Sustainable Development Policy Institute

Working Paper Series no: W-38

Implementing NEQS Pakistan's Experience in Industrial Pollution Control

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01 September 1998

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Working Paper Series # 38
1998

A publication of the Sustainable Development Policy Institute (SDPI).

Sustainable Development Policy Institute is an independent, non-profit research institute on sustainable development.

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Acknowledgements

Comments on earlier drafts of this paper are gratefully acknowledged from Mr. Abdul Matin Khan, Dr. Mahmood Ahmad Khwaja, Mr. Mahmood Ahmed, Dr. Shahrukh Rafi Khan and Mr. Zaffar A. Khan.

Technical support and guidance in developing the NEQS programme extended by SDPI's local consultants, Hagler Bailly Pakistan, is especially appreciated.

Glossary

APTMA	All Pakistan Textile Processing Mills Association
DFI	Development Finance Institution
EPA	Environmental Protection Agency
ESC	Environmental Standards Committee
ETPI	Environmental Technology Programme for Industry
FPCCI	Federation of Pakistan Chambers of Commerce and Industry
IUCN	The Word Conservation Union
NDFC	National Development Finance Corporation
NEQS	National Environmental Quality Standards
NGOs	Non-Governmental Organizations
OCAC	Oil Companies Advisory Committee
OICCI	Overseas Investors Chamber of Commerce and Industry
PEPC	Pakistan Environmental Protection Council
PETFs	Provincial Environmental Trust Funds
PSDFs	Provincial Sustainable Development Funds
SDPI	Sustainable Development Policy Institute
TTSID	Technology Transfer for Sustainable Industrial Development

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Introduction

A pollution charge regime is being introduced in Pakistan as a measure to achieve industrial compliance with the National Environmental Quality Standards (NEQS). The modalities for the implementation of the pollution charges have gone through a unique consultative process between representatives of industry, government, environmental NGOs and academic researchers. The consensus of all stakeholders has been to adopt a market based approach, i.e., a pollution charge or tax combined with fiscal incentives to industries, rather than a use of coer criminal procedures for ensuring compliance with NEQS. Appreciable progress has been made towards operationalizing the process and January 1999 has been fixed as the date for commencing implementation.

This paper documents Pakistan's experience in formulating these critical environmental policy developments.

Background

Although originally promulgated by the government in 1983, there had never been a concerted effort to implement the NEQS until the Pakistan Environmental Protection Council (PEPC) was reactivated in 1993 by Mr. Asif Ali Zardari, the Minister for Environment and husband of then Prime Minister, Ms. Benazir Bhutto. Patronage at this level provided the necessary political support for environmental concerns in the country and it was at this time that the Sustainable Development Policy Institute (SDPI) suggested the use of a pollution charge[1], based on the German experience in pollution control, and initiated discussions on modalities for implementation.

Somewhat skeptical at first of the use of such a market based instrument, government and private sector representatives soon came to the realization that this was perhaps the most effective and equitable way of ensuring compliance with NEQS. There are obvious obstacles in the transition to more sustainable industrial production, not least of which is the exorbitant cost of new technology, lack of technical know-how or expertise, insufficient credit availability, and the already weak financial health of the industrial sector. Faced with these problems, it has been a challenging task to convince industry, especially the non-exporting sectors, to comply with new environmental standards. Nevertheless, there has been a growing awareness amongst industry of the needs and benefits of going green with special efforts from organizations such as APTPMA FPCCI, OCAC[2] and OICCI. The increasing pressure, especially on exporting sectors, by way of new

1. A pollution charge would asses a fee or tax on the amount of pollution in excess of levels allowed by the NEQS. The aim of the charge is to discourage environmentally damaging activities and/or strengthen incentives to reduce waste and pollution, while at the same time generating revenue which may be ear-marked for environmental protection.
2. APTPMA All Pakistan Textile Processing Mills Association
   OCAC Oil Companies Advisory Committee.
   FPCCI Federation of Pakistan Chambers of Commerce and Industry
   OICCI Overseas Investors Chamber of Commerce and Industry

international production and management standards has made the private sector a little more conscious of the need to comply with environmental standards to remain competitive in international markets. While a few industries in Pakistan have undertaken some voluntary efforts to curb pollution, the passage of the Environmental Protection Act 1997 has now made the payment of pollution charges a statutory requirement for all industrial units.

