Organisation de Coopération et de Développement Economiques
Organisation for Economic Co-operation and Development

OLIS : 12-May-1998
Dist. : 14-May-1998

Or. Eng.

ENVIRONMENT DIRECTORATE
ENVIRONMENT POLICY COMMITTEE

ENV/EPOC/PPC(97)19/REV2
Unclassified

Cancels & replaces the same document:
distributed 12-May-1998

Group on Pollution Prevention and Control

Extended and Shared Producer Responsibility

Phase 2

EXECUTIVE SUMMARY

Contact: Fabio Vancini, Tel (33-1)45 24 76 95, Fax (33-1)45 24 78 76
E-mail: fabio.vancini@oecd.org

65385

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format

Or. Eng.

FOREWORD

Many OECD countries -- in accordance with the Polluter Pays Principle (PPP) -- are taking measures to expand private sector responsibility for conserving resources and energy and reducing the quantity of pollutants released and waste destined for final disposal. This approach of Extended Producer Responsibility (EPR) is aimed at making the private sector responsible for efforts to reduce environmental impacts from both the use and disposal of their products and to use and benefit from recycling, recovered resources and reclaimed materials in doing so.

In 1994, an OECD project on EPR was initiated, focusing particularly on programmes to address what many regard as the "weakest link" in the product responsibility chain: the final disposal of products after their sale to and use by consumers. The overall themes of each phase under the EPR Project are:

Phase 1 *Review of legal and administrative approaches in OECD Member countries and development of initial policy options for EPR programmes (1994-1995);*

Phase 2 *Analysis of economic efficiency and environmental effectiveness of various approaches to EPR (1996-1997); and*

Phase 3 *Examination of EPR approaches and issues through a series of multi-stakeholder workshops, culminating with a joint workshop combining efforts under EPR and Waste Minimisation OECD work programmes. Synergies are expected and the workshop results will serve as a basis for the development of comprehensive policy options in the form of guidance manual for governments (1998-1999).*

The *Phase 1* Report was based on extensive interviews and information gathered across the OECD area and was published in 1996 (OECD Environment Monographs No. 114, OCDE/GD(96)48).

Phase 2 consists of four areas: *a)* in-depth case studies on existing EPR systems, *b)* possible trade implications, *c)* economic analysis of EPR options, and *d)* development of an overall 'Phase 2 Framework Report' for implementing EPR programmes with a particular focus on the policy and legal considerations for sharing responsibility.

This document on "Extended and Shared Producer Responsibility" is the Executive Summary of all the work undertaken under *Phase 2* of the EPR Project. It is meant to serve as a self-standing brief for policy makers and other interested parties. The conclusions reflected in this Executive Summary are subject to further development and refinement as this Project progresses through *Phase 3*. This document has been produced within the OECD Secretariat by Fabio Vancini.

Delegates to the OECD Pollution Prevention and Control Group have had the opportunity to peer review this document and have agreed that it should be de-classified.

This document is published under the authority of the Secretary-General of the OECD.

Extended and Shared Producer Responsibility

Phase 2

EXECUTIVE SUMMARY

Many Member countries of the Organisation for Economic Co-operation and Development (OECD) are placing increasing importance on a promising new public policy tool commonly referred to as Extended Producer Responsibility (EPR). Considerable work on this tool has already been undertaken by OECD under Phase 1 of the EPR Project. In Phase 2, the OECD undertook further evaluation of EPR approaches taken in selected Member countries, and developed a detailed assessment of design and implementation factors for extending and sharing responsibility to achieve equitable and efficient EPR programmes.

This work, funded by the Government of Japan, takes a focused look at ways to minimise wastes by transferring substantial or complete financial responsibility to private enterprises for managing their products at the post-consumption phase. When properly undertaken, EPR's strength lies in its ability to simultaneously operationalise life-cycle thinking, the waste minimisation hierarchy, and the Polluter Pays Principle. OECD analysis to date confirms that EPR is a promising tool in support of sustainable development.

Context

Within the context of developing systematic approaches toward waste minimisation, closed material cycles and a reduced dependence on natural resources, the relatively new approach embodied by "Extended Producer Responsibility" (EPR) addresses, in a tangible way, some key environmental sustainability challenges. EPR can help address such challenges under at least three broad thematic areas:

(1) ***economic support measures***: a historic over-reliance on certain government subsidies that may stifle technical change, block a fuller internalisation of externalities, and possibly cause sub-optimal ecological and economic outcomes,

(2) ***consumer behaviour***: the challenge of enlisting the consumer to act in accordance with certain environmental objectives, and

(3) ***waste generation trends***: annual waste generation rates that continue to rise in concert with Gross Domestic Product.

