

DEVELOPMENT OF THE REGIONAL POLICY PROCESS FOR AIR POLLUTION IN SOUTH ASIA, SOUTHERN AFRICA AND LATIN AMERICA

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Abstract. Projections indicate that large increases in emissions may occur in developing countries during the next twenty to fifty years if current development patterns persist. This paper describes the development of co-operation regarding air pollution issues in three sub-regions of three continents. Experiences gained through activities within a programme on Regional Air Pollution in Developing Countries are used to illustrate progress. The sub-regional process in South Asia developed through a series of meetings that led to the Malé Declaration. In southern Africa a policy dialogue led to the Harare Resolution targeted towards progress in the SADC region. A policy dialogue in Buenos Aires concentrated on issues related to regional harmonisation of legal frameworks in the Mercosur region. In all regions the link between scientific information required to support decision making has been emphasised. The sub-regional policy processes are analysed in relation to availability of required scientific information and compared to the process that led to protocol development in Europe.

Key words: regional, developing countries, transboundary, policy dialogue, Malé Declaration

1. Introduction

Air pollution is an increasingly important environmental problem in developing country regions, particularly in parts of Asia. Projections indicate that significant increases in emissions may occur during the next twenty to fifty years if current development patterns persist (Arndt and Carmichael, 1995; Foell *et al.*, 1995).

Historically, in Europe, air pollution was originally perceived as a local problem caused by domestic and industrial emissions of smoke and sulphur dioxide, producing effects such as the smogs that plagued London in the early 1950s. The perception that air pollution is a local problem is typical of many developing countries today. In the late 1960s Swedish researchers realised that Long-range Transboundary Air Pollution (LRTAP) from neighbouring countries was causing increased acidification of lakes in Scandinavia (Odén, 1976). This information made it clear that European countries could not solve their air pollution problems unilaterally and that international co-operation was required. The development of international co-operation in Europe led to the international



policy negotiations of the United Nations Economic Commission for Europe (UN-ECE) which resulted in the Convention on LRTAP and its Protocols for the control of sulphur, nitrogen and volatile organic compound (VOC) emissions (UN-ECE, 1996). Within this framework a great deal of co-ordinated research and collaboration between scientists provided the building blocks upon which policy negotiations could take place. In the face of increasing air pollution problems, developing country sub-regions are thus benefiting from the European LRTAP experience and are developing policy in a similar fashion. The programme on Regional Air Pollution in Developing Countries (RAPIDC), which is co-ordinated by the Stockholm Environment Institute (SEI) and funded by the Swedish International Development Co-operation Agency (Sida), supports developing country sub-regions by facilitating both scientific collaboration and policy discussions. This paper describes the current state of policy development for air pollution in three developing country sub-regions (see Figure 1) and provides examples of how international co-operation is promoting the need for increased scientific information.

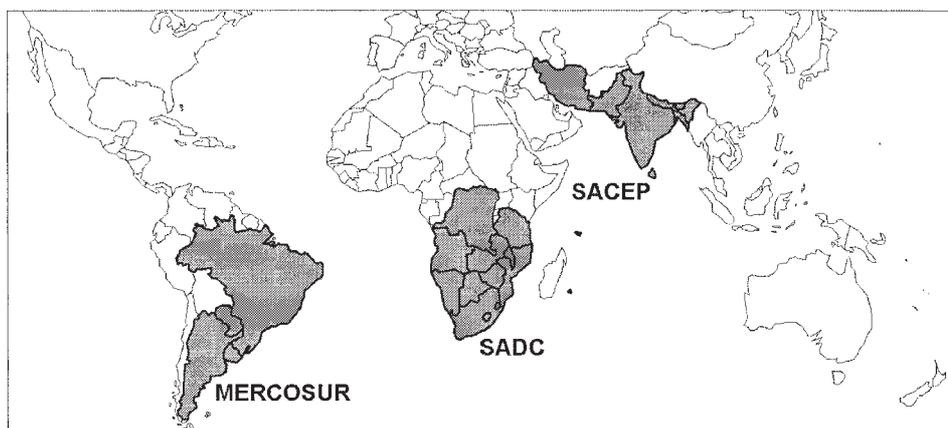


Figure 1. Geographical location of the countries covered by inter-governmental organisations discussed in this paper in Southern Africa (SADC- the Southern African Development Community), South America (Mercosur-Common Market of the South) and South Asia (SACEP- South Asia Co-operative Environment Programme).

