

Chapter 6:

Regional-scale Action

Regional-level cooperation and support can enhance the successful implementation of national-level actions and is the most effective scale at which regional transboundary problems can be addressed. To date, there has been little regional action on SLCFs, in contrast to air pollution which has well-developed regional initiatives and intergovernmental agreements. Similar initiatives on SLCFs could complement and support national emission reduction efforts. This chapter discusses options for action at the regional level: it reviews the existing major regional agreements and other mechanisms and then discusses options for regional activity to further the understanding of regional impacts and build consensus around regional objectives.

One major initiative, carried out in Asia over the last ten years, is the Atmospheric Brown Cloud (ABC) project (Ramanathan et al., 2008). Although not originally aimed specifically at SLCFs, the ABC project made important findings relevant to these issues. More recent examples of efforts specifically focusing on SLCFs include scientific assessments carried out by international organizations, including with a regional focus, such as the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO), the Ad Hoc Expert Group on Black Carbon of the Convention on Long-Range Transboundary Air Pollution (CLRTAP), and the Arctic Council, as further detailed in the following sections.

There are four reasons why action at the regional level could add value to, or stimulate, national actions:

- The impacts of SLCFs often go beyond the national level and occur at the regional level, and therefore SLCF mitigation is best addressed at this level. Examples include: the health impacts from particulate matter transported across national boundaries; regional impacts of tropospheric ozone on crops; long-range transport and impact of black carbon on the Arctic and the Himalayas, and disruption of weather patterns on all continents.
- Economies of scale or other benefits that arise from pooling and sharing of scientific expertise and

knowledge, joint research and capacity building and technical assistance programmes. This is particularly important in regions where the pollution problems extend across national boundaries and where resources may be scarce. Raising awareness of the impacts of SLCFs and sharing knowledge within regional groupings could also facilitate joint or complementary policy solutions and help overcome barriers to delivery. It is also arguable that it is easier to reach consensus on policies at a regional, rather than a global, scale.

- Common clean technology standards can be developed at the regional level, and can serve as models to other nearby countries, ensuring the more cost-effective use of scarce human and technical resources.
- Accountability may be enhanced by the presence of a regional forum to which progress on emission reductions is reported. Such shared accountability has the potential to provide further incentives for action at a national level.

This chapter examines the existing regional initiatives in terms of the following three categories:

- Regional entities with established infrastructure and a policy focus:** in some regions detailed regional legal instruments and infrastructure have been established. The most established example is the CLRTAP, which mandates legally-binding national emission ceilings for different pollutants, and the European Union (EU) which issues legislation on emissions, ambient air quality and climate change.
- Regional entities with permanent structure and a science focus:** though not based on legally-binding agreements, other regional entities do have permanent structures (e.g. a secretariat) but focus largely on developing a regional scientific base, for example by promoting or undertaking regional monitoring and modelling. Examples include the Acid Deposition Monitoring Network in East Asia (EANET) and the Malé Declaration on Control and Prevention of Air Pollution and its Likely Transboundary Effects for South Asia (Malé Declaration).

- iii) **Other initiatives:** which have no permanent structures, but provide viable policy making fora for regional cooperation. Examples include:
- in Sub-Saharan Africa, ministerial declarations (also known as 'agreements') were recently adopted, such as the Lusaka Agreement for southern Africa, the Nairobi Agreement for eastern Africa, and the Abidjan Agreement for west and central Africa. These declarations lay out common policy, set regional priorities and offer a framework for future cooperation;
 - in Latin America and the Caribbean: the Intergovernmental Network on Air Pollution in Latin America and the Caribbean was created and given a mandate from the Regional Forum of Environment Ministers of Latin America and the Caribbean to develop a regional work plan;
 - in Asia and the Pacific, regional cooperation has been enhanced through a new Joint Forum on Atmospheric Environment Issues in Asia and the Pacific, drawing together several institutions and intergovernmental initiatives.

In addition to these three categories this chapter also considers the role that economic integration organizations and other relevant regional and subregional organizations could play in developing action on SLCFs.

