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Multilateral Environmental Agreements on the Ground – Lessons from Supporting Implementation of the Montreal Protocol

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ACRONYMS AND ABBREVIATIONS

CFC	Chlorofluorocarbons
CTC	Carbon tetrachloride
EFTA	European Free Trade Association
EU	European Union
ExCom	Executive Committee of the Multilateral Fund
HCFC	Hydrochlorofluorocarbons
HFC	Hydrofluorocarbons
MEA	Multilateral Environmental Agreement
MLF	Multilateral Fund
MP	Montreal Protocol
ODS	Ozone Depleting Substances
OLP	Swedish Ozone Layer Protection Programme
SA	South Asia
SAICM	Strategic Approach to International Chemicals Management
SEAP	South East Asia and the Pacific
SEI	Stockholm Environment Institute
Sida	Swedish International Development Cooperation Agency
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organisation
USD	United States Dollars
WB	World Bank

Summary

The growing realisation that environmental challenges need global responses has led to an increasing number of Multilateral Environmental Agreements (MEAs). Their implementation at the national level often meets significant challenges, especially in countries with weak governance structures and poor institutional capacity. The purpose of this report is to take a closer look at a number of national implementation issues, by taking stock of and discussing the experiences we have made from 1999 to 2006 within a Swedish-supported bilateral programme under the Montreal Protocol, which regulates the phase-out of production and consumption of ozone depleting substances (ODS), the so-called Swedish Ozone Layer Protection programme (OLP).

The report concludes that the OLP experience has confirmed that governance aspects of MEAs such as country ownership, capacity building and stakeholder participation are critical to their successful implementation at the national level. The importance of *country ownership* in the Montreal Protocol implementation can hardly be overestimated. The OLP has found that through conscious efforts, both the locus of initiative and consensus building can be strengthened, thereby increasing the country ownership. *Capacity building* within the respective countries is an effective route towards sustained implementation in the long run. The report notes that capacity building is time consuming in the short run, and therefore demands extra resources also on behalf of the implementing agencies. *Stakeholder participation* has been integral to effective implementation of the Montreal Protocol. The OLP aimed for early involvement of industry stakeholders, for example in meetings with the national ozone units. It was found that a long project planning phase is also more likely to secure full participation of stakeholders during later phases.

Clearly, a shift towards country ownership, capacity building and stakeholder involvement as core aspects of MEA implementation support would appear as something of a paradigm shift within international and national agencies, which cannot be quickly imposed. However, a number of direct changes can be achieved through organisational and procedural measures.

First, the national units responsible for implementing and reporting on MEAs need to be given *high status in the government organisation* and a clear role and mandate. This facilitates long-term country ownership, and reinforces the incentives of policy officers to secure sustainable changes.

Second, the *procedures of policy coordination* between ministries and agencies affected – also those indirectly affected – by the implementation must be enhanced. This establishes participation of the various interests and policy sectors which is required to enable the development of a coherent institutional and legal framework within which implementation can proceed.

Third, the *formal and informal incentive structures* for desk officers need reforming – in both implementing agencies and national authorities. Today, administrative success is normally measured in terms of the number and volume of projects and investments made, with little evaluation concerning the long term sustainability or real outcome and impact of the projects.

Introduction

The growing realisation that environmental challenges need global responses has led to an increasing number of Multilateral Environmental Agreements (MEAs), for example the Kyoto Protocol under the UN Framework Convention on Climate Change, the Montreal Protocol for the protection of the Ozone layer, the Stockholm Convention for the phase out of certain chemicals and the Basel Convention on trade of hazardous substances. These agreements address international concerns but rely on national implementation to become effective (Figure 1). The implementation at the national level often meets significant challenges, especially in countries with weak governance structures and poor institutional capacity. Yet, practical implementation "on the ground" is often ignored or overlooked in policy analysis addressing MEAs. The purpose of this report is to look at and discuss a number of national implementation issues arising in MEAs, by taking stock of and discussing the experiences we have made from 1999 to 2006 within a Swedish-supported bilateral programme under the Montreal Protocol, which regulates the phase-out of production and consumption of ozone depleting substances (ODS), the so-called Swedish Ozone Layer Protection programme (OLP).

Sweden has assisted developing countries and countries with economies in transition (also referred to as Article 5 countries) in their national implementation of the Montreal Protocol since 1997. During the period 1999 up to 2008, the Stockholm Environment Institute (SEI) has been contracted to manage the Swedish bilateral programme on behalf of the Swedish International Development Cooperation Agency (Sida). The OLP supported the implementation of the Montreal Protocol in e.g. the Philippines, Croatia, Serbia-Montenegro and Romania (see Annex 1 for the full list of projects). Furthermore, it initiated network projects to support regional cooperation. The phase-out of ODS under the Montreal Protocol is controlled by gradually decreasing production and import of the regulated substances. However, the consequences for society of the reduced availability of these substances vary greatly depending on the measures also taken to reduce the demand of ODS. A strategy focusing only on decreasing the supply may turn out to be very costly. Therefore, an important focus of the OLP was to assist implementation on the demand side, in particular concerning the activities of the small companies and other stakeholders in the refrigeration servicing sector. This demand-side aspect of implementation is, due to the larger number

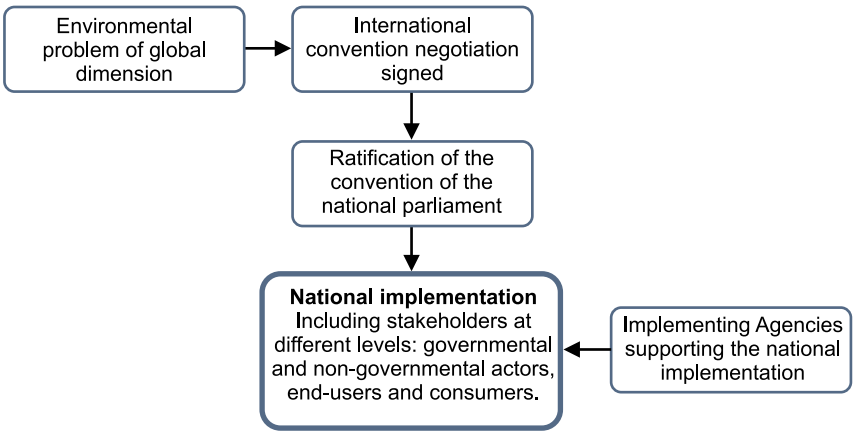

Figure 1. National Implementation of Multilateral Environmental Agreements

of stakeholders, a complex undertaking that requires stakeholder participation and capacity building to function.

