

**A Legally Binding Agreement
(LBA) - Growing Need for Air Pollution
Reduction and Control in South Asia**

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Acronyms

ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
GHI	Global Hunger Index
IFPRI	International Food Policy Research Institute
INDOEX	Indian Ocean Experiment
LBA	Legally Binding Agreement
LRTAP	Long Range Trans-Boundary Air Pollution
MoE	Ministry of Environment
Nox	Nitrogen Oxides
Pak-EPA	Pakistan Environmental Protection Agency
SAARC	South Asian Association for Regional Cooperation
SDPI	Sustainable Development Policy Institute
SMART	Self-Monitoring and Reporting Tool
SOX	Sulfur Oxides
SA	South Asia
SPM	Suspended Particulates Matter
UNEP	United Nations Environment Program
WHO	World Health Organization

A Legally Binding Agreement (LBA) - Growing Need for Air Pollution Reduction and Control in South Asia

*Mahmood A.Khwaja and Faisal Haq Shaheen

1. Introduction

With increasing urbanization and economic growth, air pollution is becoming an urgent concern in South Asian countries. The study upon which this paper is based has been conducted at SDPI, to look into and discuss the socioeconomic situation of South Asia, the existing situation of air pollution in the countries/region and the responses, if any, of national governments to air pollution. Among others, the paper makes recommendations, including a legally binding agreement for South Asia (LBA-SA), for strengthening the framework for air pollution reduction at regional and national levels in South Asia.

South Asian countries, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka, have carried out a number of projects/ activities for the creation of a meaningful framework to limit air pollution. A greater participation of member states is required and a regional framework is needed for better understanding and cooperation among the member states, on issues relating to air pollution. An effective implementation of a regional framework with shared responsibilities towards air pollution reduction measures across the member countries is vital for sustained economical growth, protection of environment and to safeguard public health, especially of future generations, in the region.

South Asia with a combined population of roughly 1.6 billion people, is a low-income region and home to half of the world's poor. Traditionally, the South Asian economies are centered on agriculture, however recently manufacturing and services have become major contributing sectors as well. The strong recovery in India and the growth in the economies of Bangladesh and Sri Lanka are primary reasons for this economic rebound (World Bank, 2010a). The state of education and health in the region leave much to be desired. With the worst score on the Global Hunger Index (GHI), South Asia along with Sub-Saharan Africa suffers from the highest level of hunger (International Food Policy Research Institute, 2010).

Environmental degradation remains a challenge in almost all the countries of South Asia. With an increase in industrial activity, the exponential growth in number of vehicles and population, the contribution of each country to the south Asia regional air pollution will increase over time (World Bank, 2010). Emissions levels of Sulfur dioxides, nitrogen oxides and suspended particulate matter have been rising steadily over past few decades. Owing to economic growth and increasing energy demand, greenhouse gas

emissions have risen in South Asia by about 3.3% annually since 1990. Coal is the main source of energy in the region, followed by natural gas (World Bank, 2010c).

Air pollutants can be transported across state and national boundaries covering a distance from about 100s to a few 1000s of kilo-meters, therefore pollutants produced by one country, as well can have adverse impacts on the environment of neighboring countries. Down-wind areas of the countries are likely to be affected more than the up-wind areas. Trans-boundary air pollution is an issue that demands critical attention, especially for landlocked countries. The persistent Atmospheric Brown Haze over Bay of Bengal has been traced to emissions from South Asian and South East Asian countries. As part of the Indian Ocean Experiment (INDOEX), scientists discovered the Atmospheric Brown Haze (also referred as Cloud) that pervades most of South Asia. This haze consists of inorganic & organic chemicals, black carbon, fly ash and other pollutants. Biomass burning, rapid industrialization, urbanization and lack of alternative environment-friendly energy sources are primarily responsible for this haze over South Asia. Other include industrial air pollution, indoor air pollution (biomass burning), increasing traffic trends, thermal power plants and incineration of solid waste (UNEP 2008 B)