2. Promoting Regional Co-operation

The discussion of the developing sub-regional policy cycles is based around a framework described in Figure 2 that provides a view of how scientific knowledge and research interacts with the policy process. As has been seen in Europe, the promotion of regional co-operation has significantly contributed to agreements that have led to reduced emissions. An important driving force leading to such regional co-operation is the availability of scientific information that illustrates the nature and extent of the problem, as well as the mitigation options to avoid impacts. For example, monitoring and quantification of pollution levels, together with emission inventories and atmospheric transfer

research, allows sources to be identified where mitigation will improve air quality and deposition levels. It was notable that the EMEP (Co-operative

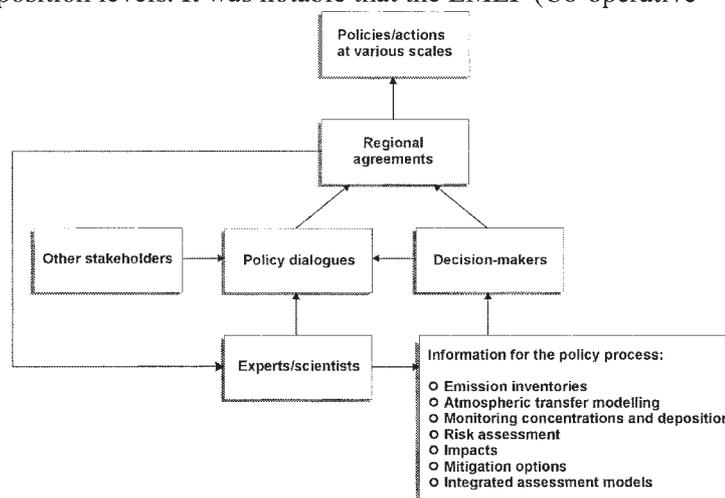


Figure 2. Flowchart showing RAPIDC's approach to developing regional co-operation on air pollution control in the South Asia Region.

Programme for Monitoring and Evaluation of the Long Range Transmission of Air Pollutants in Europe) calculations for transfer of air pollution in Europe and monitoring provided a considerable boost to the international discussions concerning transboundary air pollution by demonstrating the extent of the problem (e.g. Eliassen *et al.*, 1990). An evaluation of the extent of detrimental impacts then allows an analysis of the degree of emission reduction required. Such information can then be used to form the background for policy dialogues and increased regional co-operation and agreements. Inevitably further scientific information is demanded to support the policy process, which can eventually give rise to agreements on emission mitigation. In Europe, regional activities in preparation for the negotiations proved to be of great value as they provided a forum for international exchange of relevant information among experts who often advise national governments. In addition, activities underpinning negotiation may directly or indirectly impact significantly on national decision making when it comes to taking measures for reducing or preventing emissions.

In order to facilitate regional co-operation and generally raise the profile of air pollution and its effects at regional scales, the RAPIDC programme focussed upon the development of the policy process in three developing country sub-regions. These sub-regions in South Asia, southern Africa and South America were chosen as they have strong regional inter-governmental bodies in SACEP, SADC and Mercosur (Figure 1) and because there is already a level of awareness that air pollution is of regional concern. The policy development process in the three regions was aided by holding policy dialogues where scientists, representatives of inter-governmental bodies and NGOs met policy-makers from the different countries. During the design and preparation of the policy dialogues

regional organisations made it clear that sufficient scientific and other information would be required at the policy dialogues to illustrate the nature and extent of the air pollution issue, and to emphasize the need for regional co-operation. The most up-to-date information on air pollution issues in the three regions was assembled in a background document (Kuylenstierna and Hicks, 1998) by a team of national and international experts, and included results from the RAPIDC Programme. The regional experts emphasised the need to cover all potential impacts of air pollution. Health impacts, which are not necessarily transboundary in nature, were therefore given equal emphasis as these represent the most important issue for many developing country governments. The outcome of the dialogues and their follow-up is described below and the status of the policy cycle in the three regions explained.

