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(UNEP)**

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**Environmental Economics Unit  
(EEU)**

**UNEP/WORLD BANK WORKSHOP ON THE ENVIRONMENTAL  
IMPACTS OF STRUCTURAL ADJUSTMENT PROGRAMMES**

**and**

**THE UNEP/UNCTAD EXPERT GROUP MEETING  
ON INTERNALIZATION OF ENVIRONMENTAL COSTS**

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The views and interpretation reflected in this document are those of the author and do not necessarily reflect an expression of opinion on the part of the United Nations Environment Programme.

**UNEP/World Bank Workshop on the Environmental  
Impacts of Structural Adjustment Programmes**

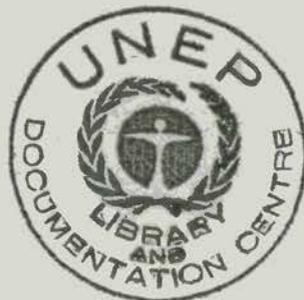
New York, 20-21 March 1995

and

**UNEP/UNCTAD Expert Group Meeting  
on Internalization of Environmental Costs**

New York, 10-11 April 1995

**Report of the Workshop and Meeting  
Hussein Abaza  
Meeting/Workshop Organizer and Rapporteur**





## ***Conclusion and Recommendations for Future Work***

### ***Preamble***

UNEP in collaboration with UNCTAD organized an Expert Group Meeting on Internalization of Environmental Costs. Some 34 experts representing developing countries, countries in transition, non-governmental organizations and research institutions and UN agencies were invited to participate in the workshop. The objective of the meeting was to consider the economic, environmental, social, legal and institutional implications of the internalization of environmental costs, principles for a practical approach to internalization policies, border effects and implications in relative competitiveness in national and international markets, linkage and relationship between internalization policies and other policies and environmental management tools and barriers and constraints for internalization and other environmental management policies. The meeting also aimed at providing recommendations for future work in the field of Environmental Costs Internalization.

### **Main Conclusions**

- \* Internalization is the incorporation of external cost and benefits in the decision-making calculus of producers and consumers, with the objective of altering behaviour towards socially preferable outcomes. External costs include production and consumption subsidies, as well as resource depletion costs and environmental damages not taken into account by producers and consumers. External benefits include resource conservation and environmental services resulting from activities that are not accounted for.
- \* Internalization should begin with the removal of intervention failures (e.g. economically distortionary and environmentally destructive subsidies and the introduction of other win-win measures.
- \* Instruments of internalization include property rights, environmental taxes and charges, regulatory measures, technology standards, institutional arrangements, education and dissemination of information, and voluntary action by the private sector.
- \* The objective of internalization is to alter behaviour by reducing the incentives for environmentally harmful activities and by enhancing the incentives for environmentally preferable activities. The goal is not to raise revenues for the government or to increase the financial burden on the producers and consumers. Where internalization results in an increase in financial burden to the producers or consumers, measures to neutralize this burden, that do not reduce the internalization incentives, may be needed to ensure its acceptability.
- \* Internalization should be done to maximize net social benefits, taking into account the social context as well as the cost-effectiveness of the internalization instrument. Both market and non-market mechanisms should be considered in this respect.

- \* Internalization policies may be used to address both marginal and fundamental changes.
- \* It is not only important that shadow prices be used as opposed to financial prices to influence attitudes, but there is also a need to change institutional structures to achieve this.
- \* Institutional arrangements may be necessary to match the scale of decisions or management units responsibilities with the scale of the environmental or resource problems.
- \* Internalization may or may not result in price increases, depending on the potential for improved efficiency, the scope for backward shift of the cost, market structure, demand and competing supply elasticities, and opportunities for earning a premium for green or sustainably produced products.
- \* The long-term effects of internalization on prices are likely to be smaller than the short-term effects because of increased flexibility, substitution and innovation.
- \* The effect of higher prices on the environment may vary according to the relative magnitude of the substitution and income effects of price increases and the scope of leakage to other sectors or other countries.
- \* Income effects will be much more significant in poorer countries. Leakage effects internationally tend to be relatively small as compared to domestic leakage between sectors and between environmental media.
- \* Developed and developing country experience and economic analysis indicate that loss of competitiveness due to internalization has been relatively small, but the perception of such losses may create a political reluctance to undertake internalization. While unilateral internalization can be to the advantage of the introducing country, international cooperation may help alleviate concerns about loss of competitiveness.
- \* Large competitive losses arising from internalization may indicate that a country has no comparative advantage in a particular industry or commodity.
- \* Internalization could be introduced incrementally or outright, depending on the economic life of the capital stock, the type of market failure that is being internalized, and the political window of opportunity for adopting the internalization policy.
- \* Experience and economic analysis indicate that internalization has a positive employment impact because of the higher labor - output ratio of environmentally preferable technologies and production practices. However, internalization may lead to structural change and dislocation of labor necessitating retraining and re-employment assistance.