Though EPR is but *one approach* in support of environmental sustainability, it has the potential, when properly undertaken, to act as an important driver stimulating continuous improvement in overall public and corporate environmental governance.

Perspectives

on Extended Producer Responsibility

"... it injects a new business and competitive dynamic", "..it can promote innovative advancement and resource efficiency", "...it is a way to concurrently actualise waste prevention and closed material loops...", "...it can embody a link between product policy and waste policy, and build life-cycle materials management systems", "...it is a means toward the elimination of government subsidies that do not favour a fuller internalisation of externalities associated with waste management", "... as a favourably looked upon evolving instrument, it represents the future for an increasing number of industries that produce or import products within and outside the OECD area ...", and "... in view of the broad participatory process and chain management necessary for achieving best overall results, one might appropriately describe EPR as "Extended and S H A R E D Producer Responsibility."

The statements in the box above illustrate views expressed by different OECD Member countries in the context of this EPR project. These observations reflect the multi-objective nature of the EPR approach, and the positive opportunities it provides. Clearly, however, opportunities, and particularly the benefits thereof, do not come automatically. The realisation of EPR's benefits requires strategic planning, oversight and leadership by governments, appropriate stakeholder input in the setting of performance requirements, and the active involvement of all relevant societal actors for the actual attainment of established objectives. A rich mix of other considerations must also be taken into account, such as changing the legal concept of "ownership", preventing and controlling free-riding of all sorts, minimising problems associated with potential monopolistic positions of corporate "Producer Responsibility Organisations", and attending to international trade matters. In short, the likelihood of realising the fruits of an EPR approach significantly increases when a range of programme design factors are provided for, implemented, and subsequently refined.

Project Background

Many OECD countries are presently taking measures to expand corporate responsibility for conserving resources and energy, and reducing the quantity of wastes destined for final disposal. The EPR approach is broadly aimed at making the private sector responsible for efforts to reduce environmental impacts from the disposal of their products by using modified industrial processes, waste prevention, product reuse, and the recycling and recovery of materials. Whether embodied in negotiated agreements, legislation, or industry-led voluntary initiatives, successful EPR programmes tend to *change the conventional balance of responsibilities among manufacturers and distributors, the consumer, and the government.* This change in dynamics would occur perhaps most tangibly with respect to the post-consumption stage of the product's life-cycle. Such programmes *extend* the responsibilities assigned to producers and to distributors in the past, i.e., worker safety, prevention and treatment of environmental releases from production, financial and legal responsibility for sound management of production or

industrial wastes, and civil responsibility for dangerous products, to include financial and possibly also physical responsibilities for *the management of products at the post-consumption stage*.

By doing so, EPR leverages life-cycle thinking and encourages producers to re-evaluate key *upstream* design decisions that only they can make to minimise the waste and pollution potential of products. Therefore, a number of factors become increasingly important strategic matters for private enterprises. These include, but are not limited to, product conception, design for reuse and recyclability, materials selection, production processes, packaging, distribution/reverse distribution and marketing approaches.

In 1994, the OECD began its EPR Project to document and support the development of this promising new instrument. In 1995, the OECD Washington Waste Minimisation Workshop explored ways to achieve these strategic goals using EPR[1]. In 1996, the OECD Phase 1 Report presented the results of an extensive survey of EPR developments in many Member countries[2]. That report offered initial recommendations for the basic design of EPR programmes and steps by which governments may support such programmes. These recommendations all have been subsequently reaffirmed as part of OECD's current EPR work reflected herein.

The concept of EPR as articulated under Phases 1 and 2 of this work -- that producers should take more responsibility for the cradle-to-grave environmental impacts of their products (particularly with respect to product end-of-life impacts), and that there is a need to internalise externalities to a greater extent in the price of products -- reflects one approach for reducing the environmental impacts of products. A key focus of OECD analysis to date is on the role that producers, acting independently or jointly, can play in improving the environmental attributes of products. The focus on producers does not mean that other actors in the product chain will have no role in achieving desired objectives. Moreover, as explained in the Phase 2 work, there are considerable opportunities, which some Member countries are pursuing, to design EPR programmes that extend and share post-consumer product responsibility throughout society.