6.1 Potential for action through regional entities with established infrastructure and a policy focus

The three inter-governmental bodies that currently address short-lived climate forcers are the United Nations Economic Commission for Europe (UNECE) Convention on Long-Range Transboundary Air Pollution (CLRTAP), the European Union (EU) and the Arctic Council.

6.1.1 Convention on Long-Range Transboundary Air Pollution

The Convention on Long-Range Transboundary Air Pollution (CLRTAP)²⁴ and its protocols have resulted in specific measures to be taken at national level to cut emissions of air pollutants. In particular, it mandates national emission ceilings of pollutants that cause acid

rain, eutrophication (excess nutrient deposition), and tropospheric ozone in its 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone. The Task Force on Hemispheric Transport of Air Pollution (TFHTAP) is undertaking modelling of tropospheric ozone including the role of methane and other ozone precursors, such as carbon monoxide. CLRTAP is currently incorporating SLCFs into its activities, taking an initial step to include consideration of black carbon as a component of particulate matter (PM) in the process of the revision of the Gothenburg Protocol, probably in the form of ceilings for PM_{2.5}. Some areas of discussion on black carbon within the context of CLRTAP include:

- i) improving measurement coverage of black carbon across the region, and clarifying the definition of black carbon;
- ii) developing guidelines for black carbon emission inventories; and
- iii) prioritizing reductions of primary particulate matter emissions in sectors with high black carbon to organic carbon ratios, recognizing that black carbon is only emitted in conjunction with other pollutants such as organic carbon which is a cooling agent²⁵.

CLRTAP has considerable potential to address the linkages between air pollution and climate change, including continuation of its work to integrate black carbon in the next phase of the Gothenburg Protocol. Methane could also be included in the Protocol, informed by the findings of the TFHTAP. There is also the possibility that expertise within the CLRTAP region could be shared with other world regions to make policy makers aware of options to mitigate SLCFs. The sharing of information and knowledge could build on the linkages that have already been established with regional air pollution networks in Asia and Africa, in the area of scientific research.

6.1.2 European Union

The European Union (EU) Directive 2001/81/EC of the European Parliament and of the Council on National Emissions Ceilings for Certain Atmospheric Pollutants Directive, known as the National Emission Ceilings (NEC) Directive, sets emission ceilings for member states for sulphur dioxide, nitrogen oxides, volatile organic

24. The Convention on Long-Range Transboundary Air Pollution (CLRTAP) was signed in 1979 and entered into force in 1983. It has 51 parties, with a geographical coverage extending from North America to Europe. www.unece.org/env/lrtap/welcome.html

25. Decision 2010/2 by the Executive Body on Implications of the reports of the Task Force on Hemispheric Transport of Air Pollution and the Ad hoc Experts Group on Black Carbon (document ECE/EB.AIR/106/Add.1), decided to "include consideration of black carbon, as a component of particulate matter (PM), in the process of the revision of the 1999 Gothenburg Protocol". In addition, also see the Report by the Co-Chairs of the Ad Hoc Expert Group on Black Carbon, available from: <http://www.unece.org/env/lrtap/ExecutiveBody/welcome.28.html>

compounds and ammonia, some of which are precursors of tropospheric ozone. The European Union also supports action by appropriate international fora to reduce the effects of emissions of greenhouse gases, black carbon and other SLCFs in the Arctic. In January 2011 the European Parliament stated that it ‘...recognises the disproportionately large Arctic warming impact caused by black carbon emissions in the EU and other regions in the northern hemisphere, and stresses the need for inclusion of black carbon emissions in the relevant UNECE and EU regulatory frameworks, such as the Convention on Long-Range Transboundary Air Pollution and the National Emissions Ceilings Directive’²⁶. In September 2011 the Parliament further came forward with two resolutions calling for more action on SLCFs, in particular on hydrofluorocarbons, black carbon and tropospheric ozone²⁷.

The European Union formulates its own air quality and climate change legislation and has just begun a review of its air quality legislation, aiming to conclude by 2013. At present it is not clear to what extent this will result in further action on SLCFs although the European Union is likely to incorporate particulate matter emissions in the NEC Directive, following the indication by the Parliament referred to above.