The approach adopted for the projects in the OLP was to a large extent based on the experience of the Montreal Protocol implementation in the Nordic countries in the 1980s and 1990s. The main feature of the successful Nordic implementation was that it was built upon close networking between the Nordic countries and carried out in cooperation with the refrigeration sector. An early engagement of the key economic stakeholders in the decision-making process concerning how the phase-out was going to be carried out in practice promoted a strong stakeholder ownership and sustained effectiveness in the implementation of the Montreal requirements (cf. Vedung, 2005).

This Nordic approach to implementing the Montreal Protocol mirrors a broader trend in public policy: the shift from hierarchy and regulation "top-down" to governance "bottom-up" including collaborative arrangements between private and public stakeholders (Lundqvist, 2001). In particular in relation to policy implementation, advocacy for more bottom-up approaches has been on-going since the 1970s (see Hjern, 1982). According to this governance approach, stakeholder involvement in policy implementation is not only a democratic imperative but a way of ensuring both higher implementation effectiveness and increased sustainability of the measures taken. It has also been seen as a general tendency in Western society that an increasing number of organisations (private companies, governmental institutions, NGOs etc) are forming networks of interdependent but relatively autonomous entities where decisions and important influences do not necessarily come from the top (de Bruijn and ten Heuvelhof, 2000).

Whether or not there is in reality a major shift towards bottom-up governance in public policy, the interest in the approaches associated with such a shift is evident at all levels of society. At the global level, in arenas of international agreements and conventions, we witness a trend towards "softer" and more governance-oriented measures emphasizing procedure rather than outcome. For new conventions, these factors are becoming more and more central in the goal formulation. For example, the new Strategic Approach to International Chemicals Management (SAICM) proposes assessment frameworks and working procedures rather than hard and legally binding targets for the management of chemicals. At the national level, "novel" national policy instruments such as voluntary agreements, public-private partnerships, labelling schemes and various forms of market-based instruments are becoming increasingly important in the policy mix relative to traditional regulation (Jordan et al., 2003). At the EU level, an important initiative for European integration, known as the Open Method of Coordination, relies on instruments such as guidelines and indicators, peer review, sharing of best practice, benchmarking of national progress towards common European objectives and organised mutual learning, without the involvement of legally binding directives and sanctions.

All these approaches, which focus on procedure rather than hard targets, have in common that in order to function effectively they need strong ownership and capacity of stakeholders to participate in both policy formation and implementation processes. This report explores three dimensions: country ownership, stakeholder participation and capacity building; as the key issues of implementation and will discuss them in separate sections. However, we recognise that they are strongly interlinked, something that will come through very clearly in the discussion. They also suffer from some conceptual confusion. For instance, there is no established definition of country ownership and the term is sometimes used synonymously with broad-based participation. However, although participation is an important component it does not cover the full meaning of country ownership. Many times, concepts of country ownership embrace capacity building and involvement of stakeholders. For instance, in a survey of 118 national ozone units carried out in 2000, Rasmussen *et al.* (2001) concluded that there are five major components needed to take into account when aiming at strengthening the ownership of the country in the Montreal Protocol implementation: the status and the mandate of the national ozone unit;

institutional strengthening; the engagement and networking of the stakeholders; domestic and international information flow; and regional coordination and cooperation.

The three dimensions explored in the report are discussed based on experiences made within the OLP with the following questions as starting point:

- What approach to implementation has been taken in the OLP?
- Which institutional and political obstacles did the OLP encounter at the national level?
- Which lessons from these OLP experiences may be of importance for the national implementation of other MEAs?

This report is written for administrators and policy analysts concerned with the implementation of the Montreal Protocol, both within implementing agencies and governments as well as supporting knowledge organisations. The report may also be of interest to those concerned with implementing other MEAs, in particular MEAs that rely on involvement of large numbers of stakeholders. These include, for instance, the Stockholm Convention on Persistent Organic Pollutants, the newly adopted "Strategic Approach to International Chemicals Management" (SAICM) and, potentially, the Kyoto Protocol under the UNFCCC. Finally, policy makers tasked with designing new MEAs may also be interested in the findings.

The next section gives an introduction to the Montreal Protocol and its implementation challenges. It will outline how they have been addressed over the years of the OLP. Thereafter the report discusses experiences in three sections covering the three main themes; country ownership, capacity building and stakeholder participation, and what problems, issues and constraints emerged. The penultimate chapter discusses what lessons can be learned to inform the national implementation process of other MEAs. Finally, some generic conclusions and brief recommendations are given.

The Swedish bilateral programme under the Montreal Protocol

THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

The Montreal Protocol entered into force on January 1st 1989. To date, 191 countries have ratified the protocol. It was amended several times up to 1999, strengthening the phase-out requirements and adding new ozone depleting substances (ODS) to be controlled (see Box 1). The substances controlled by the protocol include chlorofluorocarbons (CFCs), hydrochlorofluorocarbons (HCFCs), methyl bromide, carbon tetrachloride and halons.

Box 1: Depletion of stratospheric ozone

The stratospheric ozone layer which surrounds the planet acts as a protective filter preventing harmful UV-rays from the sun from reaching us. In 1970s it was discovered that emissions of certain man-made chemical substances deplete the ozone layer. As more UV radiation reaches the Earth this would increase the number of cases of skin cancer, cataracts and blindness, suppress the human immune system, and harm plankton and crops. In 1985, scientists discovered severe depletion of the ozone layer over Antarctica. The international community therefore agreed, in the "Montreal Protocol on Substances That Deplete the Ozone Layer" in 1987, to phase out the production and consumption of ozone depleting substances (ODS).