Because the bulk of EPR experiences to date are associated with post-consumption packaging, OECD's analysis has mostly, though not exclusively, used the lessons learned from packaging programmes as the analytical backdrop for undertaking its work. Nevertheless, the principles and interim policy recommendations that have been developed during this phase of work are constructed to have broader applicability also to other products, including those of a long-life and complex nature. The outcome to date is not definitive. During Phase 3 of this EPR Project, a series of multi-stakeholder, multi-sectoral workshops will be undertaken to further evaluate EPR (1998-1999). To achieve efficiencies and set the stage for developing comprehensive policy guidance, OECD Member countries have decided to combine the culminating workshop under the EPR Programme with the culminating workshop under the Waste Minimisation Programme. *The conclusions reflected in this Executive Summary are therefore subject to further refinement and development during the culminating phase of work.*

The Core of EPR

The essence of EPR is *who pays for, **not** who physically operates*, the waste management system. EPR provides producers with incentives to reduce operational costs for which they now have

1. Extended Producer Responsibility Programmes, pp 203-218 in "Washington Waste Minimisation Workshop. Volume II - Which Policies, Which Tools?" (Paris, 1996)
2. Extended Producer Responsibility in the OECD Area - Phase 1 Report". OECD Environment Monographs, No. 114 OCDE/GD(96)48. (Paris, 1996)

become responsible as their products reach the post-consumption phase. The new financial incentives encourage producers to acquire new skills and increasingly act in accordance with the life-cycle approach to product systems. Producers' actions, coupled with consumers' support, would be expected to result in the fullest possible achievement of many goals shared by OECD governments:

- waste prevention and reduction;
- product reuse;
- increased use of recycled materials in production;
- reduced natural resource consumption;
- internalisation of environmental costs into product prices; and
- energy recovery when incineration is considered appropriate.

Even in those cases where financing is fully internalised by producers, local authorities can continue their traditional role as handlers in waste collection, though now as contractors.

Municipal waste is the only substantial part of the total waste stream that in most countries is not managed by the industries that are generators of the waste, but is managed by governments at the expense of taxpayers. EPR recognises that producers are most able to design cleaner products so as to prevent waste, minimise downstream pollution control costs, and incorporate unavoidable costs into product pricing.

Thus EPR is a means to reducing the need for government subsidies associated with waste management, i.e. costs linked to the management of products in the post-consumption phase. This would in principle be done by shifting such costs from the taxpayers to final producers for internalisation into product pricing. Furthermore, consistent with the results usually seen from better waste minimisation, well-managed EPR systems can be expected to be accompanied by increased production efficiency and competitiveness, for both the industries and the nations involved.

Material and Capital Flows

For many products, *EPR programmes will establish new or modified systems of material and capital flows.* In order to illustrate the nature of such flows throughout a product's life cycle, the generic figure below has been developed. The figure also introduces the corporate "Producer Responsibility Organisation" (PRO), the important new social institution that is emerging as a key means, in many countries, to the success of the individual producers in meeting their collective EPR responsibilities. The figure, which is fully explained in the Phase 2 Framework Report [ENV/EPOC/PPC(97)20/REV2], is not intended to provide an exhaustive representation of EPR systems, since there are a host of other fundamental activities especially involving governments that are not indicated, including target setting, monitoring, and sanctions.

