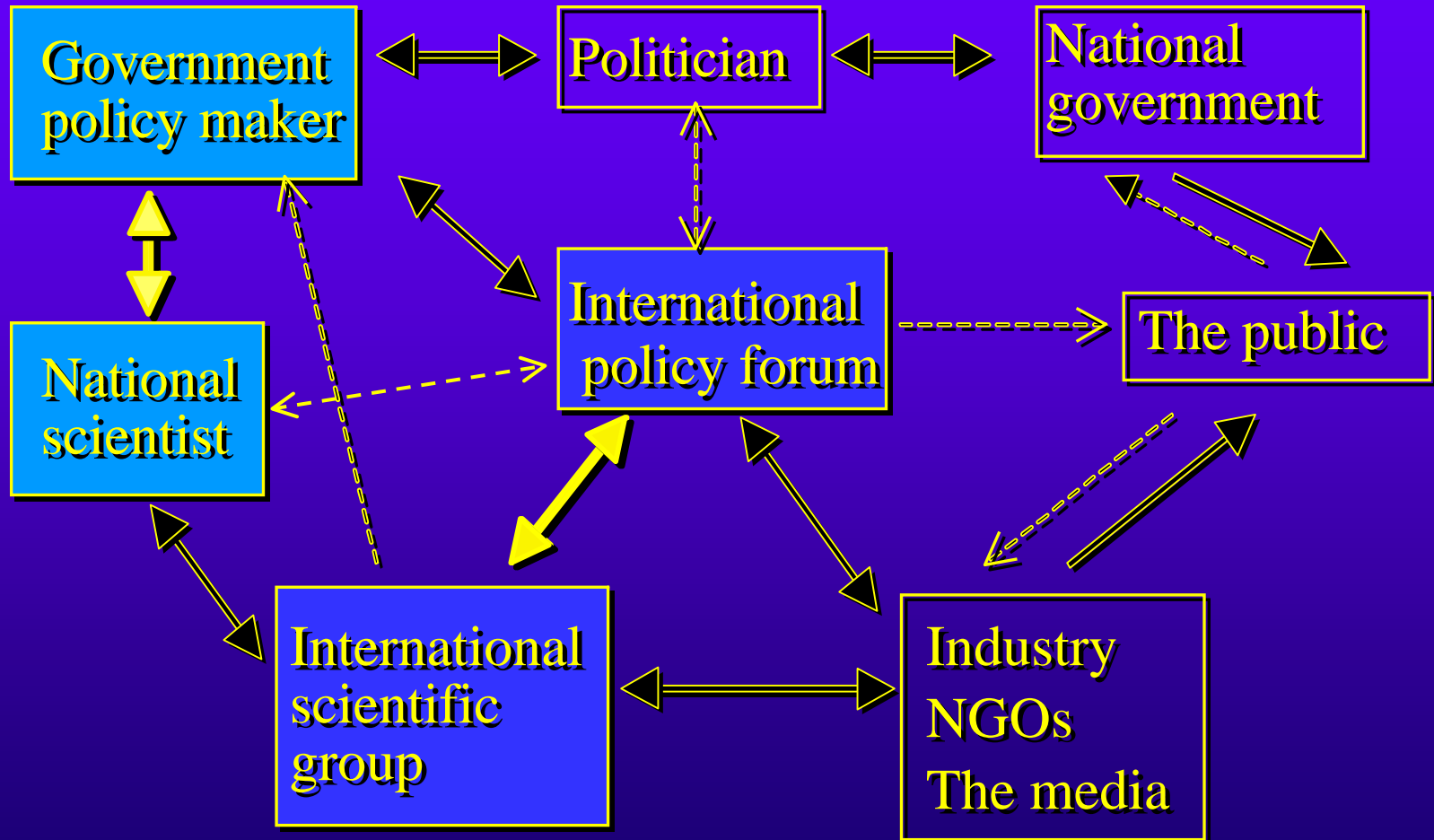
SCIENCE

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Networks are important.....



But what makes the acid rain story so successful?

Is the science of acid rain so easy to understand and so simple to deal with?

In the beginning there was public awareness and science.....

