

The Importance of Enabling Integrated Governance for Environmental Management in Developing Countries – Using the South African National Framework on Air Quality as a Model.

T.J. Chatterton, J.W.S. Longhurst, N.S. Leksmono, E.T. Hayes and J.K. Symons

Air Quality Management Resource Centre, University of the West of England, Bristol
<http://www.uwe.ac.uk/aqm> +44(0)117-328-2929 aqmrc@uwe.ac.uk

Introduction

As countries begin to develop economically, they usually undergo a range of environmental pressures related to industrial growth, increased road traffic and rapid urbanisation. Existing governance structures are often inadequate to ensure that environmental and public health protection is maintained at acceptable levels. Even in cases where there may be advanced capabilities in terms of the measurement and assessment of pollution there may not be the structures available to ensure that the resulting knowledge is used to good effect. This paper argues that the nature of air pollution requires a vertically and horizontally integrated system of governance for efficient and effective management of air quality.

Vertical Integration

What has become clear through studies of the implementation of the EU Ambient Air Quality Framework Directive across Europe is that whilst all working under the single ‘umbrella’ legislation provided by the Directive, every single Member State has its own unique experience of transposing the requirements of the Directive into their domestic law, based on their own legal and political structures. One of the key differences between states lies in the relationships between different layers of government, mainly between the top national level of government and the principal local level of government (usually representing municipalities or districts). When looking to try and develop air quality management frameworks in countries that do not have the external responsibilities of the EU Directive to comply with, it is still important to establish appropriate lines of vertical integration between governance levels.

Too Little National Control

Following the end of the previous heavily centralised and authoritarian political regime in 1998, Indonesia followed a process of decentralising many governmental processes including environmental management. In a number of sectors this was taken to the extent of granting regional autonomy, such that little support or guidance is provided for carrying out environmental management tasks. In some cases provinces and districts are no longer even bound by national standards (Word Bank 2007, Djogo and Syafv 2004). The lack of clarity for air quality responsibilities is reported to be hindering attempts to improve air quality (WHO 2007). In extreme situations devolution occurs to such a degree that very little control is still held at a central, national level and it becomes difficult for government to ensure that provinces are undertaking comparable work. This has the potential to cause problems where there is no uniform process adopted between provinces. It therefore becomes impracticable for the national government to be able to maintain an overview of what environmental management related work is taking place as they do not necessarily have access to all the information from the provinces. Even where information is

communicated, the lack of a national framework for specifying methods for air quality work means that air quality studies from separate provinces cannot be reliably compared as there is no universal set of norms and standards by which the work has been carried out.

Too Much National Control

A contrary example can be seen in the way that Thailand operated in the past. The national government had a very strong Pollution Control Department (PCD) which was responsible for air quality management across the whole country. As such, it set its priorities on confronting the worst air quality problems in the country, which were mainly in the capital Bangkok. The dominance of PCD activities in the capital prevented air quality management being effectively integrated with the activities of the local authority, the Bangkok Municipal Administration (BMA). However, the BMA sought to increase their capacity for air quality management in order to be able to take responsibility for developing their own air quality action plan (Chatterton 2003). Once the PCD had to assign less of its resources to activities in the capital, it was able to develop its regional capacity to a greater extent providing more equitable services.

International Integration

One of the key reasons why it is important for the national level of government to maintain a good overview of air quality management work across the whole country is so that it can use the work to help assess and report on conditions with regard to international commitments to reduce pollutants. These obligations under various treaties and agreements are not the only interaction that must take place on the international scale. Within the modern globalised market, governments of developing countries are faced with the challenge of deciding on whether or not they should establish standards for environmental quality on a par with those of more developed nations. On one side of the argument, developing countries are often faced with a heritage of old and poorly maintained industry and appliances, along with a lack of capital with which to modernise them. On the other, their populations have as much right to be protected from pollution as those of developed nations. However, the enforcement of high environmental standards brings with it the risk of affecting the country's economic competitiveness, and the ability to improve quality of life through economic development. This choice should not necessarily rest entirely within government though, but should include the citizens who would either benefit from the increased employment or endure the impacts of air pollution on a day-to-day basis. However, in recent discussions regarding the new European Directive on Air Quality, it has become apparent that poor environmental standards in developing countries also threaten efforts to improve conditions in developed countries.

Public Consultation and Participation

Fully integrated vertical governance has to include not just governmental structures, but also non-governmental stakeholders, especially the general public. The task of encouraging public involvement in air quality management in an open and democratic manner can be seen as a significant challenge within developing countries as the range of access to information resources and literacy is often far more diverse than in developed countries. However, very acute pollution problems can often create a strong degree of interest from communities in addressing problems, and where economic development is accompanied with recent advances in democracy (such as can be found in Indonesia, the Philippines and South Africa) there can be a far greater

desire for citizen engagement in environmental management than is common in more developed countries. In order to ensure access to a wide-range of public participation the involvement of a range of NGOs and other representative groups is often essential, particularly if the interests of those worst affected by air pollution are to be considered. Access to political power varies between groups in a society and it is often the most marginalised groups who have least access to power. Poor and marginalised groups are often those who also suffer the worst exposure to air pollution and in this regard the situation in the developing world is little different from that of the developed world. Certainly in the UK, clear patterns have been found between social deprivation and exposure to poor air quality (Gegisian et al. 2006), however the population exposed to adverse concentrations of air pollutants is likely to be larger in developing countries.