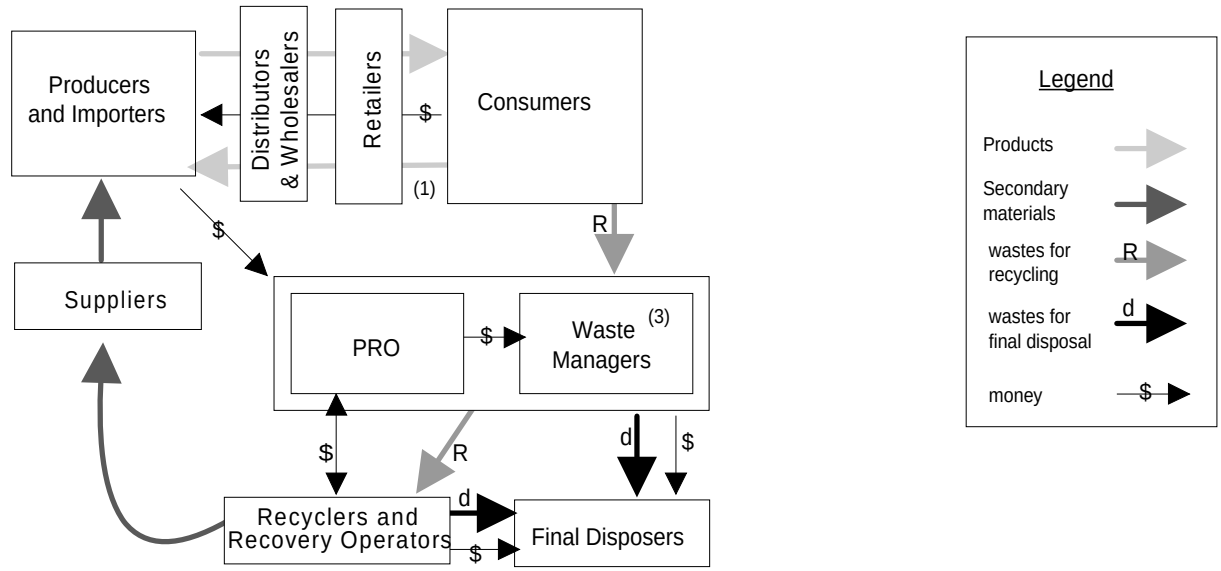
A Continuum of Approaches

A continuum of possible approaches exists for establishing EPR systems, ranging from industry-led voluntary initiatives, to government/industry negotiated agreements, to legislated approaches. OECD research to date indicates that the partial failure of voluntary EPR programmes has usually occurred because such efforts have been limited to a few producers of readily recoverable products, and because of the inherent difficulty in dealing with non-participants, commonly referred to as *free riders*. Within an

industry sector, some companies will, given an opportunity, opt to remain outside of an EPR programme in order to receive an (unfair) economic advantage over competitors that voluntarily participate.

Where negotiated or mandatory programmes have been instituted, it is often because fully voluntary programmes have proved insufficient for the fulfilment of EPR objectives. Therefore, in order to establish a far-reaching, widely effective EPR programme with a level playing field, government action will likely be needed. This may be either *(a)* by a law outlining necessary programme elements and authorising a responsible government agency to provide additional details by regulation, which could be negotiated with industry, or *(b)* by a law requiring a government-industry negotiated agreement or "covenant" to establish programme elements.

Material and Capital Flows in an EPR System



(1) The side-stream cycle of refillables/reusables/returnables is reflected in a thin "take-back" arrow from consumers to producers.
(2) The Producer Responsibility Organisation (PRO) is the private-sector association funded by producers and importers to assure waste management with recycling and recovery.
(3) "Waste managers" may include private companies or local governments receiving funds from the PRO.

Negotiated approaches between government and industry can provide significant opportunities for all stakeholders to be involved in a process of consensus building. A transparent, inclusive process will facilitate more creative, lower-cost, and quicker solutions. The government could allow the private sector the possibility to devise the self-regulating means and solutions to achieve the performance objectives that have been set. Detailed governmental regulations should probably be avoided as much as possible except as necessary to empower the corporate Producer Responsibility Organisation to achieve EPR goals.

Responsibilities and Activities within the Chain of Societal Actors

The OECD undertook an in-depth analysis of the means for designing an EPR programme that fairly extends and *shares* post-consumer product responsibility throughout society. Phase 2 has sought to comprehensively explain the nature of responsibilities and activities that can be linked to different societal actors, throughout both the product and policy life cycle. Major actor categories which have been assessed include national governmental authorities, final product manufacturers and importers, corporate Producer Responsibility Organisations (PROs), consumers, and local government authorities.

With respect to the consumer category, for example, consumers can exhibit financial responsibility upstream when making the decision to purchase an EPR-covered product, while they can exhibit physical responsibility downstream to help maximise the efficiency of separation and collection for ultimate recycling.

Future OECD work will likely result in the refinement and adjustment of the proposed "catalogue" of social responsibilities and actions. OECD's work to date in this context should therefore only be considered indicative, not prescriptive. National circumstances will ultimately dictate the weight placed upon the different actions and duties associated with each actor category. Nonetheless, it seems likely that many or all activities that have been identified will require some degree of consideration when designing, implementing and fine tuning an EPR programme.

Maximising Success

Apart from undertaking actions that allow for the appropriate and clear allocation of extended and shared responsibility to achieve EPR programme objectives, governments can undertake many actions to maximise the chances for the successful implementation and performance by the final producers of their ultimate EPR responsibility. These include:

- Appropriately timing programme implementation;
- Preventing free riding;
- Contending with PROs as potential monopolies;
- Attending to international trade (i.e., law and other) issues;
- Rewarding responsible actors;
- Undertaking activities to complement and support EPR; and
- Providing for public education, programme oversight, and other factors.