European Union legislation also has the potential to affect other regions as the motor-vehicle emission standards set by the EU (the Euro standards) have been taken up by both India and China amongst others (Chapter 5).

6.1.3 Arctic Council

The Arctic nations²⁸ may play a special role in demonstrating a strong resolution to reduce emissions of SLCFs, and most of these countries are highly motivated by the fact that the Arctic, is warming at a higher rate than the global average. The Arctic Council was an early actor on SLCFs, publishing two reports in 2008 on science and mitigation²⁹ and an SLCF task force is further exploring policy and mitigation options³⁰, while the Arctic Council’s Arctic Monitoring and Assessment Programme (AMAP) is

continuing to develop the science of SLCFs and assessing their Arctic impacts. In addition, the council’s Arctic Contaminants Action Program (ACAP) working group has begun coordinating demonstration projects funded by member governments aimed at sources of black carbon in Arctic nations, initially focusing on stationary and mobile diesel sources but potentially including other important sources such as residential stoves and open-field and forest burning³¹.

The Arctic Council is a high level intergovernmental forum to provide a means for promoting cooperation, coordination and interaction among the Arctic States; the recent signing in 2011 of the first legally binding agreement, the Agreement on Cooperation on Aeronautical and Maritime Search and Rescue in the Arctic³² may open the door to additional future agreements. The Arctic Council’s own analysis indicates that the eight member nations are responsible for more than half of the black carbon affecting the Arctic, demonstrating the potential benefits of a regional Arctic agreement that could serve as a model for others. The Arctic nations could also spearhead more global efforts such as those aimed at methane abatement or oil and gas SLCF emissions. Such actions, even if taken outside the Arctic region, could benefit Council members by mitigating some of the more extreme impacts of rapid warming there.

6.1.4 Commission for Environmental Cooperation

Since 1994, Canada, Mexico and the United States of America have been collaborating in protecting North America’s environment through the North American Agreement on Environmental Cooperation (NAAEC), which is the environmental side agreement to the North American Free Trade Agreement (NAFTA). NAAEC created a framework to better conserve, protect and enhance the North American environment through cooperation and effective enforcement of environmental laws. The Commission for Environmental Cooperation (CEC) was also established in the context of the NAAEC in order to address regional environmental concerns. Ongoing CEC

26. European Parliament resolution of 20 January 2011 on a sustainable EU policy for the High North (2009/2214(INI)). The full text of the Resolution is available from: <<http://www.europarl.europa.eu/sides/getDoc.do?type=REPORT&reference=A7-2010-0377&language=EN>>

27. European Parliament resolution of 14 September 2011 on a comprehensive approach to non-CO₂ climate-relevant anthropogenic emissions. The text of the Resolution is available from: <<http://www.europarl.europa.eu/sides/getDoc.do?type=TA&language=EN&reference=P7-TA-2011-0384>>

28. The Arctic nations include: the Russian Federation, Canada, the United States of America, Sweden, Norway, Denmark, Finland and Iceland.

29. Arctic Monitoring and Assessment Programme (AMAP): <http://www.amap.no/>

30. The task force provided recommendations to ministers at the 2011 ministerial meeting in Nuuk, Greenland, which focused primarily on black carbon, and will continue its work in the coming years on black carbon as well as methane and tropospheric ozone, with Sweden joining as a co-chair. Nuuk Declaration (2011) Seventh Ministerial Meeting of the Arctic Council, Nuuk, Greenland. <http://arctic-council.org/filearchive/Nuuk%20Declaration%20FINAL.pdf>

31. Funding for these various projects is approaching US\$10 million.

32. The Agreement will strengthen cooperation between the Arctic states and improve the way Arctic countries respond to emergency calls in the region.

programmes, as well as new strategic priorities, present a good opportunity to integrate SLCF mitigation in its work.