Unfortunately, however, whether there is an adequate legislative cover or not, command and control measures usually employed by the government have often failed. SDPI, therefore, advocated the need for dialogue from the very beginning. A systematic approach was needed that took into account the realities and limitations of both government and industry, and in doing so, also build trust and confidence between them. This is necessary for government because it does not have the capacity to regulate all industry, and conversely, it is necessary for industry in order to ensure that any control measures initiated by the government are realistic and fair.

Early Interaction

The need for a dialogue was echoed in a meeting convened at the Prime Minister's residence in March 1996 where industry representatives appreciated the ongoing consultative process that had been adopted by the government to draft environmental legislation. It was pointed out that a similar process had not been followed for setting the NEQS and that industry was of the view that these were too stringent and impractical. As a result, a request was made that the implementation of NEQS be deferred for some years to enable existing industry to prepare and take corrective action. After much discussion the government said that while deferral was not acceptable, a system could be worked out which imposed a progressive financial penalty starting at a moderate level in lieu of immediate implementation of the harsher penal clauses of the draft legislation. Such a system would be worked out, it was agreed, through a consultative process.

The Negotiation Process

In order to rationalize the NEQS and to work out detailed modalities for their implementation, PEPC constituted (12 March 1996) the Environmental Standards Committee (ESC) under the chairmanship of Dr. Shamsh Kassim-Lakha, President of The Aga Khan University, and designated SDPI as its Secretariat. The members of the Committee included representatives from the Ministry of Environment, Federal and Provincial Environmental Protection Agencies (EPAs), public and private sector corporations, industrial chambers and associations, environmental NGOs, research organizations, and legal experts. The mandate of the ESC was very specific: "to review the NEQS and suggest changes where necessary, and to recommend modalities for enforcing them". But in order to accomplish this mandate a multi-dimensional strategy would be necessary – one that combined a creative market-based formula with technical support to the industry and government, a mass awareness programme and an effective monitoring system. And the only way to ensure success was to do it openly and transparently.

The series of roundtable discussions following the establishment of the ESC is a classic example of a transparent and participatory policy making process at the national level. In fact, it can be argued that the survival of the consultative process, despite a turbulent political climate in the country since 1996, has been the result of its participatory nature and the sense of ownership of the process acquired by all parties concerned.

Review of National Environmental Quality Standards[3]

Negotiations began with a review of the NEQS[4] themselves. Considerable objections were raised by the private sector that these had not been developed through public consultation and, therefore, some of the standards were unrealistic. A technical committee was formed to address specific objections against each of the parameters in question. This review process resulted in the rationalization of the NEQS with input from industry. The revision process is likely to continue as more suggestions for changes to specific parameters continue to be received and industry specific standards are developed. Because of the high toxicity of certain pollutants, however, industry specific NEQS are likely to be more stringent than those currently applicable. In comparison with other developing countries with a similar industrial base, these standards are neither too stringent nor too relaxed (see Appendix I). The intention was to begin with realistic limits in view of the prevailing conditions in the industrial sector and to have the possibility to tighten these further in due course of time.

Concept of Pollution Charge

The concept of the pollution charge is a key element of the implementation programme. As mentioned before, it was introduced after extensive discussions with businesses, government, and the private industrial sector, in response to concerns that the NEQS should not be enforced on existing industrial units through coercive criminal procedures. According to the present proposal, the charge would be calculated on the basis of a pollution load measured in pollution units[5] (see Annex II for list of parameters and the agreed definition of respective pollution units). The principle of this concept lies in the assumption that the charge should be high enough to induce industry to clean up its act. In other words, the net cost of the cleanup should be less than the pollution charge. Such a charge would ensure that those who introduce cleanup activities do not suffer relative to those who persist with dirty production methods.

Easier said than done!

It took more than two years of intense discussions and negotiations to arrive at the present formula for calculating the pollution charge. Numerous questions had to be resolved: NEQS are in terms of concentration – should the charge be levied on the level of concentration or on the quantum of pollutants in the emission? Should the charge be the same on all industries, or a different charge be applied by type of industry? Should there be a charge on every component of NEQS, or should it be levied on key components? Should future increases of the pollution charge be subject to negotiations, or should they be imposed and agreed upon up front? What kind of fiscal incentives would be made available to industries for cleanup activities? How would

