Summary of the public IG-WG workshop on 14 December 2012

This meeting served the purpose of giving a general overview on the current science of and policy response to SLCPs, gathering perspectives on priorities from people engaged in with related issues including air pollution, urban development, and food security as well as climate change, and discussing specific topics for the IG-WG to pursue in 2013. This summary provides an overview on the key issues discussed. It should not be taken as representing the viewpoint of the group as a whole or the opinion of any particular individual. The meeting was conducted under Chatham House rules.

The Interdisciplinary and global working group (IG-WG)

The IG-WG is an internationally diverse collection of young experts from academia, public service, the private business sector, and civil society, who intend to explore and share knowledge on how emerging initiatives for SLCP mitigation can be more effectively integrated across sectors and scales in the joint context of socio-economic development, improving air quality, and mitigating climate change. The primary objective of the *Interdisciplinary Global Working Group* is to build a stronger basis for action-oriented partnerships between policy and stakeholder groups that are both important for the overall effectiveness of SLCP mitigation and presently not used to their full potential. The IG-WG is hosted by the ClimPol Project at the Institute for Advanced Sustainability Studies e.V., Potsdam, Germany.
http://climpol.iass-potsdam.de/about/interdisciplinary-and-global-working-group

The Science and Policy of SLCPs and their Importance for Related Sectors

This section summarizes the main points of discussion that emerged from the individual expert talks.

- **The framing of the SLCP issue:** The SLCP problem has been largely debated and framed by the climate change mitigation community, but it has implications for broader development policy. Mitigation strategies also involve efforts from infrastructure, agriculture, urban planning, and other communities for which climate change mitigation is one among other goals. From a global perspective, on the scale where successful climate change policies need to be enforced, this is advantageous. However, on the local scale where air pollution is a more imminent driving force for SLCP mitigation due to the direct adverse effects, climate change mitigation is often a secondary or even less important driver for change. Successful mitigation can also require local knowledge of constraints and challenges in adopting available technologies. Framing the SLCP problem based on global warming mitigation efforts will doubtlessly give the climate change aspect more weight in public discussions, but priorities based on this framing do not necessarily match those that come from an air quality

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point of view. For example, some calculations show that unless temperatures approach their peak in the next few decades, it makes no difference to peak warming whether SLCPs are cut now or after 2050. However, arguing from the air pollution perspective, reducing SLCPs sooner rather than later makes a significant difference to human health and ecosystem protection. Many felt that it was important to consider the full range of SLCP impacts rather than limit discussion to its contribution to the global 2°C (1.5°C) temperature target. Balancing climate change considerations with other impacts could also help leverage and contribute to existing momentum for measures aimed at near-term needs e.g. waste management, etc.

- **Informational challenges:** Available SLCP reports target mainly the global level. More regional and local assessments are necessary to attract the attention of national and regional policy-makers. Much information for downscaled considerations is already available in some areas (e.g., North America, Europe) while other regions largely lack data. Globally, more long-term monitoring and observation based knowledge on particulate matter composition (emissions and atmospheric concentrations) will be necessary to produce integrated assessments on SLCP impacts. It will also be important to develop ways to link these findings to existing frameworks for identifying policy priorities in mitigation-related areas such as urban planning, energy infrastructure, etc.
- **Integration of policy areas:** Environmental change is driven by the interaction between air pollution and climate change; policies, science and impact studies do not always reflect this. The sources and effects of SLCPs are a complex topic that requires flexibility of policies that ensure environmental integrity. Within the EU, for example, policy supporting reporting and monitoring is currently focused on thematic legislation. At the same time the workload to support thematic legislation is increasing and only small steps on integrating air pollution and climate change policies are being made (e.g., BC in LRTAP). A sensible way of combining and streamlining information on both greenhouse gas and air pollution emissions and how to compare effects on air quality and climate change that is apt to support policy making processes has yet to be designed. It will be important to not only highlight potential co-benefits, but also trade-offs while avoiding inaction due to complicating the issue unnecessarily. While this overlap in mandates can lead to more efficient decision making, the design of integrated policies needs to be chosen carefully as to avoid disadvantageous compromises in certain policy sectors, as for example the convolution of air quality objectives with international climate goals and politics.
- **Regional drivers/technology adoption:** A significant amount of SLCP emissions originate in Asia. In developing countries, including some in Asia, drivers for action are more basic – e.g., food, clean water, etc. In many cases technology for improved livelihoods and environmental protection exists, but the incentives and/or institutional mechanisms may be missing. Simple, targeted messages for action at the local level will be needed to combine action on these basic development/standard of living issues with mitigation of SLCPs.

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Identified key issues for making a successful approach to SLCP reduction within the context of mitigating air pollution and climate change