The Montreal Protocol set a time table with percentage reductions and phase-out dates for each type of ODS. These are more stringent for developed countries than for the roughly 140 developing countries and countries with economies in transition (Article 5 countries, see Table 1). Today most of the remaining CFC imports are used as refrigerants for servicing of installed refrigeration and air-conditioning equipment[1]. It should be noted that although the Montreal Protocol is generally considered to have been successful, the developing countries have just only reached the final stages of the phase-out. Illegal trade with ODS is an increasing concern in some regions. Furthermore, some common alternatives to CFCs such as HCFCs and hydrofluorocarbons (HFCs) are greenhouse gases. For HCFCs, the current final phase-out date for the consumption is currently as far as 1 January 2030 for the developed countries.

In 1996 developing countries consumed approximately 10% of the amounts of ODS used in developed countries and their contribution to the problem was thus relatively small. The Parties to the Montreal Protocol agreed to assist the Article 5 countries in meeting their commitments under the Protocol and set up a Multilateral Fund (MLF), based on annual contributions from the developed countries. The MLF allows for up to 20% of a country's contribution to be used for bilateral cooperation, provided that the projects are approved by the Fund. It is also stated that such cooperation shall provide additional resources to the projects compared to a situation without bilateral involvement. The MLF is governed by an Executive Committee (ExCom) with 14 members from both developed and developing countries. Sweden is part of the so called EFTA constituency including also Finland, Austria, Switzerland, Norway and Iceland. Within the constituency the countries rotate the membership of the ExCom. The multilateral assistance is delivered primarily through four implementing agencies: United Nation Environment Programme (UNEP); United Nations Development Programme (UNDP); United Nations Industrial Development Organization (UNIDO); and the World Bank (WB), but also through bilateral agencies such as Sweden's Sida.

When the MLF was set up in 1991, there was a strong focus on investment projects, such as providing new equipment for industries. The first *non*-investment projects to phase out the use of CFCs in the refrigeration servicing sector were projects for the training of service technicians on the recovery and recycling of CFC refrigerants instead of venting to the atmosphere. In 1997 these stand-alone projects were replaced by refrigerant management plans aimed at developing more

1 Refrigerants are chemicals used in fridges and in air-conditioning systems. With time these systems may leak some of the refrigerants, or the refrigerants may become contaminated and need replacement. Adding more refrigerant is then necessary for the functioning of the system. This is part of what is referred to as "servicing" of equipment.

Table 1: Phase-out dates for Article 5 countries

The Montreal Protocol phase-out schedule for CFCs and HCFCs for developing countries*

Year	Control measures
1 July 1999	Freeze of Annex A** CFCs at 1995-1997 average levels.
1 January 2003	Annex B** CFCs reduced by 20% from 1998-2000 average consumption.
1 January 2005	Annex A CFCs reduced by 50% from 1995-1997 average levels.
1 January 2007	Annex A CFCs reduced by 85% from 1995-1997 average levels. Annex B CFCs reduced by 85% from 1998-2000 average consumption.
1 January 2010	CFCs (Annex A and B) phased out.
1 January 2016	Freeze of HCFCs at the 2015 consumption.
1 January 2040	HCFC consumption phased out.

* The Montreal Protocol regulates many other substances as well (96 in total).

** The CFCs are divided into two groups called Annex A and Annex B. Annex A includes all the common types of CFCs: CFC 11, 12, 113, 114 and 115. The CFCs included in Annex B are seldom in commercial use and only in small quantities.

comprehensive strategies to manage the use and phase-out of CFCs in the servicing sector. The change of policy within the MLF in this direction took time, and from the beginning very little funding was made available for the overall strategies or refrigerant management plans, which reduced the effect of the new strategy, until additional resources for the planning were allocated (ExCom decision 31/48 from July 2000).

Many Article 5 countries have had difficulties in setting aside sufficient resources in terms of personnel for implementing the projects approved under the MLF. This realization led to the ExCom deciding to support the establishment of a national ozone unit (see Figure 2) in all Article 5 countries, covering salaries and basic office support for staff to work with the national implementation of the Montreal Protocol. Another important shift in emphasis from stand-alone projects to comprehensive national phase-out strategies came in 2001 when multi-year agreements were introduced, so-called national phase-out plans and terminal phase-out management plans. A national phase-out plan is generally applied to countries with higher consumption of CFCs and with consumption in both the manufacturing and the servicing sector. Like the refrigerant management plans, most terminal phase-out management plans are carried out in low-volume consuming countries with consumption mainly in the servicing sector. Unlike the refrigerant management plans, the terminal phase-out management plans aim to reach the 100% phase-out target. Under a national phase-out plan or terminal phase-out management plan a country receives funding for a full phase-out of CFC consumption on the understanding that no further funding will be requested. Both types of plans demand a series of coordinated policy and regulatory measures, investment activities, and technical assistance components. The national phase-out plans and terminal phase-out management plans also include support for a phase-out project management unit as a mechanism for enhancing project stewardship, self monitoring and evaluation, and clear assignment of responsibilities and accountabilities.

THE SWEDISH BILATERAL PROGRAMME (OLP)

The Swedish Government decided in 1997 to provide direct bilateral assistance to developing countries through the Swedish Ozone Layer Protection programme (OLP) using the bilateral window of the MLF. As mentioned earlier, the OLP built on the experiences made among authorities and

enterprises during the Swedish phase-out process. Sweden began to phase out ODSs in the 1980s and by 1995 most of these chemicals had been substituted (SEPA, 1995). The relatively smooth phase-out was partly related to the economic incentives for the industrial actors to innovate and find new markets. However, the cooperation both between the Nordic countries and at the national level between the key stakeholders including authorities in charge, industry, research and development institutions was a key factor for the successful phase-out.

Between 1997 and 1999 Sida coordinated the OLP. In 1999, the Stockholm Environment Institute (SEI) was contracted to take over the coordination. The approved projects were funded from the Swedish contribution to the MLF, within the 20% bilateral window that comprised around 360 000 - 450 000 USD per year. The overall objective of the OLP was to "support the process in developing countries in areas of critical importance for a sustainable and cost-efficient phase-out of ozone depleting substances". The areas prioritized for support were the development of legislation and procedures to control and monitor the ODS consumption, control and phase-out the use of ODS refrigerants in service and maintenance of air-conditioning and refrigeration, and to tackle the emerging use of transitional alternatives such as HCFCs. A key aim of the program was also to "enable the countries' or regions' own capacity" (Sida, 1997).