Local air pollution awareness is part of history

Scientists in the 1960's were drawing attention to environmental problems

EMEP was established within the framework of UNECE before the Convention was negotiated

The Convention's Working Group on Effects was established before the first protocol was agreed

STRUCTURE OF THE CONVENTION ON LONG-RANGE TRANSBOUNDARY AIR POLLUTION

EXECUTIVE BODY

Implementation Committee

Working Group on
Strategies and Review

Working Group on Effects

EMEP Steering Body

Expert Groups

Task Forces

International
Cooperative
Programmes



THE SCIENCE TOOLS

Long-term monitoring – air pollution and effects – the basis of much of our knowledge

Transport models – quantify the movement of air pollution (can be used for “blame” matrices)

Effects – demonstrate the scale and extent of problems

Critical loads – “quantify damage” by relating it to deposition

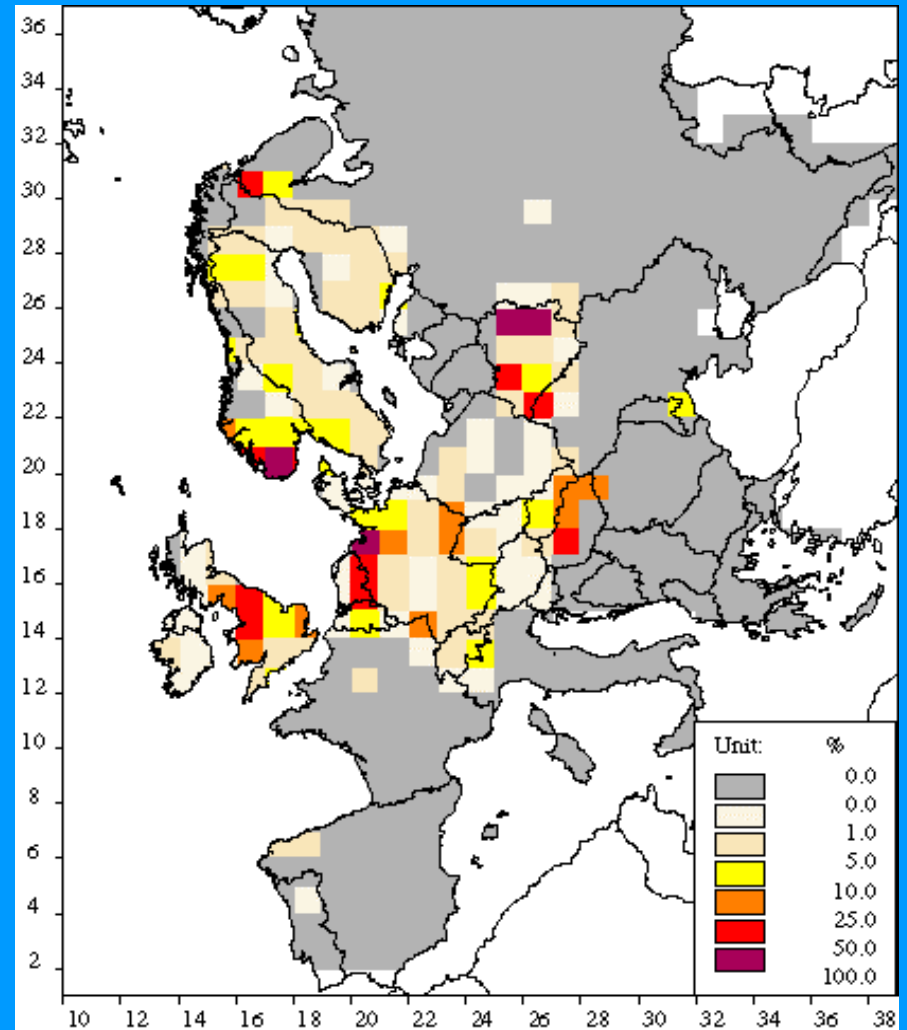
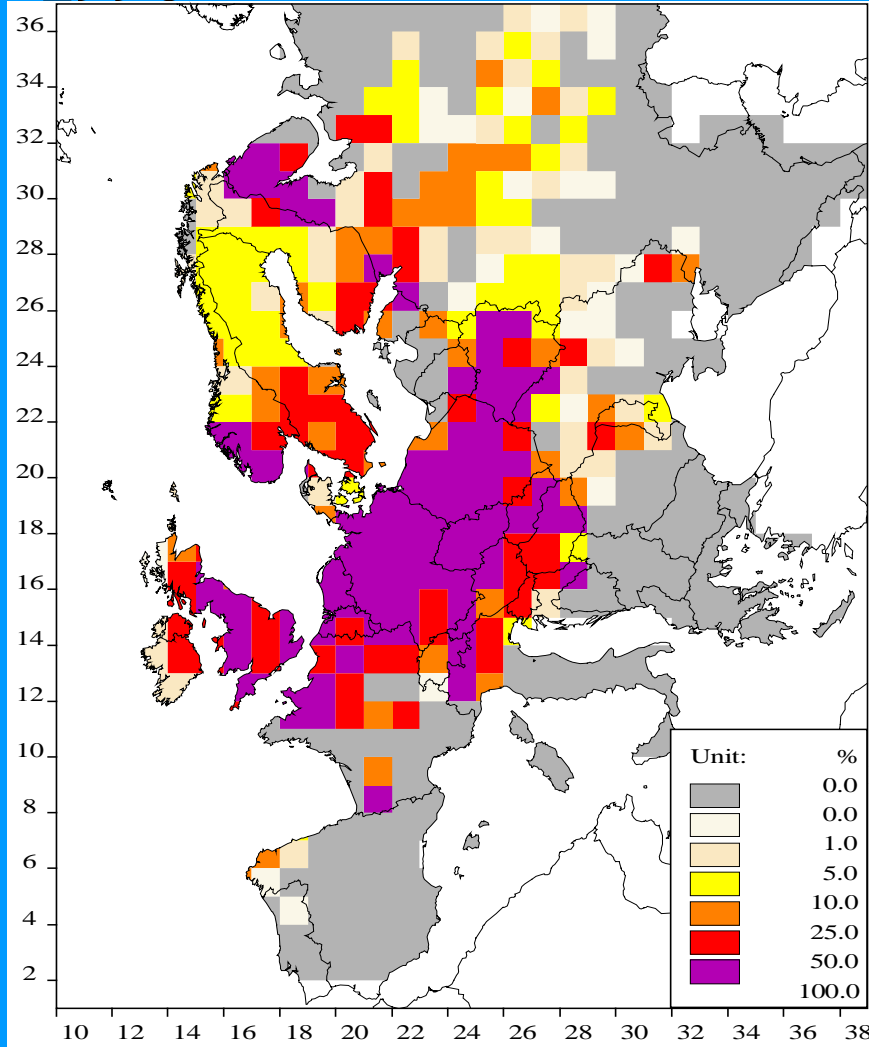
Integrated assessment models – provide cost-effective solutions showing benefits