- \* The failure to internalize environmental externalities is tantamount to an implicit subsidy of consumption, often in rich countries, by exporters, often poorer nations.
- \* To the extent that internalization involves local externalities incurred during the production process, policies which have competitiveness implications should be compatible with WTO rules.
- \* Internalization should encompass all possible strategies namely: incentive strategy (fiscal measures) environmental legislation and a strategy to change the corporate behaviour.
- \* It is essential that when attempting to internalize costs that we start with the problem which needs to be addressed. It would be useful to list the various options and alternatives available to address cost internalization.

#### **Proposed measures for Cost Internalization**

1. Emphasis in internalization should be made on adopting a participatory process involving policy makers, local communities, industrial associations, producers, NGOs, and interest groups. Internalization of environmental costs should be preceded by a process of consensus building through public hearings and meetings and seminars involving all stakeholders. It should be based on a self-policing approach rather than relying mainly on government intervention, control and monitoring. The benefits of internalization should be made known to the public, appropriately marketed, and information dissemination regarding its introduction and uses enhanced.
2. Steps and modalities for internalization include: identification, characterization, choice of model, and implementation.
3. Requirements for the introduction of cost internalization models include legal, institutional, as well as human and financial requirements.
4. Opportunities for the introduction of cost internalization measures include fiscal reforms, and structural adjustment programmes. This need to be accompanied by the necessary political will and the setting of priorities with respect to short-term versus long-term policy objectives.
5. Alleviating concerns about the impact of internalization on competitiveness could be attained through:
  - Admitting that competitiveness concerns are legitimate.
  - Detailing plans to minimize impacts on competitiveness.
  - Demonstrating that the effects are more significant in the short-run rather than in the long-run when adjustments can be made.
  - Minimizing the short-run impacts through gradual introduction and escalation to

- optimal rates allowing time for adjustment.
  - Pointing out that internalization instruments simply phase out the environmental subsidy implicit in non-charging for externalities in the past.
  - Demonstrating that the efficient environmental taxes would minimize the overall pollution control cost improving the industry's and country's competitive position vis-a-vis a competitor who uses the regulatory approach.
  - Providing evidence that reduced energy intensity usually makes industry internationally more competitive.
  - Implementing environmental taxes as part of a broader tax reform that reduces other taxes (revenue- or tax-burden neutrality).
  - Promoting an internationally coordinated approach to international harmonization of environmental taxes which is not synonymous with uniformization.
6. International cooperation is important to promote cost internalization policies. This is particularly important in case of internalization of transboundary impacts and global externalities. Moreover, multilateral cooperation needs also be promoted. This could be in the form of an international round of consultations.

### **Recommendations for Future Work**

#### ***Research and Development***

- (i) Develop a menu of options for the internalization of environmental costs;
- (ii) Establish and maintain a database of case studies;
- (iii) Study uncertainty issues as they relate to cost internalization;
- (iv) Explore the scope for win-win approaches;
- (v) Identification and assessment of (a) intervention failures (b) internalization failures;
- (vi) Study the selection of instruments under different monitoring and enforcement capabilities;
- (vii) Study the institutional and legal constraints to internalization;
- (viii) Identify problems associated with cost internalization and possible options for addressing them;
- (ix) Study traditional internalization mechanisms including communal use rights, and communal management;

- (x) Undertake further theoretical work, with particular emphasis on uncertainty, feasibility and desirability of unilateral action;
- (xi) Undertake case studies that involve both North and South i.e. commodities exported by both and for issues at different scales. Case studies could focus on the following sector(s): agriculture, resource extraction, manufacture and recreation/tourism. Case studies to include: overview (description of activity in region and bigger picture), commodity mix (production, imports, exports), techniques of production/costs/environmental effects, alternatives (common mix and technology), implications (social, economic, environmental),
- (xii) Synthesize existing studies to promote internalization.
- (xiii) Develop models for environmental cost internalization

### ***Pilot Projects***

Undertake pilot projects on cost internalization on resources/commodities such as water, energy, wood (stumpage fees), rubber, lead, and biodiversity, as well as on approaches such as voluntary internalization.

### ***Information Exchange and Dissemination***

Dissemination of results of case studies and experience on cost internalization, with emphasis on lessons learnt including successes and failures.

### ***Guidelines***

Based on research work and case studies, develop guidelines outlining principles for internalization. Some of the main guiding principles for internalization include: recognizing the problem of intermedia substitution i.e. leakage to other products or sectors via substitution, income effects especially in poor countries and communities, the potential value of transfers in facilitating internalization, respecting differences of local conditions and valuation of environmental costs. Moreover, internalization instruments should be supported by monitoring and enforcement capabilities. They should be non-discriminatory with regard to origin of product as far as consumption and disposal externalities are concerned. They should recognize the equivalence between financial, fiscal, and environmental subsidies, and should address the problem not the commodity. It is also necessary to maintain consistency between fiscal and other macroeconomic policies and internalization.

***Workshops and Seminars***

Future workshops need to include policy makers from ministries of the environment and finance, and other stakeholders including NGOs, industry and academia.