The OLP encompassed 15 projects approved by the ExCom for funding from the Swedish bilateral window. These 15 projects included terminal phase-out management plans and national phase-out plans as well as regional projects, workshops and a handbook on CFC phase-out strategies for the refrigeration servicing sector. The projects are listed in Annex A and detailed information is available in a recent SEI report (SEI, 2006).

In the next sections we will analyse and discuss the experiences from the OLP projects in relation to the three categories of implementation governance mentioned earlier: country ownership, capacity building and stakeholder participation.

Country ownership of the implementation process

Country ownership has become a leading term in development cooperation over the last decade, from the World Bank's Poverty Reduction Strategy Papers and Comprehensive Development Framework with their shift from donor-led to country-driven development strategies; to bilateral agencies' increasing emphasis on country-driven sector programmes and budget support. In the context of countries as loan receivers from the World Bank, Johnson and Wasty (1993) define four dimensions of country ownership. Each dimension has four levels reflecting the intensity of ownership, making a rating possible. The dimensions are: "locus of initiative, level of intellectual conviction among key policymakers, expression of political will by top leadership and efforts toward consensus-building among various constituencies". Using these dimensions and rating, Johnson and Wasty found that ownership was strongly predictive of overall programme success. Of the four dimensions of Johnson and Wasty, locus of initiative and efforts towards consensus-building are of particular interest to implementing agencies. The second and third dimensions covering the level of conviction among policymakers and the expression of political will by the country leadership are equally important and prerequisites for starting the projects, but fall partly outside of the domain of the implementation assistance.

Following the trend towards increased country ownership, the MLF has during the last 15 years changed its focus to give more emphasis to country ownership of the whole phase-out strategy, and less on project by project implementation by implementing agencies. The main reason for this change was that the implemented projects did not result in the expected phase-out (UNEP, 2005a). Good performance of the phase-out was linked with countries being involved in drafting the country programme, as opposed to just giving comments to a programme written by an external consultant (Rasmusson *et al.*, 2001). However, the difficulties in creating true country ownership may have been underestimated. Creating the new programme focus was an important step, but did not automatically change the implementation practices of the countries and the implementing agencies. It appeared that institutionalised behaviours and structures formed resistance to the new approach.

As mentioned above, all Article 5 countries receive financial support to hire a national ozone unit at the appropriate ministry (Figure 2). The

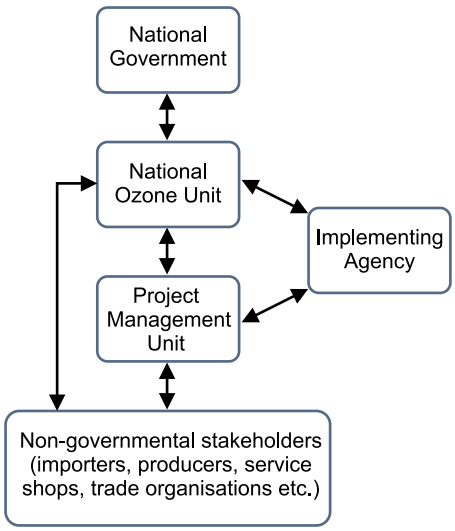

Figure 2: Organisation of the Montreal Protocol implementation at the national level

national ozone unit is a key function intended to strengthen the locus of initiative with the national government for the Montreal Protocol implementation. Within the OLP, SEI has had projects in seven countries in collaboration with their respective national ozone units. Their working situation varies significantly. In spite of being financed through the MLF, many national ozone units are overburdened with responsibilities apart from the Montreal Protocol issues, such as the implementation of other MEAs (see also UNEP 2003). This has been a factor contributing to implementation delays in many of the projects.

There was a noticeable difference for the implementation depending on the position of the national ozone unit within the ministry. In general, a unit in a lower position within the government hierarchy would be less burdened by other duties, whereas a unit in a higher position would have stronger political clout to make things happen. Also acknowledging this, the ExCom urged all countries with projects under the MLF to ensure an appropriate position and mandate of the national ozone unit. It further outlined the responsibility of the implementing agencies to ensure that the national ozone unit is fully involved in the project implementation (UNEP/OzL.Pro/ExCom/30/41, Decision 30/7). It should be noted that the creation of a national ozone unit may actually diminish the country ownership if the unit has a poor position within the national administration and if at the same time the implementing agency is in practice responsible for the strategic decisions of the project to be implemented.

In most cases, SEI experienced that the national ozone unit rather than taking the lead, took for granted that the implementing agencies would serve the ministry and guide the whole implementation process. This attitude became institutionalised also in the implementing agencies, who often found it more convenient to draft strategically important documents themselves, rather than wait for the national ozone unit to do it. This was efficient in the short term, but also caused a long-term loss in ownership on behalf of the national ozone unit in charge of the process.

In 1992, a Swedish Government official working at the UNEP office in Bangkok initiated the idea of using the Nordic experience of networking between countries as a support for the phase-out work in Article 5 countries. This led to the first regional network of national ozone units in South East Asia and the Pacific (SEAP/AP), funded by Sida and implemented by UNEP. One idea behind this initiative was that improved connections between national ozone units in neighbouring countries would improve the work situation at the national level through the sharing of information and exchange of experiences and hence lead to increased effectiveness in the national phase-out work. UNEP supported in the efforts to start the network initiative. The networks have become an important component in the phase-out process under the Montreal protocol and today there are in total 9 networks among the Article 5 countries funded by the MLF, apart from the SEAP/AP network that Sweden has funded bilaterally since 1992.

