

Annex II
Regulatory Alternatives

Section 4.2 of this report provides an overview of the range of regulatory alternatives available to governments, a general appreciation of the characteristics of each and a summary of the contexts in which each is likely to constitute an appropriate tool of policy. The following discussion provides a more detailed analysis of each of the regulatory alternatives outlined in the report. It encompasses both alternative forms of regulation and alternatives to regulation.

Performance-Based Regulations. Performance-based regulation specifies required outcomes or objectives, rather than the means by which they must be achieved. Firms and individuals are able to choose the process by which they will comply with the law. This allows them to identify processes that are more efficient and lower cost in relation to their circumstances, and also promotes innovation and the adoption of new technology on a broader scale. The focus of regulation is shifted to results or outputs, rather than inputs, and the degree of government intervention in markets is effectively reduced. Adoption of performance-based regulation can also simplify and clarify regulations, since they can be written in terms of underlying objectives, rather than requiring large amounts of detailed, prescriptive standards to be set out in legislative terms. The use of performance-based regulation is rapidly developing in OECD countries. Its use has been increasing significantly in relation to health, safety, consumer protection and environmental regulation in particular. According to the *OECD Regulatory Capacities Database*, 11 OECD countries have increased their use of performance-based regulation in recent years.

There are costs associated with performance-based regulations. They can be difficult to develop, as they require measurement or specification of desired outcomes, which are not always apparent where prescriptive regulation is analysed. Moreover, the very fact that they allow for a range of different compliance strategies suggests that the verification of compliance is likely to be more difficult, and that administrative and monitoring costs may be increased as a result. Similarly, they require the dissemination of sufficient operational guidance to provide adequate understanding and knowledge of the requirements to ensure compliance. Small businesses in particular often do not welcome performance-based regulations, since they can impose a greater responsibility to develop appropriate compliance strategies and create uncertainty as to what is required for compliance.

As a consequence of the recognition of these problems, most countries have adopted guidelines or “safe harbours” (*i.e.* “deemed to comply” provisions) in conjunction with performance-based regulations. The safe harbours are intended to allow the benefits of certainty of compliance associated with prescriptive regulation to be attained, while also allowing more innovative firms to take advantage of the benefits of performance-based regulation. Guidelines function as a “lighter handed” approach, providing information on appropriate compliance strategies and thus also helping to enhance certainty of compliance.

However, the use of guidelines and safe harbours can bring its own problems, as there is a danger they can become *de facto* prescriptive regulations, undermining the benefits of performance-based rules. This will occur if there is widespread adoption of the safe harbour, and inspectors and other stakeholders come to assume that these represent the norm for compliance. Similarly, guidelines that are written in detailed and prescriptive terms almost necessarily come to be seen as quasi-regulations.

Thus, policy-makers need to adopt a sophisticated approach to the question of when performance regulations are likely to be appropriate and what level of guidance material is required. The use of performance-based regulation necessarily requires that those regulated are able to develop and implement compliance strategies based on a sound understanding of the objectives and standards set out in the regulation. Similarly, guidelines and safe harbours, where used, should be developed from a basis of a clear understanding of the characteristics and capacities of the regulated group and the likely effect of adopting such documents on compliance efforts and strategies.

Process based regulations

These regulations are so named because they require businesses to develop processes that ensure a systematic approach to controlling and minimising production risks. They are based on the idea that, given the right incentives, producers are likely to prove more effective in identifying hazards and developing lowest-cost solutions than is a central regulatory authority. They are particularly useful where there are multiple and complex sources of risk, and *ex post* testing of the product is either relatively ineffective or prohibitively expensive.

In the **Netherlands**, businesses are required to develop individual management plans, based on their own assessments of health, safety and environmental risks pertaining to their specific operations. These plans consist of priority listings of key risks, budgets for addressing those risks, along with timeframes, and evaluation methods. Firms that prepare good plans benefit from a more flexible approach to their activities by the Environment Ministry.¹ This rewards the firm's good regulatory performance and allows the ministry to dedicate its resources to areas where there are greater concerns.

