

DOMESTIC TRANSFERABLE PERMIT SYSTEMS FOR ENVIRONMENTAL MANAGEMENT: DESIGN AND IMPLEMENTATION

EXECUTIVE SUMMARY

Tradable permits can be effective policy instruments for environmental management.

There has been increasing interest in tradable/transferable permits (TPs) as a cost-effective instrument for environmental management, both for pollution control and natural resource management. The OECD publication on *Domestic Transferable Permit Systems for Environmental Management: Design and Implementation* (2001) provides a brief historical overview of the development and use of TPs, and examines the principal issues in designing a TP system within a country, including the key design parameters that decision-makers should take into account. It also discusses how those designing a TP scheme can best make use of the potential strengths of the instrument, while taking into account the constraints and conditions that might ultimately affect its adoption. The study is based as much on the empirical experience gained to date as on the theoretical work contained in the literature, which has grown substantially over the past 25 years.

Tradable permits have certain strengths.

If implemented under the right conditions, TPs have the following benefits: (i) *environmental effectiveness* – guaranteeing environmental performance by addressing environmental impacts more directly through the setting of goals or quantified physical limits (e.g. ceilings or floors) on emissions or natural resource extractions, and requiring strict monitoring of the observance of these quantified parameters; (ii) *decentralised flexibility* – granting regulated agents greater flexibility in the choice of means in achieving the environmental objectives; (iii) *economic efficiency* – minimising the overall cost of compliance by encouraging regulated agents that can abate pollution and/or conserve resources more cheaply to do so first, while allowing those with higher costs to opt for buying additional permits/allowances; and (iv) *better control over distributive effects* – allowing flexibility for achieving desired income distribution/transfer among different groups depending on how the TP scheme is designed. Also, TPs are said to encourage technological innovations among regulated agents by instituting financial incentives to overachieve environmental objectives, although this has not yet been empirically demonstrated.

Four Main Families of Tradable Permits

1. *Quotas* (cap and trade or minimum limits and trade): a quantified ceiling or floor assigned to agents for a given period.
2. *Emission reduction credits*: acknowledgement at the end of the period of the achievement of an emission or abstraction level below the one which had been authorised for a given agent.
3. *Averaging*: the competent authority sets average limit values for an entire range of similar products manufactured by firms within the same industrial branch.
4. *Transferable usage rights*: formally regulates access to resources that are freely available, organising the regulation of the use of resources whose ownership is shared, or in the case of building and construction rights, alleviating the private property restrictions from the standpoint of environmental objectives.

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There are key variables for the design of a transferable permit system related to the objectives and basic characteristics of the system,...

Designing a TP system can entail a sequential decision-making process involving a series of options related to a number of key variables, including:

- The *objectives of the system* and its basic characteristics, such as the physical basis of permits, contents of usage rights, conditions under which transfer of rights or permits may be exercised, legal status of the permits/rights and how the participants are to be selected.
- *Initial allocation of permits* – criteria for the initial free allocation of quotas (how much for whom), or how the quota price should be set for administrative allocation (i.e. if through market mechanisms, what auctioning methods should be used; for credits, how a benchmark should be determined for acceptable level of emissions/abstraction, and how reliable monitoring can be ensured).
- *How to introduce temporal and spatial flexibility* – and which flexibility options (e.g. banking, borrowing, bubbles, etc.) are suitable under what conditions.
- *How to organise the transfer or trade itself* – within an entity as “intra-firm trades”, bilaterally between two entities, through brokers, at an exchange, or carried out under the auspices of an administrative authority.
- Reliable and cost-effective *systems for monitoring* pollutant emissions and/or resource abstraction, such as a performance tracking system and public information disclosure to establish credibility in the system.
- *Means to encourage participants to comply* with requirements and not to exceed the emission or abstraction levels beyond what is allowed under their permits, such as enforcement of penalties and fines, verification of emission reduction performance.
- *Means to promote participation* by agents and to ensure that programme is run smoothly and fairly.
- *Consideration of combining TPs with other instruments* – a TP scheme might be combined with taxation if the extent of pollution abatement costs and environmental damage are uncertain, when the authorities want to have both guarantees of improved physical environmental performance and to avoid exposing agents to economic costs deemed to be excessive. Linking TPs to voluntary agreements offers the advantage of eliminating the problems with implementation and the economic inefficiencies usually associated with voluntary agreements when the latter are not accompanied by other legal or economic mechanisms.

...the design options for the system,...

...and the means of implementation.

Policy-makers need to consider certain issues and constraints before moving ahead with implementation, such as competitiveness,...

There are a number of issues that policy-makers should keep in mind when deciding to opt for a TP scheme over other policy instruments, including the following:

- Competitiveness and market power – generally, TPs can have a favourable impact on economic competitiveness compared with regulatory approaches but each case needs to be examined individually, particularly the rules of initial permit allocation and fiscal redeployment in order to determine the net impact on the competitiveness of firms. The competitiveness effects take place in two distinct ways – through short-term impacts on market equilibrium, and through long-term impacts on technological innovation and eventual productivity increases.
- Compatibility of the proposed TP system with existing legal and institutional frameworks, regulatory regimes, and other instruments such as taxes and duties or negotiated voluntary agreements, in light of the risk of adding substantially to administrative costs if the services, monitoring systems and compliance

...compatibility with other instruments,...

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...distributive effects,...

...and political and social acceptability.

Finally, the process of designing and introducing a transferable permit system can require regulatory and institutional reform.

resources need to be duplicated.

- Distributive effects arising from the implicit sharing of property rights to the environment among the government, firms responsible for pollution and/or resource extraction, and citizens or residents of the concerned community.
- Political acceptability regarding the misinterpreted concept of the "right to pollute," and social acceptability surrounding the perception of TP schemes as a threat to local environmental quality and employment.

In reality, few countries have functioning TP schemes in place. Many countries have considered proposals for TP programmes, and often reached advanced stages in the public decision-making process, stopping just short of a final decision to adopt them for implementation. The process of designing and successfully launching a TP system requires political will, awareness by all the actors involved, and often improving, or overhauling, the existing regulatory and institutional framework. Some of the key elements in regulatory and institutional reform to facilitate introduction of a TP system include the following:

- A shift from regulations focused on technology choice to the formulation of physical constraints, such as ambient air/water quality standards, that are more in line with environmental objectives and offer greater flexibility in the choice of means to achieve compliance.
- A shift from environmental standards expressed in terms of unit and concentration values to those expressed as absolute/mass values (ceiling or quotas by period).
- Assignment of responsibility for verifying policy implementation to independent administrative authorities whose long-term mission would be to ensure compliance with regulations and to develop transfer activity and fair transactions.

Drawing lessons from existing experiences, the report provides detailed analyses of these and other key conditions and variables for implementing domestic TP schemes.

To purchase *Domestic Transferable Permit Systems for Environmental Management: Design and Implementation*, and other OECD publications, visit the OECD Online Bookshop at <http://www.oecd.org/bookshop> or send an email to sales@oecd.org.

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