Ownership also relates to how agencies evaluate success. The MLF evaluates the implementing agencies' performance by the timely execution of the projects, rather than by actual results or outcomes achieved. Although changes to procedure at the national level can be equally or more important successes than actual outputs or number of projects, these are not accounted for in evaluations. A complicating factor is that the MLF policies have resulted in the implementing agencies sometimes competing for new projects. As a consequence of this, many implementing agencies have delivered projects according to standard formats and without requesting much involvement of the authority in the developing country. Many national ozone units have perceived this as a sign of high-performance and a practical solution. As a result, too little time is given in the projects for achieving country ownership. Thus, factors both within national authorities and within the implementing agencies in the form of established working cultures and incentive systems are working against a change to work procedures that would allow for reinforced country ownership and national control of the strategic choices in the implementation.

Another component of interest is the establishment of a project management unit (See Figure 2). This unit is tasked with certain parts of the coordination of the national

implementation. This is in addition to the national ozone unit which has the overall responsibility for activities under the Montreal Protocol. The project management unit may – if set up correctly – be a means to increase the country ownership by strengthening the national ozone unit. It may also be a way to increase the distance between the national ozone unit and the project implementation in case the links between the project management unit and the implementing agency is closer than the integration of the project management unit with the national ozone unit and the government. In this case, the set up of a project management unit will decrease the country ownership in the same way as explained above for the national ozone unit.

OLP has had four projects that included establishing a project management unit. In the first country, it was established at the ministerial level, within the office of the national ozone unit. This group constituted an efficient counterpart for the implementing agencies and the various consultants involved in the project. Its location at the ministry meant that the national ozone unit had day-to-day feed back from the projects included in the national phase-out plan and thus insight in the implementation process which strengthened the country ownership. One of the other countries, on the other hand, chose to place the project management unit within a consultancy firm. This arrangement decreased the control from the ministry of the project, and made it more difficult for the national ozone unit and the Ministry of Environment to be in charge of the activities. Furthermore, a consultancy firm performs the services specified in a contract, but is normally not interested in supplying additional or other services as needs arise. This meant that there had to be detailed planning of the activities from the start of the project when the consultancy firm was hired, and there was little space for flexibility in the activities as the projects progressed. Following these experiences, the OLP's recommendation in later projects was always to establish the project management unit at the ministerial level.

Lack of country ownership at policy level tends to lead to inadequate institutional and legal frameworks for practical implementation. Reports of completed MLF projects usually point to successful implementation in distributing equipment and giving training. However, the OLP experienced that even if the activities were delivered, the actual outcomes were often very limited. In one country, a number of phase-out projects had been previously implemented. It soon became clear that several of these projects did not work in practice. One project had distributed equipment to about 60 service technicians but since there was no institutional structure in place to support the use of this equipment, almost all technicians handed back or even sold the equipment. Nonetheless, according to the formal project reporting the project had been successfully completed.

When the OLP started working in one of the other countries it became apparent that earlier projects in the servicing sector had not had the anticipated impact although reported as successfully completed. Most of the companies that had received training and equipment did not use the equipment. They lacked incentives to use the recovery equipment since there was no supportive legislation or infrastructure to handle recovered material. Furthermore, there had been no training in handling the alternative refrigerants. This seriously compromised the effectiveness of the measures taken. A third example was a country in which, before the implementation of the phase out project, most technicians did not practice recovery of used refrigerants on a regular basis even though trained and equipped for this practice (instead the refrigerants were let out and emitted to the atmosphere). The main obstacles were uncertainties in the legislation and no legal provisions in place concerning the responsibility for the re-use system of old refrigerants.

Both the degree of consensus building and more specifically the coordination across ministries and authorities for issues relating to Montreal Protocol varied among the countries. Many OLP projects suffered from a lack of coordination of different measures and activities. Part of this problem is the lack of coordination between different ministries when there are project components that fall within the domain of additional ministries or authorities. For example, in one country the new legislation on ODS led to a contradiction

with existing legislation on waste. This resulted in companies being forced to break one set of rules in order to follow the other. This situation was later resolved but could have been prevented with a higher degree of coordination between ministries.

These cases are all examples of a lack of coordination of project components and a weak dimension of consensus building within the authorities in the implementation process. Apart from being an obstacle to successful implementation in itself, this lack of coordination also reduces the national control of the overall strategic direction of the implementation process.

To sum up, the OLP experience points to the following conclusions regarding country ownership. In order to strengthen the locus of initiative, the position and mandate given to the national ozone unit is of high importance, as are the working culture of the implementing agencies and the incentive structures of the agencies and the MLF. A functioning national ozone unit at the appropriate level in the government hierarchy, without outsourcing the project management unit, can increase the country ownership significantly by strengthening the locus of initiative within the government. Concerning consensus–building and national coordination, implementing agencies must always consider how the implementation process could be strengthened by the involvement of other authorities and ministries apart from the ministry responsible. Improving the overall policy coordination between different strands in the national government is a fundamental aspect of building country ownership.

Capacity building

Capacity is a multidimensional concept involving both the functions that organisations have, their competence or ability to perform these functions, and the resources (human, technical and financial) as well as supporting structures (Bhagavan and Virgin, 2004). Furthermore, building of capacity may be directed to different levels. Three levels are often distinguished: human resources (micro-level capacity), the organisational structures (meso-level capacities) and the legal and administrative context (macro-level capacities) (Nilsson et al 2006; Forss, 2001).

The need for capacity building for implementation in developing countries is constantly stressed in international fora such as UNEP (e.g. as expressed in the Bali Strategic Plan for Technology Support and Capacity-building). Long-term capacity building is crucial, not only for the Montreal Protocol implementation, but also for the national-level implementation of other MEAs. Capacity building is also closely linked to enhanced country ownership. Still in most cases of actual MEA implementation, capacity building is lagging behind and is not always a priority (VanDeveer and Dabelko 2001). This section will discuss some experiences of capacity building in the OLP.

At the start of the MLF, capacity building components were not in focus. Over time they have become more recognised, which has only highlighted the constraints caused from not knowing how to create capacity as part of the implementation process. The OLP put a clear emphasis on building the countries' or regions' own capacity as an important component in ensuring sustainability of the measures also after the project ended. The OLP projects included capacity building at all levels. At the micro level there was training of service technicians. This was normally carried out as one or two day courses. With these components, the OLP emphasized upgrading of regular training institutes or vocational schools for service technicians, instead of making special training arrangements for the ODS phase-out projects. But also the more informal or indirect capacity building of those involved at national level in the programme implementation was seen as important. This capacity building took place within the group of people involved in the project implementation, the national stakeholders and the implementing agencies. Including capacity building as one of the aims of the interaction during the implementation process may be more demanding and time-consuming than just providing rapid advice. Such capacity enforcement can however reap substantial benefits.