Process regulation is also being used in **Mexico**, where Eco-audits, which are an in-depth and interdisciplinary review of a company's production process, are used to identify major pollution problems and risks. Following the audit, the company signs an agreement with the authority on the steps it will take to clean up its operations, committing itself to timelines. By agreeing to this process, the firm avoids criminal sanctions and can often reduce its insurance premiums. By August 1997 the Environment Ministry had approved 2 110 audits and 698 had been completed.²

In the **United States**, the FDA's Hazard Analysis at Critical Control Points (HACCP) programme regulates seafood safety. Producers are required to document and analyse the different stages of the production process, identifying key points at which hazards arise and putting into place site-specific strategies to manage them. The benefits of HACCP, compared with previously used regulatory approaches, have been estimated to be in the range of USD 1.4 billion to USD 2.6 billion, with up to 58 000 illnesses from contaminated seafood avoided annually. HACCP approaches have been recommended by the UN-based Codex Alimentarius Commission and other countries (**Canada** in relation to seafood) have also moved toward HACCP.³ In Victoria, **Australia**, food businesses are required to complete HACCP-based "food

safety programmes” and to update them regularly, with independent auditing. Similarly, operators of cooling towers are required to adopt HACCP-based Risk Management Plans and Systems (RMPS) to minimise the risks of legionnaires’ disease, while water supply authorities are also shortly to be required to adopt HACCP-based systems.

Co-regulation

Under co-regulation the regulatory role is shared between government and industry. It is usually effected through legislative reference or endorsement of a code of practice. Typically, the industry or a large proportion of industry participants formulate a code of practice in consultation with government, with breaches of the code usually enforceable *via* sanctions imposed by industry or professional organisations rather than the government directly. This approach allows industry to take the lead in the regulation of its members by setting standards and encouraging greater responsibility for performance. It also exploits the expertise and knowledge held within the industry or professional association.

Co-regulation affords government the opportunity to involve industry and interested parties in the investigation and enforcement of the regulations. This can lead to significantly greater levels of compliance, as industries become co-monitors, while it also encourages participants to see good industry-wide performance as a common good, through its impact on public perceptions. From the government viewpoint, co-regulation can be highly cost effective, as industry experts will often participate on a voluntary basis, while the “arms length” relationship with government can also mean lower overheads and greater responsiveness.

However, there is a substantial risk attached to co-regulation arising from the possibility that it will become the vehicle for anti-competitive activities created by the industry regulators. Evidence from numerous countries suggests that such risks are widespread. For example, when regulations governing the professions was subjected to the general competition law for the first time under **Australia**’s National Competition Policy reforms, substantial changes were required to bring the existing regulatory structure into compliance. Similarly, when the **Netherlands** introduced a new competition law in 1998, a five year exemption was required for the regulations of the Professional Boards to allow time for compliance to be achieved.⁴

This highlights the importance of proper regulatory design that focuses on transparency and follows specified regulatory principles to guide the development of codes. Opportunities for regulatory barriers to entry to develop must be minimised and careful scrutiny maintained. Transparency is of crucial importance in this regard, since the close relationships required between industry groups and government regulators under the co-regulatory model necessarily implies a higher than normal risk of “regulatory capture” developing.

Economic instruments

At a theoretical level, the use of economic instruments should *a priori* be the preferred means of achieving policy objectives in a wide range of situations. This is because these tools – taxes, subsidies, tradable permits, vouchers and the like – operate directly through the market, thus harnessing market incentives and avoiding the substantial potential for distorting market incentives inherent in most forms of regulation. Indeed, the fundamental

goal of a regulatory instrument is precisely to reduce existing distortions in the operation of markets by better aligning price incentives with the broad social welfare.

There are good theoretical reasons to believe that economic instruments offer the potential for substantial static and dynamic efficiency gains, compared to traditional command and control regulation. Economic incentives offer two important advantages over traditional “command and control” regulation. First, they allow business and others to achieve regulatory goals in the least costly manner. Second, market incentives reward the use of innovation and technical change to achieve these goals.

A recent study related to the use of economic instruments in environmental policy has found that little empirical evidence is available on the scale of efficiency gains from economic instruments, though indirect evidence suggests that such gains exist. Evidence from the **United States** indicates that a tradable permit programme for sulphur dioxide has led to substantial efficiency gains.⁵ Part of the problem in generating data is that a considerable period of time is needed before the benefits of economic instruments are fully realised. Another problem is that economic instruments are often applied within the context of larger policy packages, which makes it difficult to single out the effect of a particular instrument.⁶ The distributional effects of these instruments have also raised concerns in some quarters, though the evidence on this point is not very clear.

