Voluntary, Collaborative, and Information-Based Policies: *Lessons and Next Steps for Environmental and Energy Policy in the United States and Europe*

Introductory paper for the workshop
'SHARING RESPONSIBILITIES –
NEW ROLES FOR GOVERNMENTS AND INDUSTRY'

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BACKGROUND OF THE PAPER

When environmental degradation emerged as a priority for government action in the early 1970s, most countries enacted media-specific legislation based on direct regulation (i.e. ambient, emission and technology standards enforced through permitting systems). Although direct regulation has been a powerful tool for adjusting industrial behavior, it is not adequate for addressing the challenges of sustainability. Given the tremendous uncertainty in developing transition strategies for sustainability, governments acting through traditional channels do not have the capacity and capability of to develop meaningful and effective solutions. All stakeholders are increasingly realizing that industry is not only part of the problem, but must be actively engaged as part of the solution through the development of new processes, technologies and products. Among other adjustments this has lead to the development of voluntary, collaborative and information-based approaches. These approaches are attempts to engage industry in significant environmental improvements through dialogue, consensus-building and voluntary action rather than the imperatives of direct regulation or the incentives of market-based approaches.

On May 10-12, 2001, we organized a workshop at the Kennedy School of Government at Harvard University entitled "Voluntary, Collaborative, and Information-Based Policies: Lessons and Next Steps for Environmental and Energy Policy in the United States and Europe." This workshop focused particularly on how these approaches can provide opportunities and incentives for private-sector leadership in environmental protection, and whether they can be effective in stimulating beyond compliance behavior and the development and diffusion of environmentally superior technologies. Twelve policy programs were presented at the workshop, six U.S. programs and six from various countries in Europe. The U.S. programs: the *Common Sense Initiative (CSI)* – a sector-based attempt to fine-tune environment regulation to the specific circumstances of different industrial sectors; *Energy Star* – a product labeling program for energy efficiency; three *R&D collaborations in the power sector* (the Advanced Turbine Systems program, the Photovoltaic Manufacturing Technology project, and the Thin-Film PV Partnership project) that support the development of a next generation of technol-

ogy; *StarTrack* – a program that used the adoption of an environmental management system (EMS) as part of a tiered system of environmental regulation; *Project XL* – a program that offered regulatory flexibility at a specific facility in exchange for producing an overall increase in environmental quality; and the *Toxics Release Inventory (TRI)* – a program that requires firms to disclose release data as well as storage, treatment, disposal, recycling and energy recovery. The European programs include the *Dutch Target Group Policy* – a sector-based approach based on negotiations between industry and governmental agencies in order to reach an agreement concerning the contribution of a specific sector to national environmental goals; the *German End-of-life-vehicles Program* – a voluntary agreement between branch organizations in the automotive, recycling and supply sector; the *Danish Cleaner Technology Programs* that offered grants to support the identification, development, demonstration, and full-scale implementation of cleaner technologies; the *Dutch Policy Program on Environmental Management* aiming at capacity building within industry through the introduction of EMS; the adoption of the *Eco-Management and Audit Scheme in the UK* – a regulation of the European Union offering a verification scheme for the introduction of EMS; and the *Norwegian Accounting Act* that requires firms to disclose environmental data in their yearly financial report.

The workshop at Harvard University built on a book project that engaged scholars who have been doing in-depth studies of these innovative policy mechanisms. A full manuscript has been finalized in the meantime. After the workshop a workshop report has been written (see title page for full reference)[1]. This paper is the executive summary of the workshop report. It brings together the most crucial issues concerning the use of the new policy programs in practice and it will serve as an introduction to the workshop 'SHARING RESPONSIBILITIES – NEW ROLES FOR GOVERNMENTS AND INDUSTRY' at the 2002 GIN conference in Göteborg. This session aims at having a debate between relevant stakeholders rather than having formal paper presentations. A panel consisting of three representatives of business, governments and NGOs will initiate the debate.

[1] With "the workshop" we refer to the May 2001 workshop at Harvard University.

EXECUTIVE SUMMARY

Over the past decade, the United States and many European countries have developed new approaches to environmental policy that are voluntary, collaborative, and information-based. These programs are attempts to engage industry in significant environmental improvements through dialogue, consensus-building, and voluntary action rather than the imperatives of direct regulation or the incentives of market-based approaches. This workshop examined the effectiveness of these innovative policies, focusing particularly on how these approaches can provide opportunities and incentives for private-sector leadership in environmental protection, and whether they can be effective in stimulating beyond compliance behavior and the development and diffusion of environmentally superior technologies. The workshop was organized into five panels: voluntary approaches, industry sector collaboration, collaborative approaches for technology development, information disclosure policy, and environmental management systems.

Taken as a whole, the programs examined in this workshop demonstrate more success than failure. Many of these programs have already improved the environment, as well as establishing long-term goals that hold up the prospect for more fundamental change in the future. However, when measured against the high standards for evaluation put forth in this workshop - industry leadership and the radical technological innovation - our evaluation is more circumspect. While the programs have contributed to technology innovation, it was more often incremental than radical. While there is evidence of private sector leadership, there is concern that it may be one-off rather than on going, and focused on near-term opportunities rather than longer-term and more difficult targets.