Capacity building at the meso level included components for well functioning infrastructure for reclamation of ODS and the set-up of stakeholder work groups. Macro level capacity building included components of licensing systems and the development of the legal framework.

In the past, the national ozone unit often did not have long-term capacity building for their own staff as a main objective. As previously mentioned, the number of projects approved for the country could be seen as more important than actually making sure that the approved and implemented projects were effective. Furthermore, in many cases there were frequent changes of personnel within the national ozone unit, limiting the capacity building effects at this position. For example, in one country where there were OLP plans to work with the solvent sector, the country made it clear that they had no interest in meeting Swedish technical experts during a mission. The national ozone unit explained that they had no knowledge about the solvent sector and hence would have nothing to offer the consultants. It was clear that they had expected a ready-made product without the involvement of the authorities. This project was not realized.

Effective capacity building efforts to promote the phase-out of ODS has also occurred at the regional scale. The OLP network projects in South East Asia and the Pacific (SEAP) and South Asia (SA) were set up to improve regional cooperation thereby improving the institutional frame for cooperation between countries. The regional network of national ozone units in SEAP was initiated as a

Swedish pilot project in 1992 and was funded separately by Sida. Based on the positive SEAP experiences eight other networks have subsequently been initiated with funding from the MLF and all Article 5 countries are now part of a regional network. In 2001 the OLP initiated a project together with UNEP for customs officers and national ozone units in the SEAP region to meet regularly to exchange information and experiences on the monitoring and control of ODS and also to discuss common strategies for the issue of illegal trade of ODS. It was extended to include the SA region in 2003. The underlying idea is that experiences gained in one country in the region can be learned from to help abate crime in the others. It is likely that illegal actors are active in more than one country in the region and that smugglers use similar methods. Countries can compare their records of import and export to see if the names of importing and exporting entities registered match up. In addition, the tracking of shipments in the region is facilitated if the customs authorities in the various countries have regular contact with each other.

The OLP project on regional networking between ozone and customs officers was pioneering and has proved to be an effective method for curbing illegal trade. The preparedness in the SEAP/SA region thanks to this project was recognized by an MLF-funded evaluation of customs officers' training and licensing system projects conducted during 2005 (UNEP, 2005b). In this evaluation, the project on customs cooperation is pointed out as an effective approach to preventing illegal trade.

In the OLP projects it has been possible to pursue complementary capacity building activities through the Sida contribution to the implementation process beyond the project funds from the MLF. This has enabled informal capacity building achieved through close cooperation with the national ozone units and other stakeholders. It is a time consuming approach in the short run, but appears more efficient and sustainable in a longer perspective.

Stakeholder participation

The past decade has witnessed a growing recognition worldwide of the legitimate interest and meaningful participation of different stakeholders in policy formation and implementation. The relative benefits of stakeholder participation are manifold: the participation process helps define the problem areas, needs and concerns; it provides insights into preferences and acceptability of policy measures and policy change; it helps to generate trust, empowerment and learning among the stakeholders; and it provides decision makers with relevant information and expertise related to defined issues.

From a regulator's perspective, involving the industry or other stakeholders in the implementation of MEAs can have several important advantages. These include legitimating policy and regulations, serving as means for quality assurance, promoting mutual learning and local awareness of and commitment to the matters of concern. However, there are also drawbacks in that these exercises are time-consuming and resource-demanding and that it is problematic to include diverse and sometimes contrasting perspectives under a coherent policy framework. Furthermore, there is always a risk of so-called "regulatory capture"; that a too close cooperation with the private sector or other non-governmental actors may result in an undue influence of their specific interests on the government policies. This risk has to be considered case by case. We argue that in the projects implemented in the refrigeration servicing sector under the Montreal Protocol, with daunting enforcement difficulties and a large number of actors, the advantages of stakeholder involvement tend to outweigh the drawbacks. As discussed earlier stakeholder engagement is also an important component in building country ownership.

The Nordic experience was that developing regulations in cooperation with the industry was a key factor for achieving successful phase-out of ODS. It is necessary to get acceptance from the industry that the measures are good or at least fair, especially when addressing small and medium sized companies, since the enforcement of regulations otherwise will be almost impossible. The change of refrigerants affects large part of the community. Therefore, if the phase-out plan is to be effective, the phase-out strategy relies on understanding, support and assistance of those who need to be involved in the implementation.

Building on the Nordic model the OLP worked to include national stakeholders in the development of the phase-out plans as well as in the implementation stages. The resulting involvement of stakeholders varied between the different projects. SEI did not "own" the projects and could not make any decisions regarding the degree or method of stakeholder involvement. However, as part of the assistance, SEI argued for including relevant stakeholders in both the preparation and implementation phase, stressing that it would increase the likelihood of a successful phase-out. This position was supported by various other actors. In the Evaluation of Refrigerant Management Plans carried out for the ExCom of the MLF, it was concluded that all cases of rapid progress in the phase-out among the countries studied took place in countries where a close cooperation between the national ozone unit and private stakeholders (importers, distributors, service workshops) had been accomplished (UNEP 2003).

Stakeholder participation was thus consistently encouraged in all OLP projects. This started already with the development of the phase-out plan by suggesting the national ozone unit to invite representatives of different national authorities and company representatives to meetings and seminars to discuss the phase-out strategy. In the projects that the OLP was asked to implement this was followed up by always suggesting meetings also with stakeholders when SEI or the international consultants visited the country. In some countries, the meetings held in this way were the first point of contact between the national ozone unit, the schools for training of service technicians, importers of ODS and other trade

representatives. In the countries aspiring to join the EU, the wish to know more about EU regulations and conditions served as an important driving force for companies to participate in the projects.