There is a large range of economic instruments that governments can utilise to better align incentives with socially optimal outcomes. They operate by internalising external costs or providing subsidies to account for external benefits, and include taxes, charges, subsidies, user-pays pricing or refund schemes. By raising or lowering the cost of engaging in a particular activity, governments can provide powerful incentives to undertake the desired behaviour or to avoid the undesirable behaviour. They can be used to force companies or citizens to internalise the external costs (externalities) of their actions. Alternatively, they can be used to ensure adequate pricing of previously under-priced resources, such as the environmental quality of water or air.

In **Denmark**, the “Green Tax System” is used to pursue environmental objectives. This system uses taxes on energy use, CO₂ emissions, SO₂ emissions, and wastewater discharge to influence behaviour in relation to a wide range of environmental goals. The Green Tax System is complex, involving the application of several different tax rates for different uses or means of generation of pollutants. The size of the impact of the scheme is quite significant with receipts from levied taxes expected to reach 1.2% of GDP by 2000.⁷

Subsidies can be used to encourage desired actions. In the **Netherlands**, income tax deductions are available for commuting via public transport and, as in a number of other countries, differential indirect tax rates favour the use of unleaded petrol. In **Korea**, longterm low interest loans are available to firms that establish facilities that prevent, treat or recycle pollutants.

Another type of economic instrument is a tradable permit, first pioneered in the **United States**, but also used now in other OECD countries. Perhaps the best-known example of such trading is the acid rain programme operated by EPA, which was designed to reduce **United States** sulphur dioxide emissions by 10 million tons annually from 1980 levels. In the programme, emitters of SO₂, a precursor to acid rain, were issued a finite number of allowances (permits) that can be used over the next 50 years. The SO₂ trading programme was launched in 1992. It has produced significant cost savings and reductions in emissions are ahead of schedule. Estimates of cost-savings just from allowing trading

range from 25 to 43%. In 1990, the EPA estimated that the cost of SO₂ reductions in 2010 would be between USD 2.6 billion and USD 6.1 billion (in 1995 dollars). However, a 1998 study projected that these costs would be just over USD 1 billion (in 1995 dollars).⁸ Other examples of the use of tradable permits include:

- Airlines in the United States that are trading landing slots at busy airports at prices in the range of USD 1-10 million per slot, with the total value of slots traded estimated to be around USD 400 million.
- A programme of tradable Regional Contribution Agreements in New Jersey which has allowed towns to meet their obligation to provide low- and moderate-income housing by trading the housing requirement to another willing municipality through a regional contribution agreement (RCA). This involves a cash payment from one municipality (usually suburban) to another municipality for the purpose of building or refurbishing low- and moderate-income housing in the receiving municipality. These obligations have been recently traded at a cost of USD 27 000 per unit.⁹
- Permits for agriculture, including fisheries licenses, fishing quotas for plaice and sole, manure spreading rights and milk quotas that are traded in the Netherlands.
- In Korea an emissions charge was established as a means to ensure compliance with permissible discharge limits. The charges are levied in relation to a set of 10 air pollutants, 17 water pollutants and two specific types of livestock wastewater pollution. From 1991 to 1996, the total number of charges levied varied between 3 099 and 4 267 and the total amount levied varied from KRW 22.2 billion to KRW 10.4 billion. In 1997, the incidence of the charge was varied so those firms now face an incentive to reduce emissions to around 30% of their permitted levels as opposed to a straight penalty system, thus rewarding better performers.
- Entry to the United Kingdom emissions trading scheme is open to any entity responsible for emissions in the UK. Companies in Climate Change Levy negotiated agreements are able to use emission trading as a way of reducing the costs of meeting their negotiated agreement targets.

Information and education

The most widely used alternative approach to regulation in OECD member countries is information and education campaigns. These approaches address information asymmetries and empower citizens and consumers to adopt actions or make informed choices that match their preferences and align their sensibility to risks. While many information campaigns simply seek to inform citizens and enhance consumer choice, some information campaigns are more explicit in seeking to change behaviour. This form of campaign, based on attempts at “moral suasion” by the government, is generally found where the behaviours sought to be modified have substantial externality effects. For example, in campaigns aimed at reducing speeding when driving, or mustering antismoking or anti-litter behaviours.