Horizontal Integration

As with the vertical dimension of government, integration is important horizontally, between government departments. Air Quality Management is generally seen being the preserve of environmental management departments within government, at any level. However, whilst this may be the most appropriate place for responsibility for monitoring and assessment to be carried out, the activities controlled by other governmental departments (such as road transport, mining, power generation etc.) often have greater impacts on air quality and so they need to be given official responsibilities for involvement in the process of improving air quality. The failure in the UK to designate responsibilities in primary legislation for engagement in air quality management to non-environment departments has been judged to have been a significant hindrance to the development and implementation of action plans (Chatterton et al. 2007). Where consideration of air quality has been specifically written into the duties and responsibilities of sectors outside environmental management (such as transport and land-use planning) there have been significant improvements in the levels of communication that occur between sectors, providing greater hope for improvements in air quality than existed previously.

A Structured Framework The South African Example

In developing the South African National Framework on Air Quality, experience from studying air quality management systems in the UK, Europe and further a field was used to incorporate explicit responsibilities for, and relationships between, different levels of government in order to ensure “coordinated, integrated and cohesive air quality governance” (DEAT 2007). The National Framework sets out clear responsibilities for the Department for Environment and Tourism (DEAT), for Environmental Departments in Provincial Government, and for Municipalities. One of the primary actions for each level of government was the designation of a specific air quality officer to take responsibility for ensuring all the other relevant requirements of the Framework and related legislation are undertaken.

Whilst provinces and municipalities have to comply with national ‘norms and standards’ relating to controlling emissions from processes they are also allowed the freedom to designate tighter controls within their area of jurisdiction in order to enable them to meet ambient air quality standards. The National Framework sets out a clear ‘Environmental Governance Cycle’ (see Figure 1) which recognises the need for a gradual and continual process for assessing pollution and mitigation measures. By following this cycle provincial and municipal governments will be able to clearly demonstrate the need for more stringent local measures where these are necessary.

In terms of ensuring adequate horizontal integration, the South African National Framework specifically lists 12 government departments other than DEAT that have “an interest or responsibilities” in the air quality management process. Figure 2 shows a diagram of the ‘3D-Governance Model’ set out in the National Framework. This model takes the Environmental Governance Cycle discussed above, and demonstrates how this process of assessment and action occurs simultaneously both within different policy spheres (linked in a hub-and-spoke manner) and at different levels of government. Responsibilities at each level and within each ‘hub’ are clearly identified and explicitly linked in both the horizontal and vertical domains. The importance of regular and appropriate communication within and between the domains lies at the heart of the effective functioning of integrated air quality governance. In order to make explicit that cleaning up air pollution is not merely a process of exercising governmental authority, the National Framework also goes on to outline the responsibilities of Industry, Labour and the General Public within the process.

In addition to integrating management of air quality with management of pollution sources, the National Framework also seeks to integrate with other environmental policy areas. One of the key aspirations was the integration of air quality with climate change policies. Despite having no current obligations under the Kyoto Protocol, levels of economic growth in South Africa are such that it is expected that future responsibilities are likely. Therefore, the National Framework has taken the forward looking step of directly establishing links between conventional air pollution emissions and greenhouse gas emissions within the framework so that integration of the two processes in practice is more likely to occur as the profile of climate change rises on South Africa’s political agenda (DEAT 2007).

Enabling Integrated Governance

Although an effective policy framework is important in developing an integrated governance system, the most essential elements are the dynamics and communication within the framework. For these to work well the framework needs to allow and encourage the participation of all stakeholders (government, industry and public) and to do this it must ensure adequate and transparent dissemination of information, and constantly build the capacity of all sectors interactions?.