The overarching conclusion of the workshop is that voluntary, collaborative, and information programs can play a useful role in a comprehensive environmental strategy but only if they are carefully designed to fit with and complement the other elements of a nation's environmental policy system. Voluntary, collaborative, and information strategies can create capacity, transparency, and flexibility; facilitate the development of long-term agendas; provide opportunities and incentives for firms to assume leadership in environmental protection; and provide

avenues for greater community and NGO participation. As demonstrated by the cases in this workshop, these new approaches can be effectively targeted toward capacity building or toward actual improvements in environmental performance. They can also be targeted toward either individual firms, in an effort to create leaders, or toward an entire industry sector, in an effort to bring forward all firms. Regardless of goals, there will remain a role for direct regulations and market-based approaches as part of an overall strategy - they will be needed to create sufficient pressures to push industry along the path toward sustainability. In the end, the real question therefore is not whether the new approaches should be used, but rather how they should be used.

Below, we first examine several conclusions that cut across the full range of programs, and then present lessons for each of the five types of programs.

Cross-cutting Themes

Integration with the Environmental Policy System

These new approaches are most effective when integrated with other policies and programs for three reasons:

- *Incentives external to the programs.* The imperative for change is often external to the programs, thus programs will be most effective when used synergistically with or as a complement to other policy approaches, particularly policy approaches that can provide incentives or imperatives to action.
- *Different approaches for leaders and laggards.* Voluntary, collaborative, and information-based approaches will be most effective in a dynamic system of regulation, in which the level of regulation is established by best practices at leading firms, and laggards are then brought forward by regulatory requirements. Voluntary, collaborative, and information-based approaches may be most appealing to pro-active firms and sectors while regulatory programs can force free-riders to comply.
- *Fundamental change in the dominant regulatory system.* These new approaches are most often a small innovation to the larger policy system. Thus, notwithstanding the potential advantages of voluntary, collaborative, and information-based approaches, they cannot be effective unless

designed to work synergistically with the larger policy system. In some cases this will require legislative changes; in others a carefully design package of programs and policies that can build capability and provide incentives for action.

Transaction costs

High transaction costs is a critique that was aimed at nearly all of the programs examined in this workshop, and for these approaches more generally.

- Transaction costs should be considered when deciding whether to implement voluntary, collaborative, and information-based programs.
- Transaction costs should be evaluated against benefits of the program and compared to the transaction costs of alternative approaches for reaching environmental goals.

Evaluation

Inadequate attention has been given to evaluation. Evaluation should be an integral part of program design, including collecting the necessary data and putting the funding for evaluation into the budget of new programs.

- Although information gathered through post-program interviewing and surveys can be useful, efforts should be made to gather real-time data on program outcomes.
- It is essential to look beyond process variables (e.g. number of participants) and evaluate actions taken to reduce environmental impacts as well as the actual reduction of environmental impacts.

Voluntary Approaches

Three programs were presented in this session: U.S. Energy Star (by Bruce Paton), the Dutch Policy Program on Environmental Management (by Theo de Bruijn and Kris Lulofs) and U.S. Project XL (by Alfred Marcus, Donald Geffen and Ken Sexton). The commentators for this session were Jerry Dion, Tim Jenkins, Shelley Metzenbaum, and Leslie Carothers.

- *Win-win opportunities*. Voluntary programs can be effective in stimulating firms to take win-win actions that the firms would not have identified without the intervention of a voluntary program.

- *Tie to incentives and imperatives for action.* From the standpoint of more fundamental industrial transformation and technological innovation, voluntary programs will be most effective if they are tied to incentives or imperatives for action. These can be either integral to the voluntary approach or through policies external to the voluntary approach.
  - Internal incentives include: a credible threat of regulation if voluntary action is not taken, cost-sharing, and public recognition.
  - External incentives include: regulations, procurement policies, and other economic incentives.

- *Fit with the national policy style.* The existing regulatory culture needs to be considered when assessing the potential goals and benefits of voluntary approaches. The importance of interaction between voluntary approaches and the rest of the environmental policy system suggests that coherence and fit with the policy style is important.

- *Implementation through networks.* Voluntary programs may be most successful if they are implemented through existing networks or institutions that have compatible objectives and capabilities.

Industry Sector Approaches

Three programs were presented in this session: U.S. Common Sense Initiative (by Laurie Allen and Cary Coglianese), The Dutch Target Group Policy (by Peter Hofman and Geerten Schrama) and the German End-of-Life Vehicles Program (by Helge Jörgens and Per-Olof Busch). The commentators for this session were Marilyn Brown, Daryl Banks and Dan Fiorino.

- *Conditions for effective industry sector collaboration:* Industry sector approaches are likely to be most effective under the following conditions:
  - Clear goals that are externally-imposed or externally-mediated.
  - Compatible and embedded in the larger national and environmental regulatory system.
  - "Voluntary but not without obligations", in other words there is an alternative to the collaborative process for reaching publicly established environmental goals.
  - A well-organized and homogenous sector with a strong representative body (e.g. the trade association) or a small and orderly sector consisting of only a few companies.