- **Reduce the complexity of the topic and link it to familiar issues:** SLCP impacts and mitigation priorities span diverse sectors and scales. Breaking down the level of complexity will help to make the issue tangible and some of the trade-offs intelligible to a wider public. Creating perspectives that integrate the SLCP problem into familiar contexts, e.g., rural development or climate change can make it more accessible to policy makers.
- **Create a combination of top down, bottom up, technological and non-technological approaches:** Emissions of SLCPs are tied to both system driven activities and individual choices, but most importantly to the interaction of the two. The presentations made from diverse policy perspectives highlighted the extent to which emissions production is entangled with choices made on the basis of other non-climate and non-environmental goals. Effective response thus requires a combination of structural, i.e. system changing and technology-based changes. Individual actions will also matter as they can trigger changes in habits among a larger fraction of the population.
- **Integrating SLCP reduction measures across sectors and across issues of concern:** The emissions of SLCPs are not a standalone issue but rather linked to a variety of sectors. When approaching the problem from the SLCP perspective it is important to identify the connection to other sectors and to find solutions with them jointly without distracting attention. For example, waste management is not only an issue of avoiding methane emissions but has rather to do with hygiene, avoiding open waste burning, resource management etc. The integrated approach is important not only in practice but also in science that often tends to separate out issues.
- **Involve those who have the knowledge:** In order to understand the interconnected systems that lead to SLCP emissions engaging stakeholder and local authority is inevitable as their knowledge needs to be combined with scientific understanding to develop appropriate solutions.
- **Sector-based versus thematic approaches:** Most development initiatives and local authority structures are sector based (e.g., waste management, waste water treatment, traffic, construction etc.) in both the industrialized and in the developing world. The framing of the SLCP issue is different as it targets a specific problem that is part of many different sectors. For concrete mitigation action planning the specific approach needs to be evaluated according to local structures.
- **Educating tomorrow's leadership:** Reducing emissions of SLCP requires integrated perspectives across a variety of sectors. Educating future leadership generations to naturally consider integrated approaches will help to find more sustainable solutions and to create both infrastructure and political structures accordingly.

Ideas and Recommendation for Actions

IG-WG members developed a range of project ideas before the meeting, and the second day's session focused on identifying points of common interest as well as potential gaps to be filled in the broader SLCP policy and research field. The below recommendations mirror the missing key points of action within the SLCP context from the perspective of the workshop participants and are also intended to be considered by other SLCP related initiatives.

Knowledge Brokering: Providing and Producing Targeted Group Oriented Information

Mitigating SLCPs across sectors and across scales, from local to global level, requires the involvement of many different actors. More than a decade of scientific research and recently published reports have provided the informational basis to prioritize mitigation efforts. However, many of the available data are neither tailored to the needs of the wide range of audiences and actors nor to the needs of those who would need to contribute to mitigation strategies. This means that the information relevant for understanding the costs and benefits of action from the perspectives of those whose actions are essential needs to be developed. We also need to develop ways to track effectiveness of efforts. In short, translation between the currently available macro level to the micro level where action takes place is needed. Innovative concepts that go beyond the production of standard informational material are required. Especially for policy makers the communication needs to be more compelling showing concrete links to the costs and benefits that shape their decisions. Hence, complementary perspectives from other related policy areas other than air pollution, climate change and food security on the SLCP problem need to be elaborated, e.g., rural development and urban planning, energy supply etc. At the same time as designing information for stakeholders and decision-makers based on existing data it is important to derive targeted research questions from policy making through establishing multi-way dialogues between science, policy and society.

Platforms for Stakeholder Relationships and Networking

Due to the cross-sectoral nature of SLCP emissions there is a diverse community of stakeholders at local, regional and global level. To approach the SLCP problem sustainably, two factors appear to be important:

(1) Fostering constructive relationships between stakeholders, their networks and decision-makers can lead to the co-design of multilaterally supported solutions. Involving stakeholders in the process is often not explored to its full potential. Creating relationships between different stakeholder communities which under "traditional circumstances" would not emerge can result in the creation of innovative and practical solutions to a common problem. Next to the task of brokering improved relationships, emphasis should also be put on the continuous involvement of stakeholders in the process to keep their efforts linked to the overall strategy as well as the resulting benefits connected to the stakeholders.

(2) Gaining knowledge on how stakeholder networks function, and how and why they interact will help steer the solution design process. And similarly, understanding the way decisions are made and the associated underlying assumptions and narratives will provide keys to elaborate a common strategy across sectors. Such analysis will also serve to judge whether the right drivers are in place to move the process forward sustainably.

Missing pieces to evaluate the highlighted co-benefits

Co-benefits in the sectors of public health, agriculture and climate change are highlighted as cost-effective assets of SLCPs mitigation. These co-benefits have been evaluated by integrated assessment models on a global scale using a variety of success indicators. However, metrics for evaluating actual effectiveness of mitigation strategies have yet to be designed. Such metrics would not only serve the purpose of evaluation, but also play a key role in framing the dialogue around SLCP mitigation for the non-science community, and help shaping future governance schemes. At the same time, tested and established metrics will support the process of folding the idea of realizing co-benefits into current legal frameworks which do not commonly take an integrative approach to air pollution, public health and climate change or other sectors. However, when it comes to designing integrated metrics it will be important to avoid mistakes that have been made in comparable contexts. The establishment of CO_2 equivalents, for example, is sometimes viewed as responsible for an over-emphasis on reduction of climate warming agents other than CO_2.

Hence, designing and standardizing metrics carefully will help broaden the narrow focus of SLCPs to a wider spectrum of emission related problems that are currently being tackled such as CO_2 for climate or ammonia for eutrophication. This approach will also have the advantage that the SLCP framing or labeling becomes implicit while their reduction is inherent. Often at the level of concrete action, SLCPs are not the main problem or driver for change but part of it. Such integration will link SLCPs to other problems resulting in simultaneous instead of separated treatment.

Outlook of the IG-WG's work plan in 2013

Based on the issues discussed during the workshop and the initial project proposals, the IG-WG decided to structure their work in the following manner: The WG will carry out an umbrella project focused on the development and stress testing of integrated metrics for air pollution and climate change in collaboration with partners from science and practice. The IG-WG thereby intends to bridge the gap between a scientifically derived metric output and its application in practice facilitating iterative information exchange and feedback in both directions. Policy relevant information will be generated out of this process. This umbrella project is intended to link closely to and follow up with the recent IGAC activities of formulating an integrated strategy for SLCP mitigation. In addition to the umbrella project, a series of working papers will be produced related to this main focal area and tailored to the expertise of the WG members.