6.2 Potential for action through regional entities with permanent structure and a science focus

6.2.1 Malé Declaration in South Asia

The Malé Declaration on Control and Prevention of Air Pollution and Its Likely Transboundary Effects for South Asia was adopted at the Seventh meeting of the Governing Council of SACEP in 1998. The main objective of the Malé Declaration programme is to promote the establishment of a scientific base for prevention and control of transboundary air pollution in South Asia to encourage and facilitate coordinated interventions of all the stakeholders on transboundary and shared air pollution problems at national and regional levels³³. It already includes consideration of the air quality impacts of tropospheric ozone, especially on crops, and the impact of particulate matter pollution on health. Activities include developing emission inventories, integrated assessment modelling and consideration of policies and measures to reduce air pollution. Sharing practices and experiences from countries within this region on emission reduction policies and measures is already an important part of this forum and could be further expanded to key sources of black carbon and tropospheric ozone precursors, including methane. Priority sources for this region include transport, cookstoves, brick kilns and agricultural residue burning, all of which are included in the Declaration. Assessment and action on these issues could be promoted through awareness raising and appropriate financing of the Malé Declaration activities.

6.2.2 EANET – Acid Deposition Monitoring Network in East Asia

The Acid Deposition Monitoring Network in East Asia (EANET) was established in 1998 as an inter-governmental initiative to create a common understanding of the state of acid deposition problems and to provide inputs into the

decision-making process³⁴. The focus at this stage is chiefly scientific and concerned with the pollutants involved in acid deposition but includes a group of countries with some of the largest emissions of SLCFs. Many of the key countries involved are promoting national co-benefit strategies that enhance the synergy between air pollution and climate policy and it would be important to investigate the potential of this forum to focus on SLCF issues.

6.2.3 ASEAN Agreement on Transboundary Haze Pollution in South East Asia

The governments of the ten member countries of the Association of South East Asian Nations (ASEAN) signed an Agreement on Transboundary Haze Pollution in 2002³⁵.

It is the first regional agreement in the world that binds a group of contiguous states to tackle transboundary haze pollution resulting from land and forest fires³⁶. It arose as a result of the transboundary transport of particles from forest-fire outbreaks that has significant health impacts in countries thousands of kilometres from the source of emissions. As outdoor burning of biomass is a major source of SLCFs, the agreement could provide an excellent opportunity in the region to discuss wider measures that reduce particulate matter pollution and SLCF emissions.

6.2.4 The Central Asian Environment Convention

Countries of Central Asia have made a political commitment on air pollution issues under the 2006 Framework Convention on Environmental Protection for Sustainable Development in Central Asia³⁷. This offers an opportunity for these countries to address SLCFs.

6.2.5 Other Initiatives in Asia

There are other regional initiatives, such as the Tripartite Environmental Ministers' Meeting (TEMM) among China, Japan and Republic of Korea³⁸ and ASEAN+3 Meeting³⁹, which might be effective in addressing the issues of transboundary air pollution and its link with climate change, including aspects related to various SLCFs.

33. The Malé Declaration covers Bangladesh, Bhutan, India, Iran, the Maldives, Nepal, Sri Lanka and Pakistan.

34. Thirteen countries participate in EANET: Cambodia, China, Indonesia, Japan, Lao PDR, Malaysia, Mongolia, Myanmar, Philippines, Republic of Korea, Russia, Thailand and Vietnam. UNEP is the Secretariat and the Asia Centre for Air Pollution research, located in Japan is the Network Centre for EANET.

35. ASEAN is the Association of South East Asian Nations, a geopolitical and economic organization of ten countries originally formed in 1967 involving Indonesia, Malaysia, the Philippines, Singapore and Thailand. Membership then expanded to include Brunei, Myanmar, Cambodia, Laos and Vietnam.

36. The Agreement entered into force in 2003 and was ratified by nine of the ten ASEAN countries. See: <http://haze.asean.org/hazeagreement/>

37. See http://www.ecolex.org/ecolex/ledge/view/RecordDetails;document_Framework%20Convention%20on%20Environmental%20Protection%20for%20Sustainable%20Development%20in%20Central%20Asia.html?DIDPFDSjsessionid=20D91EE559E0718840CF60B3AFCE560A?id=TRE-143806&index=treaties. The agreement has been signed only by Kyrgyzstan, Tajikistan and Turkmenistan.