3. Article 11(1) of the Environmental Protection Act 1997 provides the legal basis for NEQS compliance: "*Subject to the provisions of this Act and the rules and regulations made thereunder no person shall discharge or emit or allow the discharge or emission of any effluent or waste or air pollutant or noise in an amount, concentration or level which is in excess of the National Environmental Quality Standards or, where applicable, the standards established under sub-clause (i) of clause (g) of sub-section (1) of section 6".*
4. The NEQS consist of 32 liquid and 16 gaseous parameters in addition to limits on noise pollution.
5. It has been agreed through consensus that initially only 10 liquid and 7 gaseous NEQS parameters will be charged. The list was arrived at in view of the following considerations, (i) to keep the system simple and cost effective, (ii) the quantity of pollutant defined as one pollution unit reflects the relative toxicity of the pollutant, and consequently the extent of damage to the environment and to human/work's health. Other NEQS parameters will be phased-in on an agreed schedule.

the pollution charge be collected and for what purpose would it be used? And, of course, the penultimate question: what will be the per unit rupee amount or base rate of the pollution charge.

The need to get the political endorsement of the plan by industry as a whole was as important as reaching a consensus on the above technical questions. Industry representatives at the negotiating table were under intense pressure from their constituents to ease or postpone the financial impact of this programme given the already adverse economic conditions being faced by the industrial sector. Sparks flew, tempers flared, but the representatives managed to convince many of the need for the pollution charge regime to address the long-term environmental damage likely to be caused by uncontrolled industrial growth in the country.

Formula for Pollution Charge Calculations

A number of proposals were reviewed extensively for determination of pollution charges. It was decided: (i) the proposal should be an equitable, simple, and workable approach towards establishment of pollution charges, (ii) it will ensure real progress towards making the industry environmentally friendly without jeopardizing the economic growth in the country, (iii) industry should be allowed sufficient time in which to prepare for compliance with NEQS. In addition, the ESC had agreed that:

a. *The level of pollution charge will be established through a process of negotiations.*

b. *The level of pollution charge should initially be such that the industry should feel the impact, but should not be excessive such that the financial health of the concern is jeopardized.*

c. *The system should be applied uniformly across all industrial sectors. Industry specific application is not recommended.*[6]

The initial proposal submitted by SDPI recommended linking the pollution charge to the cost of effluent cleanup. Another variation of this proposal suggested linking it to the cost of environmental damage caused. In either case, a gradual increase was recommended so that industry would be induced to adopt cleaner production methods and technology over time.

An alternative proposal circulated by FPCCI proposed to levy pollution charges on the basis of pollution loads depending on the size and type of industry. Industries were categorized into three sets according to pollution treatment technologies: (i) parameters to be covered under primary and secondary treatment, (ii) secondary and chemical recovery treatment, (iii) recovery and re-use technologies. The proposal divided the NEQS list according to these three categories and estimated cleanup costs for these respectively.

The proposal on which consensus was finally reached was developed jointly by SDPI, the Federal EPA and Halger Bailly Pakistan. Based on the experience in Germany with the use of pollution charges, this programme will levy pollution charges on the basis of pollution units (Annex II) in excess of NEQS as determined by an agreed procedure. It was assured that the application of NEQS and the levy of pollution charges will be applied uniformly to industry in the private and public sectors, and will eventually include municipal services as well.

Agreement on the Pollution Charge Amount

6. *Source:* Guidelines for Determination of a Pollution Charge for Industry, March 1998.

Irrespective of the formula or determination procedure applied, the base rate or the actual rupee amount per unit of pollution would obviously be the determining factor to ensure a transition towards cleaner production. Clearly this was to be an immensely critical and expectedly controversial decision for all concerned. Numerous discussions took place and the ultimate responsibility of democratically arriving at the figure was placed in the hands of industry under the leadership of FPCCI.
It took weeks of negotiations amongst industry representatives to establish both a pollution charge and a progressive escalation schedule[7]. This was an unprecedented achievement in Pakistan and perhaps also elsewhere in the world where industry voluntarily agreed to a charge to be applied to themselves for generating pollution in excess of permissible national limits. The FPCCI task force also recommended that the pollution charge be renamed to Environmental Improvement Charge to evoke a more favorable response from industry[8].