2.1. REGIONAL CO-OPERATION IN SOUTH ASIA

Of the Asian sub-regions, South Asia in 1998 was at the earliest stage of the policy cycle concerning regional co-operation on air pollution. In NE Asia initiatives such as the East Asia Acidic Deposition Monitoring Network (EANET) had already been set up as regionally co-operative efforts to curb and prevent acid rain (EA, 1997). In South-east Asia the issue of transboundary pollution was first highlighted in ASEAN countries in the 1990 Kuala Lumpur Accord on Environment and Development (ASEAN 1995). The awareness of the issue in the region has been further highlighted in recent years by the Indonesian haze episode of 1997 which has led to the development of a Regional Haze Action Plan.

In South Asia no such co-operation had been initiated. Therefore, the South Asian policy dialogue was held in Bangkok in March 1998, hosted by UNEP-EAP/AP. It was attended by a group of senior level environmental ministry officials from South Asian countries, analysts and people with an influence on policy, and representatives of key environmental organisations in the region. The meeting agreed on the need for regional co-operation, noting the experience of Europe, and prepared a draft declaration. The declaration was subsequently modified and approved, a month later, by Ministers of the Environment of all SACEP countries at the Governing Council of SACEP in Malé, Republic of Maldives. The signed Declaration is entitled the 'Malé Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia' (see Hicks *et al.*, 2000).

The signatories to the Malé Declaration stated the need for each South Asian country to carry forward or initiate studies and programmes on regional air pollution to support the policy process in the region. National Implementing Agencies (NIAs) were nominated by each country's government to participate in a network implementing the Malé Declaration. Each NIA was requested to produce a baseline study, outlining the information currently available on all aspects of air pollution, and to develop national action plans to tackle the air pollution issue. These studies have now been carried out and meetings of the

NIAAs have been held to review them. The meetings and action plans emphasised the need for capacity building for the establishment/maintenance of monitoring networks and the analysis of air pollutant impacts. This scientific information, produced within the region, was considered important for the further development of policy initiatives.

The continued development of the regional network and databases for air pollution in the region was also high on the agenda entailing increased collaboration amongst scientists and institutes of the different countries as well as collaborations with other related activities in South Asia such as the Indian Ocean Experiment (INDOEX). The importance of other stakeholders, such as NGOs and the media, was also emphasised. Progress in the region will depend on building the capacity of national governments and the institutions involved in the implementation of the Malé Declaration such that they can deliver the required scientific and technical information.

2.2. SOUTHERN AFRICA

The policy dialogue held in Harare, Zimbabwe, in 1998, resulted in the 'Harare Resolution on the Prevention and Control of Regional Air Pollution in Southern Africa and its Likely Transboundary Effects' (see Hicks *et al.*, 2000). Participants at the dialogue were policy-makers drawn from various national ministries such as health, environment, natural resources, mines and energy. In addition, representatives from industrial, scientific and research communities were in attendance. The meeting was organised by the Air Pollution Information Network for Africa (APINA), under the auspices of the Southern African Development Community – Environment and Land Management Sector (SADC-ELMS), as part of the RAPIDC Programme. The focus of the follow-up is to assist SADC-ELMS in its development of a Protocol on Environment which will have transboundary air pollution as one article. Assistance from APINA will involve the development of the APINA network to capitalize on regional expertise as well as to provide and disseminate locally relevant information. A considerable amount of research into air pollution exists in this region but there is a need to increase co-operation amongst the activities. For example, the Southern African Regional Science Initiative (SAFARI 2000) is a co-ordinated scientific experiment with numerous international collaborators and which aims to further the understanding of causes and transfer of air pollution in the region. However, there is currently no mechanism or process to consider the policy implications of the research results.

2.3 LATIN AMERICA

The third policy dialogue, held in Buenos Aires, Argentina, successfully initiated regional discussions on air pollution in Mercosur countries of South America. The main outcome of the meeting was the 'Cañuelas Declaration on the Control and Prevention of Atmospheric Pollution (in Mercosur countries)'

(Hicks *et al.*, 2000). Air pollution is not seen as a transboundary problem, but more as a shared problem in the region. The focus then has been more on trade issues and on the harmonisation of legal frameworks to ensure that there is a level playing field for industry with respect to environmental regulations that will lead to improved air quality. This also forms the focus of the follow-up to the Cañuelas Declaration.

3. Conclusion

Developing countries are now well aware of the potential for detrimental impacts from air pollution and realise that regional co-operation is a key component to avoiding the serious implications that have been prevalent in Europe and North America. In order for nations to co-operate on policy development, there is a need for relevant scientific information to support the process. The development of institutional capacity to provide such information in these nations will be important to promote further efforts.

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