***Modelling***

Though it was recognized that there was a need to undertake case studies and pilot projects, there was also a need for formal modelling in order to define the debate. However, it was acknowledged that such modelling would not necessarily provide a definitive answer.

One approach for cost internalization was looking into areas such as resource extraction, manufacturing, and prepare broad based models, rather than adopting prepared models.

## Annex I

### Environmental Cost Internalization - Experiences and Lessons (Information provided by participants)

- \* Bonair - A combined use of diving site user charges and command and control regulation led to a reduction in the damage to coral reefs by the divers.
- \* Costa Rica - A watershed protection surcharge is being incorporated in water tariffs as an instrument of internalization of positive environmental externalities and as an application of the beneficiary pays principle.
- \* Costa Rica - A five-fold increase of the national park entrance fees resulted in only a 40% reduction of visitors and provided an almost 300% increase in revenue, which is being used to improve protection and management in the park.
- \* Hungary - Hungary introduced in 1992 an environmental product charge on fuels. Revenue from the charge is paid into the Central Environmental Protection Fund and is used to alleviate damages caused by motorization.
- \* India - A study is being undertaken in India to: introduce economic instruments as complements to command and control to internalize costs arising from water pollution and excessive water use by the steel industry and devise a system of tradeable permits for the Tata Iron and Steel Company. The study is expected to result in a "second best" approach based on calculation of marginal pollution abatement costs. Policy measures proposed will be evaluated in terms of their impacts on: competitiveness, incomes, administrative feasibility and monitoring and enforcement requirements.
- \* Malaysia (Malaysian Palm Oil) - Successful governmental intervention through effluent charges on the processing industry did not lead to loss of market share. The costs of the charges were shifted by the processors backward to the primary producers, whose losses were mitigated by a government programme to redistribute resources.
- \* Nigeria - Introduction of a Structural Adjustment Programme in Nigeria led to a general fall in real incomes - this coupled with an increase in price of petroleum based fuels and cooking equipment has the negative effect of increasing the local demand for fuelwood.

- \* Sahel - There may be situations in which the negative income effect of cost internalization may be sufficiently strong to offset the expected positive environmental benefits of the substitution effect to result in greater environmental deterioration.
  
- \* Sweden - The Swedish Government promotes environmentally friendly technologies by liaising between producers of these technologies and potential users so that a market for the technology could be established.
  
- \* Wetlands - Regulators have an important and permanent role to play, even in market schemes for environmental cost internalization, such as the mitigation banking scheme for wetland protection in the U.S.
  
- \* Organic Farming - Provides an example of market driven internalization with catalytic assistance from NGOs and the government. It also provides insight in increase in cost of environment-friendly agricultural production and processing and industry self-regulation.

Annex II

**Agenda**

**Monday, 10 April**

**09:00-09:30**

**Registration of participants**

**09:30-09:45**

**Welcoming and Opening Remarks and adoption of Agenda**

**09:45-10:30**

**Session I: Internalization of Environmental Costs :  
Scope and Role**

Objectives of internalization of environmental costs for sound and sustainable management of natural resources; full cost pricing and the issue of prioritizing specific externalities; polluter pays principle; role of cost internalization in influencing attitudes, lifestyles and consumption and production patterns and in integrating environment and development.

**10:30-11:00**

**Break**

**11:00-12:30**

**Session II: Application of Internalization of Environmental Costs**

Experience in developed countries and its relevance to developing countries and CITs; experience in developing countries and CITs and possibilities for generalization; modalities for introducing environmental costs; market approaches to cost internalization, e.g., risk insurances. Supplementary tools, e.g., standards setting, command and control and public awareness.

**12:30-14:00**

**Lunch**

**14:00-15:30**

**Session III: Economic Implications**

Effects of price increases on the environment; effects on competitiveness; distributional impacts and equity considerations; conflicts between domestic and global priorities for internalization of costs; evaluation of environmental damage in physical and monetary terms; dislocation of labour resulting from internalization policies.

**15:30-16:00**

**Break**

**16:00-17:30**

**Continuation**

**Tuesday, 11 April****09:00-10:30****Session IV: Institutional Aspects**

Institutional, legal and social requirements and implications of the internalization of environmental costs. Identification of factors, ethical and others which induce and constrain internalizational policies. Role of private sector. Potential of international cooperation in relieving institutional constraints to cost internalization.

**10:30-11:00*****Break*****11:00-12:30****Session V: Continuation****12:30-14:00*****Lunch*****14:00-16:00****Session VI: Conclusions and Recommendations**

Main conclusions and recommendations for future work; potential or drawing up guidelines for cost internalization; usefulness of case studies; assistance required from the international community, including UN organizations, international institutions, multilateral development banks, bilaterals and NGOs; specifically role of UNCTAD, UNEP, CSD, ILO, WTO, CSD, etc.

**16:00-16:30*****Break*****16:30-17:30****Continuation**

Annex III

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