ENVIRONMENTAL IMPACTS

% Ecosystems not protected against acidification

1990

G5/2 - 2010



Other key factors.....

The stepwise process has built confidence and understanding

Individual champions have developed or communicated key parts of the process, such as critical loads

Win-win situations for all countries are demonstrated through source-receptor matrices, critical loads maps and multi-pollutant approaches

Negotiations are supported by the science not replaced by it, e.g. there is still a need to select ambition levels

Timing.....

**A window of
opportunity....**

**Kingdon (1984) Theory
of policy windows**



Kingdon's Window of Opportunity

← **Problem stream** (knowing what the problem is – basic science, awareness)

← **Policy stream** (knowing how to solve the problem – science, technology, policy)

← **Political stream** (action to address the problem)

The three streams converging create the window

**Unless all three streams come together
at the same time then the window
remains closed!**





Early driving forces.....

Acidified waters



Forest damage



**Visible signs of ozone injury
– unnoticed by many**



City air pollution problems – increasing awareness and a recurring issue across the globe

THE BIRTH OF THE CONVENTION

- © Scientific evidence available – scientific awareness
- © Public outcry on forest and freshwater damage –public awareness and pressure on political stream
- © The policy solution – cut emissions – seemed obvious
- © A need to improve East-West relations - an additional political pressure
- © A ministerial meeting provided the window

BUILDING ON THE WINDOW.....

SCIENCE AND POLICY IN THE CONVENTION

- © Building trust between political blocks
- © Creating awareness and shared perceptions as a basis for action
- © Developing acceptable tools for illustrating problems and their solutions
- © Developing acceptable ways of addressing several linked problems at the same time

LESSONS LEARNED IN THE CONVENTION

- Science can play an important role to help find solutions to policy questions
- The science needs to have some continuity
- Science should be easily understood (tools such as critical loads help provide interpretation)
- Higher ambition levels and multi-pollutant/multi-issue policies can lead to greater complexity of the science and technical work

CONCLUDING POINTS

Maintaining simplicity and focus will be a major challenge as the issues and the science become more complex

Linked to this communication will remain a challenge

Attracting the political interest will also be necessary for any major step forward