Some key air pollutants of priority concerns to countries in south Asia are suspended particulate matter (SPM), sulphur oxides (SO_x) and nitrogen oxides (No_x). The suspended particulate matter (SPM) is of great concern in south Asia. In most of the countries, the levels of SPM exceed the national standards and cause severe health impacts and environmental damage. WHO guideline levels of suspended particulate matter (SPM) exceed in the air of most of mega cities of South Asia (Asian Development Bank, 2001)

The level and nature of air pollution in any country has implications for the economy of that country as well as neighboring countries, owing to the trans-boundary nature of air pollution. A regional level framework for combating air pollution is important and its harmful effects can be assessed after reviewing the socioeconomic situation in South Asia and establishing the impact of air pollution on the various socioeconomic parameters. Once governments and society realize the potential damages caused by air pollution, sufficient support can be garnered at the national and regional levels to combat this environmental hazard. High levels of air pollution have a serious impact on the environmental quality that imposes economic costs associated with reduced quality of life, lost productivity and health care costs. According to the World Health Organization (WHO), air pollution is responsible for an increase in outpatient's visits owing to respiratory and cardiovascular diseases and approximately 3 million people die each year due to air pollution in the world (World Bank, 2003b).

In any preventive pollution control strategy, "Reduction at Source" is considered to be the very first and foremost option. The same has been considered for air pollution reduction in South Asia, to minimize the resulting economical, environmental and health

impacts in the region. South Asian countries have developed environmental legal and regulatory frameworks in their respective countries. However, the execution of the national environmental action plan has been limited, due to lack of financial resources and technical know-how. A number of international Conventions and Treaties have also been signed by most of the south Asian states and every member state has constituted its own designated organizational authority for the implementation of international conventions and treaties. The major hurdles in the implementation of these treaties and conventions are common to all states, which include lack of financial and technical support, lack of coordination, inefficient legal and regulatory framework, no access to relevant databases and lack of awareness among the local populations.

As also emphasized earlier, air pollution has a serious impact on the socioeconomic status of any country. It can increase poverty, widen the classes and gender-divide and harm the agriculture sectors. Local impacts due to air pollution would be only further aggravated by the trans-boundary air pollution. Therefore, it is imperative to look for and identify a regional level framework not only for reducing the trans-boundary impacts of air pollution in South Asia but also to support enforcement for adopting control measures at the country level towards the improvement of ambient air quality in general. Undoubtedly, any effort to control air pollution levels in South Asia will be daunting, in light of the continued policy push for unabated economic growth by the region's governments. Regional cooperation has often been called for across the region in economic terms, but the call has yet to be answered institutionally in terms of social and environmental concerns. Only a regional institutional capacity and forum for engagement will be able to facilitate knowledge dissemination in a way that it is non competitive and effective.

2. Recommended Policy Actions at the Regional Levels

Given the progress that has been made at the national levels in terms of institutional building and development in south Asia, a number of initiatives are recommended which should initially create forums for more regular technology sharing and dialogue. Such forums would also help to:

- establish consensus sharing between national and provincial bodies on common issues of concern
- related to trans-boundary pollution.
- ensure that dissemination of work to other regional bodies takes place on a regular basis. Pilot projects should be set up and their progress monitored regularly, periodically reported on and disseminated to other groups and interested agencies region wide.
- look at ways of defining the precautionary principle for usage that encourages solutions and alternative
- development while not constraining economic growth and development imperatives.