In **Denmark**, initiatives have included information campaigns on the disposal of electric batteries and on reducing drinking water consumption. Another is the EPA’s “List of Undesirable Substances”, a list of approximately 100 chemical substances or groups of substances known to have harmful effects on humans and/or the environment and to be used in significant quantities. The purpose of the list is to exercise a “moral suasion” in

discouraging the use of these chemicals, with future regulatory action a possible, but not inevitable next step.

Since 1987, the **Netherlands** has used an information disclosure strategy in the “ecolabelling” of products – that is, the provision of information to consumers on the environmental aspects of the manufacture, use and/or recycling of the product. In 1994, **Hungary** introduced a similar programme of eco-labelling, called “Environmentally Friendly Product” which certifies around a hundred products, with a fee for the use of the logo paid to the government.

Guidelines

One kind of information campaign is the promulgation of quasi-regulatory “guidelines” by a regulatory authority, setting out processes or providing interpretations to aid understanding of government objectives by business and citizens. They may be designed to accompany existing regulations, particularly those written in performance-based terms (see Annex II), but are also increasingly used as stand-alone documents. Guidelines are helpful where there are many acceptable solutions to a regulatory problem because they do not limit the range of options for compliance.

Guidelines are widely used as an alternative to regulation in the area of consumer protection in **Denmark**. The Consumer Ombudsman sees guidelines as a means to influence the behaviour of particular industries that is more flexible than formal regulation. Where significant non-compliance with guidelines occurs, the Ombudsman is able to instigate court proceedings. Guidelines have evidentiary status in court proceedings, being regarded as interpretations or clarifications of the application of legislation to the particular industry or situation. Business has a clear incentive to support guidelines once made, as their cancellation (which might occur in cases of widespread non-compliance) is likely to lead to the promulgation of more detailed regulations, which are likely to diminish flexibility and increase compliance costs.

Guidelines, while offering significant advantages in terms of flexibility, can potentially have negative impacts on competition. There are strong incentives for existing producers to lobby for guidelines that pose barriers to new entrants or that legitimise existing anticompetitive behaviours. This requires that attention be given to safeguarding openness and transparency in the procedures under which guidelines are made.

Voluntary approaches

Voluntary approaches are arrangements initiated and undertaken by industry and firms, sometimes formally sanctioned or endorsed by government, in which self-imposed requirements which go beyond or complement the prevailing regulatory requirements. They include voluntary initiatives, voluntary codes, voluntary agreements, and self-regulation and can vary in regard to their enforceability and degree of voluntarism.

There are two underlying reasons why firms would participate in voluntary approaches. First, companies who take voluntary action to redress a policy concern may stave off more onerous government regulation. A government with a credible threat of possible future regulation can encourage an industry to deal with the issue itself rather than actually taking the step of implementing regulation. Second, firms may enhance their reputation and hence increase sales via participation in voluntary associations.

For the community as a whole, arrangements that are undertaken and implemented by firms voluntarily offer the advantages of speed, consensus, and flexibility, as opposed to arduous, adversarial, and formal rule-making. Costs of compliance can be lowered, while incentives to comply can be strengthened compared to traditional sanctioning approaches.

At a minimum, voluntary arrangements have the potential to promote interaction among groups who normally interact through the regulatory process as adversaries.

An early, and very successful example of a voluntary arrangement is the chemical industry's Responsible Care Programme, now used in over 40 countries. Responsible Care, aims to accelerate environmental improvements in the chemical industry by promoting the adoption of rules for sound environmental management practice, including a "cradle to grave" product lifecycle management approach. The degree to which this voluntary programme circumscribes firm activity depends on the country and the circumstances in which the particular programme was developed. In **Canada**, where the programme was pioneered in 1984, it is characterised by ambitious targets and strict control procedures.

Box 8. Environmental covenants in the Netherlands

The Netherlands has used covenants since the mid 1980s and they have become increasingly popular, particularly as an environmental policy instrument, over the past ten years. Covenants reflect a desire for co-operative, rather than adversarial, relationships between industry and government in working toward environmental goals.