Performance Measures

To facilitate comparisons between different EPR systems, the OECD developed and applied five core performance criteria to two well-established programmes: the EPR packaging systems for Germany and the Netherlands. The criteria not only facilitate more consistent performance assessment, but they can also be more broadly used as central policy considerations for the mid-stream adjustment of *existing* EPR programmes, as well as for the strategic planning of *future* EPR programmes. Continuous overall improvement of an EPR programme can be supported through increasingly systematic monitoring based on the fulfilment of these or similar criteria on a national level.

(1) Environmental Effectiveness: the extent to which the programme has achieved established environmental performance objectives and/or the extent to which environmental improvements occur from year to year. Components of environmental effectiveness include changes in environmental quality, health risk reduction, and resource efficiency;

(2) Economic Efficiency: the extent to which the programme has operated with minimum cost to society. Components of economic efficiency may include various domestic impacts, i.e. prices, employment, profitability and competitiveness, growth, as well as trade and international competitiveness;

(3) Innovative Advancement: the extent to which the programme has stimulated technological and managerial innovation. Such "dynamic efficiency" is key to increasing economic efficiency and environmental effectiveness;

(4) Political Acceptability: the extent to which the programme has enjoyed positive political reception. Components of this consideration may include public participation and transparency, social equity, and conformity with international agreements; and

(5) Administrability: the extent to which the programme is feasible to carry out. Components of administrability include smooth integration with policies of other sectors, simplicity and flexibility of operation, effectiveness/compliance, and costs associated with monitoring, licensing, and enforcement. Cost impacts and attributes of effectiveness should be considered both for governmental and private-sector entities.

In addition to these broad criteria, EPR-specific challenges alluded to above, in particular the challenge of *free riders, international trade issues, and PROs as potential monopolies*, will have a strong influence on the degree to which the broader performance criteria are fulfilled. The optimisation of an EPR system would seem to call for a combined assessment method which incorporates broad performance-oriented criteria with EPR-specific challenges and responses thereto.

FOCUS
on EPR
Innovative Advancement

Innovative Advancement is key to increasing economic efficiency and environmental effectiveness. In the Netherlands, Life Cycle Analyses (LCAs) and Market-Economic Analyses (MEAs) have been an *explicit requirement* for producers under the "chain-management" EPR approach of its 1991 Packaging Covenant. Over six years of experience with this obligation demonstrates that at least a few hundred innovative adaptations to packaging systems have been implemented. Perhaps the most important innovation, however, has to do with the fact that the process of undertaking LCAs/MEAs inherently forces increased co-operation between all links in a product chain, and results in improved insights into enterprises' cost structures. Corporate awareness of product system environmental attributes is enhanced. Fairer solutions for all enterprises involved in a product chain would presumably be promoted while achieving best practicable "cradle-to-grave" solutions for attaining the EPR performance requirements.

OECD Findings

There is a strong acknowledgement across mostly all OECD countries that an alternative tool, *EPR*, is now at hand with which to further leverage precautionary approaches, potentially achieve great improvements in the minimisation of waste, and change the way that industries think about their product systems. EPR is a multi-objective tool that when properly undertaken would seem to offer several opportunities for innovative advancement in public sector and corporate environmental governance.

With increasing international collaboration on EPR, the chances for *avoiding potential problems* and *institutionalising* this inventive approach are considerably enhanced. Ecological and economic benefits are expected when a range of EPR design and implementation factors are taken into account during the programme design and implementation phases.

Phase 2 of the OECD EPR Project reaches the following conclusions for further consideration and development during the Phase 3 workshops.

(i) General

EPR programme efficiency heavily relies on producer and consumer support and involvement in its operations. Therefore, more important than ever is clarity and cohesiveness in programme design, operation, and oversight, as well as the promotional leadership of government.

(ii) Responsibility Assignment

The fundamental legal conceptualisation of "ownership" of post-consumer product responsibility could be revised to clearly assign "ultimate responsibility" to producers. As a means toward the privatisation of waste management (i.e., internalisation of associated environmental costs) and better overall waste minimisation, EPR requires that producers will retain or regain effective ownership of their products once the post-consumption stage is reached.