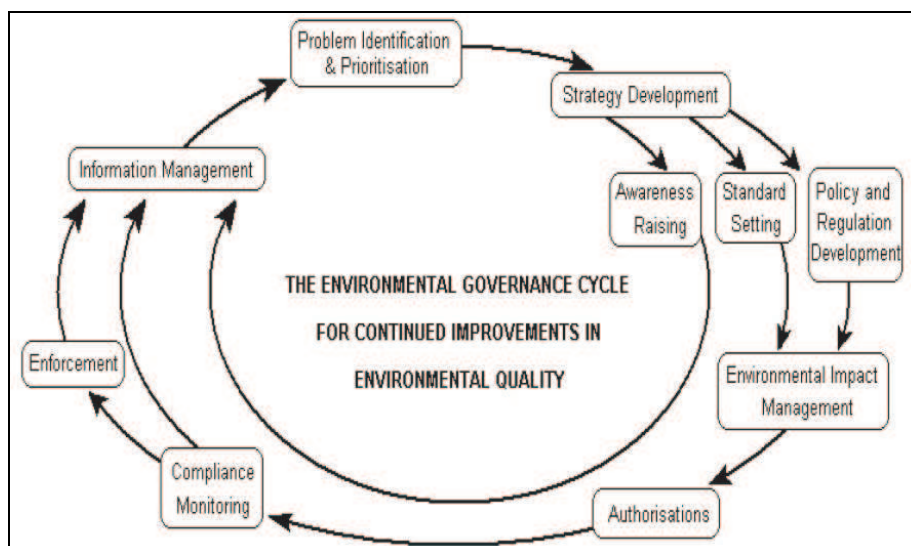


Figure 1: The Environmental Governance Cycle (DEAT, 2007)

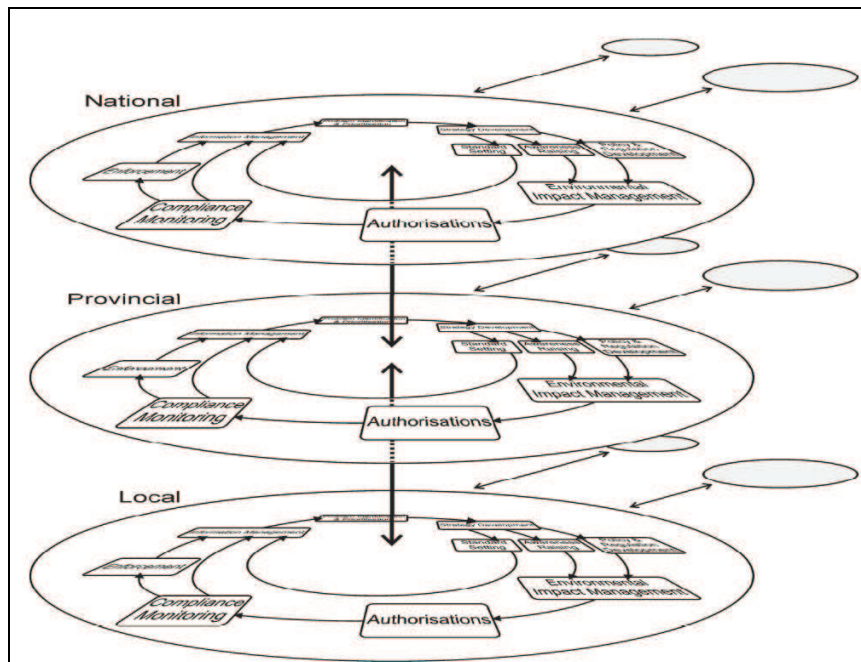


Figure 2: The 3D Governance Model (DEAT, 2007)

References

- Chatterton, T. 2003, Local Air Quality Management: Capacity Strengthening in Bangkok, Presentation at Better Air Quality (Asia), <http://www.cleanairnet.org/baq2003/1496/article-58324.html> (Accessed 21/11/07)
- Chatterton, T.J. Longhurst, J.W.S., Leksmono, N.S., Hayes, E.T. And Symons, J.K. “Ten Years Of Local Air Quality Management Experience In The UK: An Analysis Of The Process”, *Clean Air and Environmental Quality*, 41(4): 26-31.
- Conexor 2000, “Air Quality Management Project in Co-operation between Thailand and Sweden – Final Report”, Project for the Enhancement of the Air Quality Management Project to Four Regional Nodes in addition to the Continued Support for Central PCD and the Support to Establish an Air Quality Laboratory at the PCD, December 2000. http://www.conexor.com/thailand/Final_Report_Dec_2000.pdf (accessed 20/11/2007)
- DEAT 2007 “The 2007 National Framework for Air Quality Management in the Republic of South Africa”, South African Government Gazette No.30284, 11th September 2007.
- Djogo T. and Syafv R. 2004, “Decentralization Without Accountability: Power and Authority over Local Forest Governance in Indonesia”, International Centre for Forestry Research, <http://www.cifor.cgiar.org/acm/download/pub/djogo-EWC.pdf> (accessed 20/11/2007).
- Gegisian, I., Grey, M., Irwin, J.G. & Longhurst, J.W.S., 2006. “Environmental Justice Consequences of the UK’s Local Air Quality Management (LAQM) System”. In: Longhurst, J.W.S. & Brebbia, C.A. (Eds. 2006) *Air Pollution XIV*. WIT Press. Southampton and Boston, 175-183.
- World Development Bank (WDB) 2007, “Environmental Issues in Indonesia”, www.worldbank.org/id/environment (accessed 20/11/2007)
- World Health Organisation 2007, Indonesia Country Cooperation Strategy, <http://www.who.or.id/eng/strategy.asp?id=cs2> (Accessed 21/11/2007).