- *Long-term commitments*. Industry sector approaches have been successful in obtaining commitments from the private sector for long-term goals that will substantially improve environmental performance and will require radical technological innovation.
  - It is not clear that the programs provide adequate incentives or enforcement mechanisms for these long-term goals.
  - The programs should implement mid-term requirements to demonstrate private sector actions toward meeting long-term goals.

- *Long-term commitments vs. flexibility:* In many of these programs, the private sector has made long-term commitments in exchange for promises that no new requirements would be imposed.
  - These long-term agreements reduce societies ability to respond to new environmental hazards, or to new understandings of current environmental hazards.
  - New mechanisms are needed to address this concern.

Collaborative Approaches for Technology Development

Two papers were presented in this session: R&D collaboration in the Power Sector in the United States (by Vicki Norberg-Bohm and Robert Margolis), and Danish Cleaner Technology Programs (by Ulrik Jørgensen). The commentators for the session were Jerry Rogers and Nils Thorsen.

- *Effective for near-and mid-range technology development.* Collaborative technology programs are potentially powerful instruments to reach near-and mid-range technology development goals.

- *Networks of technological capability.* Collaborative technology programs can provide opportunities and incentives for manufacturers, suppliers, universities, national laboratories, and consultants to work together to reduce risks.

- *Design elements*: Collaborative technology programs are most effective if they:
  - Set challenging goals that require collaboration
  - Provide funding and require organizational structures that increase collaboration amongst firms and other actors with technological capabilities
  - Link the R&D function with the business organization.

- *Shifting environmental goals*: Over the time frame of technology development (often a decade or more), our knowledge about environmental impacts will increase and may result in the need for more stringent environmental goals. Technology programs should be designed with this possibility in mind by including the participation of a broad range of stakeholders and periodic evaluation of technology targets.

- *Market creation.* Cleaner technology programs need to be commercially viable. In many cases this will require simultaneous use of other policies and regulatory programs that create markets for the emerging cleaner technologies.

Information Disclosure

Two programs were presented in this session: the U.S. Toxic Release Inventory (by Mary Graham

and Kathryn Miller), and the Norwegian Accounting Act of 1998 (by Audun Ruud). The commentators for this session were Robert Massie, Mark Greenwood and Rolf Marstrander.

- *Internal and external pressure.* Mandatory public disclosure systems are effective by producing external pressures on firms and by changing internal decision-making.
  - *External pressures*: Negative recognition can motivate short-term efforts to quickly reduce emissions, and the accompanying negative publicity.
    - Further research is needed to establish whether negative recognition can stimulate long-term and pollution prevention approaches. Requirements for a life-cycle perspective, reporting of future plans, and approval by the board-of-directors (as required by the Norwegian accounting act), represent new efforts in this direction.
  - *Internal pressures*: New information generated inside firms can build capacity for improving environmental performance.
    - Information disclosure policies will be a stronger impetus for change if they require firms to develop information that is useful internally.
- *Support for other policies.* Information disclosure can by used to support other environmental policy and programs.
  - Information disclosure can be used for priority setting in both public and private sectors.
  - Information disclosure can provide an underpinning for voluntary policies and programs.

- *Design criteria.* Effective information disclosure policy must be designed for legitimacy, accuracy, consistency, comprehensiveness and utility.
  - The effectiveness of information disclosure policy depends not only these characteristics, but also on the mobilization of a set of stakeholders that can use data to support decision-making and press for change.

  - *Private market for information.* There is a strong and growing private sector market for information disclosure both as advocates for information disclosure and as users of this information. Thus, government is not the only the powerful driver of information disclosure.

Environmental Management Systems (EMS)

Two programs were presented in this session: the U.S. StarTrack program (by Jennifer Nash) and the European Eco-Management and Audit Scheme (by Andrew Gouldson). The commentators for this session were John Harris, Martin Baxter and Dan Fiorino.

- *EMS can be effective in:*
  - Increasing capacity for environmental improvement
  - Increasing awareness of the need for innovation for the environment
  - Identification of "win-win" opportunities for environmental improvement
  - Better compliance with environmental regulation.

- *EMS and drivers for change.* Although the adoption of an EMS raises the awareness of the need to innovate and help develop capacities for technological change, external incentives or imperatives for change are needed for the actual utilization of these capacities.

- *Government-sponsored EMS.*

  - Characteristics identified as contributing to the effectiveness of government-sponsored EMS include:
    - Third party verification
    - Comprehensive and regular public reporting
    - Requirements for future planning for continued environmental improvement, including progress toward specific environmental goals.

  - The current approaches to EMS are overly bureaucratic. Efforts should be made to reduce transaction costs by focusing on information generation that is useful to the firm and stream-lining reporting requirements.

    - EMS may have strong influence only when first adopted, with benefits decreasing over-

time as the system becomes institutionalized. Government sponsored EMS should work to crate incentives for continuous improvement.

- *EMS and tiered environmental systems*. Adoption of EMS is not a sufficient criterion for establishing superior environmental performance, and thus not an adequate criterion for entry of firms into tiered systems of environmental regulation.