Covenants are used in three ways: as a temporary instrument pending the passage of legislation, as a supplement to legislation to achieve higher standards and as an alternative to legislation. Three broad categories of covenant are: those that relate to environmental aspects of products, those that relate to pollution caused by companies, and those that contain agreements on the exercise of certain government powers.

As experience with covenants has grown, efforts have been made to standardise their content and roles, notably through the issue in 1992 of a Code of Conduct for covenants and a subsequent Cabinet Regulation, adopted in 1995. The fact that many covenants are enforceable may have been important in encouraging the adoption of these attempts at greater standardisation and transparency. Significant dissatisfaction had arisen with the early use of covenants, based on their lack of clear obligations to achieve results, uncertain legal status, lack of third party involvement and concern that the role of parliament was being supplanted. The 1995 Cabinet Regulation includes criteria for the use of covenants, binding of the parties, openness, making objectives and obligations explicit, accounting for the interests of third parties, dispute resolution and evaluation.

By the time of the 1992 Code of Conduct, over 150 covenants were already in existence. By 1998, there were over 50 in the environment area alone, covering areas such as basic metals, paper and cardboard production, dairy products, batteries, PET bottles, CFC and phosphate use and wastes. Evaluation suggests that the mechanism has been successful in achieving an integrated focus on firms' environmental problems and that the process of devising and implementing the covenants is now well accepted. Overall, covenants are seen as an important adjunct to more traditional regulation.

Note: See OECD (1999), *Regulatory Reform in the Netherlands*, Paris, p. 131, and Bastmeijer, K. (1997), "The Covenant as an Instrument of Environmental Policy: A Case Study from the Netherlands", published in Huigen, H. (ed), OECD (1997), *Co-operative Approaches to Regulation*, PUMA Occasional Papers No. 18, Paris.

These were the result of an imminent threat of new legislation, consumer boycotts, and local pressure against the chemical industry in the wake of the Bhopal disaster. By contrast, in **France**, where the programme was adopted in 1990, it was developed in the absence of any threat of additional regulation or international chemical industry disaster. Hence the programme involves recommendations rather than mandatory requirements, self-reporting, and the only sanction is exclusion from the association of members of the programme. Despite differences in scope between countries, the Responsible Care Programme has significantly improved relationships between the chemical industry and local communities. It has improved environmental practices, and has given the industry the flexibility to achieve cost-effective outcomes without being subject to new regulation.¹⁰

In the **United States**, a variety of voluntary programmes was developed in the 1990s, such as the Pesticide Environmental Stewardship Program, Encouraging Environmental Excellence, and Common Sense Initiative. A study found that these programmes combine the features of the unilateral, negotiated, and public voluntary approaches employed in the **European Union**.¹¹ Most **United States** voluntary efforts are co-operative, non-mandatory strategies.¹²

In some countries legislation is used to demonstrate a strong credible threat of potential government action, which in turn provides considerable incentive to develop, join and participate in voluntary approaches. For example, in **Denmark** legislation gives Ministers the power to issue a formal order making voluntary agreements enforceable and mandating that non-participant firms within the industry comply with the agreement's conditions. While this power is rarely used it is believed to have substantially increased the degree of commitment of firms to the various voluntary approaches.¹³

As in the US, the large majority of voluntary arrangements in EU countries are nonbinding in nature.¹⁴ The exception tends to be The **Netherlands**, where Dutch covenants which tend to be more coercive as they rely on legally binding obligations.

Notes

1. OECD (1999d), p. 132.
2. OECD (1998c), pp. 135-151 and Procuraduria Federal del Medio Ambiente (1998).
3. Chenok, Daniel J. (1997).
4. OECD (1999d), pp. 147-8.
5. Government of the United States (1997).
6. OECD (1997b); OECD (1994); OECD (1995b). 7. OECD (2000e).
8. United States Government (1999), p. 198.
See www.geocities.com/flower1_20007/ANCW.html
9. Haddad (1997).
10. OECD (1999f), p. 67.
11. Mazurek, Janice (1998).
12. OECD (1999e), p. 149.
13. OECD (2000e).
14. EEA (1997), Oko-Institut (1998), cited in OECD (1998d), pp. 12, 15.
EEA (1997), Oko-Institut (1998), cited in OECD (1998d), *op. cit.*, pp. 12, 15.