The first comprehensive phase-out project in the refrigeration sector of the OLP was the project in the Philippines. In this context substantial efforts were put into achieving an appropriate level of stakeholder participation. SEI and the consultant undertook several missions during the development of the phase-out plan where stakeholder meetings with established working groups took place. Several aspects of the phase-out were designed together with the representatives of the refrigeration and air-conditioning sector and the authorities involved, for example the Code of Practice, the re-use scheme and the information material. Although the phase-out activities in the Philippines will not be completed until 2010 and therefore a final evaluation of the results is premature, our impressions of the ongoing process suggest that the thorough work in developing the plan in close cooperation with the different actors and continued discussions during the implementation will prove to be a success factor in the Philippine phase-out in terms of the integrated set of measures created.

In more recent projects, the preparation time for the national phase out and terminal phase-out management plans was very short. This led to reduced stakeholder involvement also in the implementation phase. However, as mentioned above, the EU constitutes an important incentive for industry in these countries and in all cases discussed here, a majority of companies that have been approached have shown great interest in the issues.

The OLP experience points to some lessons for how to achieve effective stakeholder participation in this type of projects. First, one needs an extended planning phase to allow for building of trust. Second, there needs to be strong ownership by the authority in charge (e.g. not handing over the implementation to national or international consultants, see chapter on Country ownership). Third, industry stakeholders need clear incentives to take an interest in participation in the implementation activities (such as improved competitiveness, market access and clear legal situation in terms of responsibilities).

Discussion on the relevance to other MEAs

The OLP experience seems to confirm the importance of country ownership, capacity building and stakeholder participation for successful national implementation of the Montreal Protocol (MP). It also shows that these aspects are inextricably linked. The question is, then, if any of the insights from the OLP work can be transferred to other MEAs. To what extent are they of a generic nature? The MEAs most commonly mentioned as candidates that could learn from the MP are those related to chemicals management. These are the 2001 Stockholm Convention on Persistent Organic Pollutants, the 1998 Rotterdam Convention on the Prior Informed Consent procedure in international trade, the 1989 Basel Convention on Transboundary Movements of Hazardous waste, the 1997 Kyoto Protocol under the Framework Convention on Climate Change, as well as the non-binding 2006 Strategic Approach to International Chemicals Management (SAICM). These are all conventions that regulate the production, consumption, trade, and/or handling of chemicals (Table 2) and as such they may gain from the experiences of implementing changes in chemicals management under the Montreal Protocol. There is also an ongoing discussion on how the implementation of the different chemicals-related conventions could be integrated in a way that would give benefits from synergies (e.g. Oberthur, 2001, United Nations University *et al*, 2002), and how to integrate the assistance with MEA implementation with general development cooperation (e.g. OECD 2002).

All the MEAs listed above will require certain strategic decisions at the national level regarding the implementation. There is thus a need for creating a strong country ownership of the implementation process. Equally, capacity building and stakeholder involvement is also needed in all cases listed. From this perspective, the lessons learned from the OLP therefore appear valid for these MEAs. For instance, in the Stockholm convention, the implementation has started by all countries setting up national implementation plans. Developing countries are receiving support for doing so, and the UN organisations active in the MP are also acting as implementing agencies for the preparation of these Stockholm Convention implementation plans. The OLP experience suggests that investing in careful planning and setting up of an overall strategy is important both for stakeholder participation and for making space for strong country ownership of the strategic decisions surrounding the implementation process. The degree of country ownership established in these early phases will be decisive for the effectiveness of the future implementation of these plans.

At such a generic level, lessons learned appear

Table 2: Overview of some chemicals related MEAs

MEA	Aim of the control of the MEA
Montreal Protocol	Production and consumption of Ozone depleting substances (96 in total).
Stockholm Convention	The production and use of 12 persistent organic pollutants, most of them pesticides.
Rotterdam Convention	The trade of pesticides and industrial chemicals that have been banned or severely restricted because of health or environmental reasons by Parties (39 substances in total).
Basel Convention	Control of the international trade of hazardous waste as well as the goal to minimize the generation of hazardous waste.
SAICM (non-binding)	The whole life cycle of all chemicals produced and used in society.
Kyoto Protocol	Emissions of carbon dioxide, methane and other Green House Gases, of which some are replacements for ODS in refrigeration and air-conditioning systems.

valid. However, the different MEAs are different in scope and other characteristics, creating particular implementation challenges at a more specific level. For example the **number and nature of stakeholders** is likely to affect the scope for ensuring elements of governance in the implementation phase. In the context of stakeholder characteristics, other decisive factors are **how powerful and organised stakeholders are.** In general, those who have access to the corridors of power and prove successful in formulating their position are likely to influence policy formulation and decision making. In comparison, the MP has a relatively well-defined group of stakeholders. These stakeholders are in some cases well-organised in trade organisations, and in other cases very dispersed as is the case when there is a large informal sector. The other MEAs identified above have a wider range of stakeholders. For example, the Kyoto Protocol targets a larger number of producers (in the energy sector) and within the transport sector the emission sources are non-point and mainly attributable to individuals. The SAICM addresses a larger number of chemicals manufacturers and other producers. It also addresses some chemicals management practices at the consumption stage. Clearly, the number of stakeholders is higher and they may also be more diffuse and less mobilised than producer stakeholders. It is probably not possible to form as close relationships with all those stakeholders as in the case of the MP. At the same time, the ownership and acceptance of the MEA among stakeholders may be even more important. Therefore, the lessons about involving the affected stakeholders already at the planning phase of the national implementation need to be extended from the MP to other MEAs.

An often quoted success factor for the MP is the **availability of substitutes**, which implies that the industry had an economic interest in supporting this MEA (Vedung, 2005). This factor is sometimes questioned today. Initially, industry opposition was forceful and led to a longer negotiations and longer phase-out periods. Producers of CFCs resisted regulation for 20 years with the argument that there were no cost-effective alternatives (Grundmann 2006). Still, the consequences for the relevant industries appear to be lower than for example in the case of the Kyoto Protocol where the phase-out of greenhouse gas emissions is on the agenda. While in the MP substitution of substances on a marginal scale was at least by some deemed sufficient (i.e. substituting CFCs with HCFCs), cutting greenhouse gas emissions will require more systemic change on a societal level (i.e. reforming energy and transport systems). This will lead to significant restructuring of markets and industries, with potentially negative effects on economic growth in the short term. More wealth is therefore at stake than in the MP, which is one reason why "on-the-ground" implementation takes place in a slower pace.