- establish working groups on specific sectors which involve public and private sector stakeholders and actors in priority areas such as automobile and industrial emissions & standards;
- recommend, in the light of national emission inventories and metrological data, the minimum standards for vehicles road worthiness, fuel quality and emissions from brick-kilns.
- recommend national emission reduction targets to comply with agreed regional targets and to consider replication of “Self-monitoring and Reporting/SMART program for industrial sector” similar to one in Pakistan for other member states (Pak-EPA/MoE, 2000; Khwaja, 2001)

3. South Asian Association for Regional Cooperation (SAARC)

SAARC could be a possible forum, to provide support for establishing forums for the above and to look into ways & means of generating possible support for air pollution reduction in the region. While SAARC has been functional for about 25 years now, the impact of this framework, especially with regard to air pollution is yet to be seen. SAARC needs to be strengthened with a monitoring and evaluation mechanism to observe whether member countries are making progress on reducing air pollution and its associated impacts in the South Asia region. Moreover, there needs to be a mechanism of binding commitments such that member countries take the promises of reducing air pollution seriously and if it could be mandatory for them to make some progress in this regard. Through technical assistance protocols, countries would be able to learn from each other, there by making the goal of minimizing air pollution and its trans-boundary effects not only possible but also achievable. It is also strongly recommended that SAARC summits should be more frequent so that the momentum of the agenda of air pollution is not lost.

4. Legally Binding Agreement (LBA) for Developing and Strengthening the Framework of Air Pollution Reduction in South Asia

Air pollution leads to atmospheric transport of pollutants, affecting countries of the region in more than one way, thus making air pollution a regional issue. Being a regional problem, no one country, especially in a poor and diversified region like South Asia, can tackle it on its own. National actions in this regard seem to be insufficient. Lack of financial support, skilled and trained manpower, technology and technical know-how, further limit one single country’s capability to handle this issue. As air pollution impacts the region, to combat it, a regional focus and approach is essential in which all member countries of the region have a role to play, with equal but diversified responsibilities.

The Acid Deposition Monitoring Network in East Asia and the Malé Declaration on Control and Prevention of Air Pollution and its likely Trans boundary Effects for South Asia are current reflections of regional concerns and efforts to control emissions at a

regional level. ASEAN has also established the ASEAN Agreement on Trans boundary Haze Pollution to prevent and monitor such pollution in the region.. Convention on Long Range Trans-boundary Air pollution (LRTAP) is another regional agreement for air pollution reduction. Besides possible support from SAARC forum, another option for consideration by south Asian countries could be preparing and in-acting a legally binding agreement, similar to ASEAN and LRTAP, to manage air pollution and its reduction in south Asian region. The objective of such a legally binding agreement for South Asia (LBA-SA) should be to protect human health and ecosystem by setting up time framed air pollution reduction targets (starting with priority pollutants SPM, SO_x and NO_x).

Some salient features of the envisaged LBA – SA could be: (a) the recognition of the problem of increasing air pollution in South Asia and its resulting environmental, economical and health impacts on the population of the region (b) reduction of air pollution through the exchanges of information, consultation, research, monitoring., policy and assessments. (c) the recognition that obligations regarding control and reduction of emissions of agreed pollutants, should allow for flexible and differentiated national programs, to be implemented by individual Parties to the instruments with a view to achieving the most cost-effective and environmentally benign improvements of air quality in the whole region.

For the implementation and further development of the cooperative program for monitoring and evaluation of the long-range transmission of air pollutants, whenever possible a comparable or standardized procedures for monitoring is strongly recommended, whenever possible which should be based on the framework of both national and international programs. Mechanisms would also need to be established for capacity building, finance, intra-state available technology transfer, knowledge and information exchange (about emissions, exposures, monitored data, socio-economic impacts) and reporting and evaluation of LBA-SA effectiveness. The LBA-SA should acknowledge and ensure an active role of civil society in the development and implementation of the LBA-SA of national and finally, among others, the LBA-SA should establish effective and enforceable treaty compliance provisions. The specific elements of the LBA may be further built up on the above to address/accommodate “Policy Actions at the National and Regional Levels.”

Importantly, this instrument would encourage governments to pass legislation in their respective countries, to set up or revise and improve minimum emission standards for industrial, vehicular and brick kiln emission, use of filters to clean emissions and improved fuel quality, banning the use of unclean or ‘dirty’ fuels for domestic or industrial consumption.

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