38. <http://www.env.go.jp/earth/coop/coop/english/dialogue/temm.html>

39. ASEAN+3 includes the ASEAN countries plus China, Japan and Republic of Korea. <http://www.aseansec.org/4918.htm>

The Clean Air Initiative for Asian Cities (CAI-Asia) is a partnership⁴⁰ that actively promotes policies to address air pollution and climate change in an integrated fashion, and, given the opportunity of policy development at city scale in rapidly industrializing countries in Asia, it focuses on how urban centres could help be a catalyst for enhanced implementation of the black carbon and methane measures.

The Asian Co-benefits Partnership⁴¹ was officially launched in November 2010 and serves as an informal and interactive platform to improve knowledge management and stakeholder cooperation on co-benefits in Asia. The SLCF issue is central to this partnership.

The Asian Development Bank (ADB) has a number of programmes and initiatives for Asia and the Pacific that are relevant to SLCFs and the measures required to control them. These include the Climate Change Programme, Clean Energy Programme, Energy Efficiency Initiative, Energy for All Initiative, and Sustainable Transport Initiative. The Cities Development Initiative for Asia (CDIA) may also be relevant to SLCF mitigation, as it provides assistance to medium-sized Asian cities to bridge the gap between their development plans and the implementation of their infrastructure investments⁴².

6.3 Potential for action on SLCFs through other initiatives

6.3.1 Africa

Regional cooperation on air pollution was initiated by the Air Pollution Information Network for Africa (APINA) in 1997 culminating in the adoption by the Southern African Development Community (SADC) Ministers of the Regional Policy Framework on Air Pollution, known as the Lusaka Agreement in 2008. APINA has also worked in partnership with UNEP's Partnership for Clean Fuels and Vehicles (PCFV)⁴³, the USEPA, the World Bank and others since 2006 on better air quality for African cities⁴⁴. This process has resulted in further regional instruments on air pollution adopted at the ministerial level, the Eastern Africa Regional Framework Agreement on Air Pollution, known as the Nairobi Agreement (2008), the West and

Central Africa Regional Framework Agreement on Air Pollution, known as the Abidjan Agreement (2009)⁴⁵, and a draft regional framework in northern Africa. All these regional instruments specifically mention air pollution and climate change co-benefits. Elements of the Lusaka Agreement have been considered for inclusion in the SADC environment protocol that is currently being developed. UNEP has been encouraging national governments to implement measures outlined in the regional agreements across Africa, through the Partnership for Clean Fuels and Vehicles (PCFV) initiative, on unleaded petrol and low sulphur fuel. There is considerable potential for these processes to promote action on SLCFs. Investments in these regions to develop stable institutional structures would promote progress and provide a platform for coordinating SLCF activities. Including the issues addressed in these declarations into the discussions at the African Ministerial Conference on Environment (AMCEN) could provide an opportunity to elaborate a regional framework and strategy on SLCF mitigation.

6.3.2 Asia

Regional cooperation in Asia has been enhanced through a new Joint Forum on Atmospheric Environmental Issues in Asia and the Pacific convened by UNEP. The Forum draws together ASEAN, the Malé Declaration, EANET, CAI-Asia, the Central Asian Environment Convention, the Pacific Regional Environment Programme (SPREP), the South Asia Cooperative Environment Programme (SACEP) and the governmental meetings on Urban Air Quality in Asia. Although in its early stages, the Joint Forum has the potential to promote action on SLCF through the exchange of information across the region. It could also provide a focus for inter-regional scientific collaboration on SLCF issues, awareness raising and capacity enhancement.

6.3.3 Latin America and the Caribbean

In 2008, the XVI Forum of Ministers of the Environment of Latin America and the Caribbean secured support in principle for the establishment of an Inter-Governmental

40. CAI-Asia leads efforts to enable Asia's 2500 cities to reduce both air pollution and CO₂ emissions. <http://cleanairinitiative.org/portal/node/2288>

41. <http://www.iges.or.jp/en/cp/co-benefits.html>

42. <http://www.cdia.asia/about-cdia/>

43. www.unep.org/PCFV/

44. The Better Air Quality in Sub-Saharan Africa (BAQ-SSA) policy dialogue was held in July 2006 with participation by forty nine sub-Saharan countries and Ministers of Environment of thirty of them. See: www.gapforum.org for details.