Comparing the MEAs in this way may suggest that the MP was an "easy" case and that other MEAs are facing larger implementation challenges. However, the implementation challenges met in the MP as discussed above also tell the story that even apparently easy cases may be difficult to implement, and that it therefore makes sense to prepare well for the implementation of the more complex and challenging MEAs.

Conclusions and recommendations

The OLP experience has confirmed that governance aspects of MEAs such as stakeholder participation, country ownership and capacity building are critical to their successful implementation at the national level. However, despite increasing rhetoric about their importance, neither the international agencies nor the national governments are used to working with such procedures (VanDeveer and Dabelko, 2001). Instead a traditional top-down approach continues to characterise much of the implementation and support systems for the Montreal Protocol in developing countries. Consequently, the OLP, with its focus on "soft" factors, at times met strong resistance, both at national level and in the ExCom of the MLF. What conclusions can be drawn from the experiences of the OLP in implementing the Montreal Protocol on the ground?

First, the importance of *country ownership* in the Montreal Protocol implementation can hardly be overestimated. Evaluations have shown that phase-out has been more effective when countries have prepared their own strategies. Despite this, the implementation reality today is often one of weak country ownership. National ozone units often assume that the implementing agencies will take on a large portion of the work. Officers of implementing agencies may even have a perverse incentive to ungracefully reduce the degree of country ownership of the implementation. This is because their own performance is evaluated on the number of projects they undertake and it is easier and quicker in the short term to initiate and complete projects solely under an implementing agency's control. However, the OLP found that through conscious efforts, both the locus of initiative and consensus building can be strengthened, thereby increasing the country ownership.

Second, *capacity building* within the respective countries is an effective route towards sustained implementation in the long run. The OLP capacity building occurred both at a "micro-level" through training of technicians and at a "meso-level" through organising regional cooperation networks between countries. Importantly, the OLP incorporated new ODS knowledge and procedures into *regular* training and into networks that would be naturally held together, rather than a short-term and one-off effort outside normal working routines and trade institutions and networks. However, there were still obstacles to building and sustaining institutional capacity, such as high staff turn-over in the national ozone units and, again, the questionable incentive to initiate a large number of projects in the short term in order to demonstrate good performance. The report notes that capacity building is time consuming in the short run, and therefore also demands extra resources available to the implementing agency. In the case of OLP this was made possible through the extra resources provided for by the Swedish Sida.

Finally, *stakeholder participation* has been integral to effective implementation of the Montreal Protocol. In order to achieve actual changes in behaviour, there is a need to gain acceptance of the ODS phase-out plan from the relevant industries. The OLP aimed for early involvement of industry stakeholders, for example in meetings with the national ozone units. It was found that the longer the project planning phase, the more likely it was to secure full participation of the stakeholders also during later phases. The need to ensure early stakeholder participation has also been confirmed in an MLF evaluation, which showed that countries with close cooperation between the national ozone units and private stakeholders have been more effective in phasing out ODS.

On the basis of the OLP experiences reviewed in this report, what recommendations can be made to enhance the potential for these three governance aspects in future MEA implemenation? Clearly, a shift towards country ownership, capacity building and stakeholder involvement as core aspects of MEA implementation support would appear as something of a paradigm shift within international and national agencies, which cannot be quickly imposed. However, a number of direct changes can be achieved through organisational and procedural measures.

First, the national units responsible for implementing and reporting on MEAs need to be given *high status in the government organisation* and with a clear role and mandate. This facilitates long-term ownership and interests of policy officers in securing sustainable changes.

Second, the *procedures of policy coordination* between ministries and agencies affected – also indirectly – by the implementation must be enhanced. This establishes participation of various interests and policy sectors which is required to enable the development of a coherent institutional and legal framework within which implementation can proceed. Whilst synergies between MEAs and the legislation they give rise to may be difficult to achieve, obvious contradictions with existing legislation can still be minimised.

Third, the *formal and informal incentive structures* for desk officers need reforming – in both implementing agencies and national authorities. Today, administrative success is normally measured in terms of number and volume of projects and investments made, with little evaluation concerning the long term sustainability or real outcome and impact of the projects. With incentive systems for civil servants and international agency desk officers set up accordingly, there is little room for a change in implementation approach towards "soft" aspects that tend to be time-consuming and have benefits that are difficult to measure. The institutionalization of the conventional "investment project paradigm" (for which bilateral and multilateral development agencies are nowadays frequently criticised) is a problem often overlooked in the multilateral process.

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Annex 1: List of Swedish bilateral projects

1. Assisting the Government of Georgia in preparing a Terminal Phase-out Management Plan for the servicing sector

2. Assisting the Government of Romania in preparing a National CFC Phase-out Plan for the servicing sector

3. Assisting the Government of Romania in the implementation of the approved National CFC Phase-out Plan

4. Assistance to the Gov. of Serbia and Montenegro in preparing a National CFC Phase out Plan for the servicing sector

5. Assisting the Government of Serbia and Montenegro in the implementation of the approved National CFC Phase-out Plan

6. Assisting the Government of the Republic of Croatia in preparing a Refrigerant Management Plan Update.

7. Assisting the Government of the Republic of Croatia in the implementation of the Terminal Phase-out Management Plan.

8. Assisting the Government of the Philippines in preparing a Strategy to Reduce and Eliminate the Use of CFC Refrigerants for the servicing sector.

9. Assisting the Government of the Philippines in the implementation of the National CFC phase out plan for the servicing sector

10. Assisting the Government of Lao P.D.R. in preparing an Import and Export Licensing System.

11. Assisting the Government of Thailand in preparing and implementing a Halon Management Plan.

12. Arranging a Regional Workshop for SEAP on Import/Export Controls.

13. Network project: Regional Co-operation for monitoring and control of ODS consumption in the SEAP Region.

14. Network project: Preventing illegal trade of ODS in the South Asia Region.

15. Development of a Handbook on best practices in developing and implementing national CFC phase-out plans for the servicing sector.

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