Without diluting producers' ultimate responsibility, extended responsibility should be shared. However, the notion of "shared responsibility" is useful only if individual roles and responsibilities of different actors (including national governmental authorities, final product manufacturers and importers, corporate Producer Responsibility Organisations, consumers, and local government authorities) are made unambiguous, and mutually exclusive, to the extent possible.

It will also be important to identify the scope of the final producer's responsibility for end-of-life "similar" products that come into his possession, but which he did not actually produce. This would include consideration of responsibility for end-of-life "orphan" products where the original producer no longer exists. This may be particularly relevant to long-life, complex and high-cost products.

Certain long-life products will have been manufactured before the relevant EPR programme came into effect, and the issue of who should pay for the recycling of those products will likely require further analysis to arrive at efficient solutions.

(iii) A Level Playing Field

In order to establish a far-reaching, widely effective EPR programme with an equitable distribution of benefits and costs, it seems likely that government action will be needed on some level, whether it be the establishment of framework legal provisions for EPR, or in the negotiation of an EPR "voluntary agreement" with a target industry sector.

Free-riding of all sorts should be prevented and if necessary disciplined by governments and/or corporate Producer Responsibility Organisations (PROs) that have been appropriately empowered to undertake such activities. Under most circumstances, the private sector will take measures to achieve officially established performance requirements only when individual enterprises are faced with economic handicaps or specific sanctions for failure to do so.

Importantly, the consequences for failure should be more expensive than the internalised cost of financial responsibility for participating in EPR.

(iv) Phased and Flexible Approaches

Governments may wish to consider the benefits of phasing-in EPR programmes, beginning with measures to promote markets for secondary materials and stimulate development of recycling capacity, followed by the establishment of monitorable performance targets.

It is more effective to allow the private sector to devise the practical means for achieving these targets than to create detailed government regulations.

(v) Performance Requirements

EPR performance requirements should be progressive, and manageable. Waste prevention, product re-use and recycling targets would probably be best set through an entire sector range, and not only on a sub-sector basis, in order to have a far-reaching impact, while treating competitors equally.

(vi) Promoting Application of Forward-looking Business Tools

Participation in an effective EPR programme will tend to cause private enterprises to re-think and reduce their products' environmental impacts. EPR can be an important accelerator to foster continuous overall improvement in corporate environmental management. Creative methods to more explicitly link EPR-based performance objectives with broader cleaner production objectives could be advantageously explored. In this context, an investigation of the feasibility of employing other tools, such as corporate Environmental Management Systems, might be useful.

Encouraging or, as some countries have done, requiring, business self-analysis planning, i.e., life-cycle and market-economic, can foster the integration of activities within and across enterprises. This can result in the more efficient attainment of performance targets, and the advancement of technological and managerial innovation.

(vii) New, Important "Corporate Institutions"

Producer Responsibility Organisations (PROs) can be a key to EPR success. Governments may usefully consider establishing all necessary favourable conditions under which PROs may be launched to act collectively toward the fulfilment of member producers' individual responsibilities. Governments could actively support PROs by regulating non-participant free riders such that they will see the advantages of PRO membership. PROs could be encouraged to establish producer membership fees that are designed as private-sector economic instruments for promoting and rewarding waste minimisation.

(viii) International and Domestic Competition

Preliminary OECD research indicates that EPR policies and programmes do not give rise to immediate, obvious or large-scale trade problems. Vigilance will be required however to ensure that EPR policies do not create unnecessary obstacles to trade or arbitrary or unjustifiable discrimination that affords protection to domestic industry. Respecting international requirements for notification and transparency of new requirements and schemes, and perhaps

making allowances for particular problems caused to developing country exporters, would go a long way to avoiding any international friction.

A number of economic and legal issues of market or business concentration may be related to the activities of Producer Responsibility Organisations. National governments may find themselves challenged by EPR to reconcile and integrate their national environmental and competition policies to avoid the negative impacts associated with potential monopolies.

The special difficulties that EPR may pose for small and medium sized enterprises (SMEs) would seem to require the particular attention of governments.

(ix) Accounting and Accountability

National governments can encourage and assist local authorities to address possible "double charging", such that municipal waste management taxes or fees are reduced by the amount of the private-sector financial contribution to the (formerly fully subsidised) waste management system.

EPR programmes can incorporate full-cost accounting for financial transactions and make results accessible and easily understood by the general public. Oversight bodies composed of local authorities and representatives of major stakeholder groups could monitor the overall performance of EPR programmes and make recommendations for policy or programme adjustments.

*

* *