45. Lusaka Agreement: (2008) - Southern African Development Community (SADC) Regional Policy Framework on Air Pollution'. See: www.gapforum.org for details. Nairobi Agreement: (2008) http://www.unep.org/urban_environment/PDFs/EABAQ2008-AirPollutionAgreement.pdf, Abidjan Agreement: http://www.unep.org/urban_environment/PDFs/BAQ09_AgreementEn.Pdf

Network on Air Pollution in Latin America and the Caribbean. The initiative is being promoted by the Global Atmospheric Pollution (GAP) Forum⁴⁶ and includes recognition of air pollution climate change issues. Although the inter-governmental network is still in its infancy, and will require further financial commitment, it does have enormous potential to promote action on SLCFs. Draft Elements of a Framework Agreement on Atmospheric Pollution in Latin America and the Caribbean has been discussed at the Seventeenth Meeting of the Forum of Ministers of Environment of Latin America and the Caribbean in 2010⁴⁷. Bilateral donors have also supported SLCF mitigation in the region. For example, the Swiss Development Agency for Development and Cooperation established a project to increase the energy efficiency of artisanal brick kilns in seven Latin American countries. The project promotes the reduction of greenhouse gas emissions through the use of more energy-efficient technologies and processes, and the use of less polluting fuels.

The Inter-American Development Bank (IDB) has a sustainable energy and climate change initiative and also finances several climate change and sustainable energy efforts such as a climate change programme in Latin America including the Biodigester Network and Knowledge Sharing Platform (BioLAC).

The WMO Global Atmospheric Watch (GAW) Urban Research Meteorology and Environment (GURME) project addresses both air quality and climate change⁴⁸ and is an initiative that could be approached to promote the science around SLCFs across Latin America and the Caribbean.

6.3.4 Other Relevant Initiatives

Environmentally sustainable transport (EST) forums were established for Asia and Latin America by the United Nations Centre for Regional Development (UNCRD), bringing together senior transport and environment sector government officials each year to share experience and discuss strategies for making transport more sustainable. In Asia, the Fifth Regional Environmentally Sustainable Transport Forum held in Bangkok in August 2010, adopted the Bangkok Declaration for 2020, in

order to demonstrate their 'renewed interest in, and commitment to, realizing a promising decade (2010-2020) of sustainable actions and measures for achieving safe, secure, quick, reliable, affordable, efficient and people-centric and environment friendly transport in rapidly urbanizing Asia'⁴⁹. The Latin America Forum (Foro de Transporte Sostenible para América Latina) held a meeting in Bogota, Colombia in June 2011 and adopted the Bogota Declaration, which outlines common goals on environmentally sustainable transport in Latin America until 2020. These forums could provide an avenue to promote SLCFs measures in the transport sector.

6.4 Economic groupings

In addition to the atmosphere-based groupings discussed above, there are also economic integration organizations and other regional and sub-regional organizations that potentially could play a role in SLCF mitigation. The role of some of them, such as SADC and ASEAN, has already been discussed in this chapter. Organizations covering other sub-regions could also become active on SLCF mitigation. These could include for instance Mercosur in Latin America⁵⁰, the South Asian Association for Regional Cooperation (SAARC)⁵¹ and the Economic Community of West African States (ECOWAS)⁵². ASEAN, in addition to being the forum under which the Haze Agreement was adopted, hosts formal meetings of senior officials from national ministries, such as the ASEAN Senior Transport Officials Meeting, that are relevant to the SLCF issue. It also has several working groups that could be relevant to the SLCF policies and measures, amongst others on transboundary air pollution, environmentally sustainable cities, agriculture and training extension and multilateral environment agreements.

6.5 Possible options for progress at a regional Level

This chapter shows that throughout the world there are now regional inter-governmental networks and initiatives that can provide a basis for cooperative action on SLCFs, as well as enhancing and supporting national activity. At present their scale and effectiveness vary significantly, and

46. A global forum of regional atmospheric initiatives. www.gapforum.org.

47. <http://www.pnuma.org/forumofministers/17-panama/FORO%20DE%20MINISTROS%202010%20VERSIONES%20FINALES/EXPERTOS/DE%20TRABAJO%20INGLES/UNEP-LAC-IGWG-XVII-%206%20Draft%20Elements%20Framework%20Agreement%20Atmospheric%20Pollution.pdf>

48. <http://mce2.org/wmogurme/>

49. <http://www.uncrd.or.jp/env/5th-regional-est-forum/index02>

50. Involving Argentina, Brazil, Paraguay and Uruguay. See www.mercosur.int

51. <http://www.saarc-sec.org/>

52. <http://www.ecowas.int/>

although some are still at an early stage of development, they are developing rapidly. These initiatives can provide a useful platform for awareness raising, capacity building, technical cooperation and financing at the regional level.

6.5.1 Awareness of the benefits

A key requirement for going forward with SLCF mitigation is to adequately inform decision makers. It should be made clear that many benefits, especially for human health, will accrue to the populations of regions and individual countries that take action. While the responsibility to select and implement measures to mitigate SLCFs could lie primarily with national governments, it should be made clear that co-ordinated regional action is indispensable if certain key impacts – for instance on the Arctic, the Himalayas and the South Asian Monsoon – are to be effectively addressed.

6.5.2 Technical knowledge

Existing agreements and their institutions and partnerships could be used to raise awareness, improve scientific understanding, facilitate the transfer of technology, and develop capacity as prerequisites for policy makers to take action on SLCFs.

Regional instruments and initiatives such as CLRTAP, the Malé Declaration, EANET and others could be involved in a series of regional meetings or workshops, which could be tailored to the needs of the different regions. The meetings could be linked to the development of region-specific SLCF assessment reports. In an initial phase, these meetings could involve scientists and decision makers to define the scope of the issues at stake, refine priorities, promote capacity building and scientific research and lay the foundations for policy action at regional or national levels. Inviting participants from other regions to these meetings could promote cross-fertilization and the sharing of experiences.

The more developed institutions, as well as countries, individually or jointly, could play an important role in capacity building and awareness raising. The CLRTAP and the EU, for example, can offer their experience in formulating mitigation policies and in particular offer examples of how science informs and drives policy development in these areas, as well as help disseminate scientific findings related to SLCFs.

South-south cooperation also can increase the flow of information, resources, expertise, technology and

knowledge among developing countries. One example is UNEP's efforts to actively promote the streamlining of approaches to south-south cooperation in the implementation of the capacity-building components of its biennial programmes of work⁵³.

6.5.3 Financing and enabling mechanisms

Regional and sub-regional development banks, such as the Asian and African Development Bank, the European Bank for Reconstruction and Development and the Inter-American Development Bank, as well as other similar institutions, could play a strong role in supporting regional activities. Regional initiatives have already received support from the regional development banks, such as through the Clean Air Initiative for Asian Cities, but these institutions could play a bigger role through funding and promoting additional initiatives such as high-level dialogue among governments in their respective regions. Increased knowledge and awareness among countries about funding opportunities and other enabling mechanisms available through these institutions in the field of SLCFs would also be useful to advance mitigation efforts.

6.5.4 Further regional development to enable SLCF Action

In order to move forward, it is important to capitalize on the important role played by regional networks, which are able to address the circumstances of individual regions and catalyze policy discussion and promote action.

Some of the declarations and other instruments emerging in Africa and Latin America and the Caribbean and other developments mentioned in this chapter offer the prospect of moving to effective collaborative action in a relatively quick fashion. A positive aspect of some initiatives is their close alignment with regional development communities such as the SADC (in the case of the Lusaka Agreement) and ASEAN (in the case of the ASEAN Haze Agreement) which could offer an opportunity for mainstreaming near-term climate and air-quality protection into development.

Building on the successes of the network of well-established institutions and agreements at the regional level, as well as promoting collaboration among them, can offer an effective way to strengthen on-going efforts to mitigate SLCF emissions. It can also offer the opportunity to incorporate SLCF mitigation into existing air quality policies where this has not yet happened.

53. See: <http://www.unep.org/south-south-cooperation/>; this also closely links with some aspects of the North-South cooperation and the so-called triangular cooperation.