Monitoring

A major issue before the Environmental Standards Committee was the absence of an adequate monitoring capacity in the EPAs, and in the government more generally. Industry representatives were skeptical of the transparency and fairness of any system that relied primarily on monitoring by a limited number of overburdened and undertrained governmental inspectors. The government representatives also felt that the current capacity of the monitoring agencies was considerably short of the demands likely to be placed upon it. As such, there was a consensus on the need to develop a sophisticated monitoring system that did not rely exclusively on government inspections. Such a system would begin initially by self monitoring and reporting by the units concerned. These reports would be taken at face value, except in case of doubt of their validity, or for a randomly selected sub-sample, in which case the EPA could require their authentication. Finally, reporting of compliance with NEQS from all industrial units would be placed in the public domain to enable independent research and environmental NGOs to monitor them and assess the performance of the entire system. Any entities that willfully conceal or mis-declare the level of pollutants in their report will be open to prosecution under the harsher penal clauses of the Environmental Protection Act.

A simplified monitoring programme has been agreed to. Based on the degree of hazardousness and toxicity of emissions, industry has been divided into categories A, B, and C. For category A, a monthly monitoring and reporting (M&R) frequency has been recommended for both liquid and gaseous emissions. For Categories B and C, quarterly and biannual M&R has been recommended respectively. For most of the industries, M&R of 4-6 priority parameters have been proposed under normal plant operating conditions. These M&R guidelines would be applicable to both the private and public sectors and would be reviewed from time to time.

To ensure consistency in the sampling and monitoring process, the Federal EPA is undertaking measures to standardize sampling and testing procedures as well as certifying laboratories across the country which would be used for analysis. Furthermore, in order to ensure transparency, the government and industry agreed to allow reputable NGOs to be present at any stage of the monitoring process.

Mode of Collection and Use of Funds

7. The proposed pollution charge of Rs.50 per pollution unit will be achieved by charging 10% in year one and escalating to 80% of the base rate in year five.
8. Although renaming the charge was endorsed by the ESC, it's official adoption would require and amendment to EPA '97.

While the modalities of collection and disbursement of funds are still being worked out, the basic principles have also been agreed to after exhaustive discussions between industry representatives and the government. Ever since it was agreed that the money collected as pollution charges would be made available for environmental services to benefit industry (see Box 1), the private sector has been adamant that these funds must not be deposited into the national treasury from where they are likely to be utilized for other purposes. Instead, they have strongly advocated the creation of Provincial Environmental Trust Funds (PETFs) that would be governed by a tripartite board of private sector, government and NGO representatives. Furthermore, the private sector has recommended that these funds be collected by industry associations themselves. Such an arrangement is necessary, according to the industry, to facilitate timely payments both by the industrial units and subsequently by the Trust Funds for any environmental services requested.

Box 1:

Use of Pollution Charge

Money collected will be used primarily for activities that will help in abatement of environmental pollution through the following activities:

- provision of soft loans for the purchase of pollution treatment equipment,
- installation of combined effluent treatment plants in industrial estates,
- research and analysis in support of pollution abatement,
- round tables, conferences, workshops for pollution abatement,
- provision of incentives to develop indigenous technology for pollution control,
- training and advisory services for industry.

Source: ESC recommendations to PEPC, 20 May 1996

Although these arrangements received endorsement by the Environmental Standards Committee and were formally submitted as recommendations to PEPC, certain legal restrictions have prevented the establishment of such institutional arrangements. Article 11(2) of the 1997 Environmental Protection Act states that *"The Federal Government (will) levy a pollution charge on any person who contravenes or fails to comply with the provisions of sub-section (1), to be calculated at such a rate, and collected in accordance with such procedures as may be prescribed"*. The Act, however, does not specify where these funds are to be deposited or for what purpose they are to be used. It is implicit, nevertheless, that since the Federal Government is responsible for the collection of the pollution charge, these funds must be deposited as revenue of the federal treasury.

Article 9 of the Act calls for the establishment of Provincial Sustainable Development Funds (PSDFs). These funds can be utilized for *"providing financial assistance to the projects designed for the protection, conservation, rehabilitation and improvement of the environment, the prevention and control of pollution, the sustainable development of resources and for research in any specified aspect of environment; and any other purpose which in the opinion of the Board will help achieve environmental objectives and the purposes of this Ordinance"*, Article 9(3)(a,b). The government is of the opinion that the PSDFs can be used as the PETFs suggested by the private sector, however, the anomaly is that pollution charges have not been included as one of its sources[9]. Industry representatives have consistently argued against this point saying the PSDFs are not industry specific and will result in innumerable complications.

9. *"The Provincial Sustainable Development Fund shall be derived from the following sources:*
   a. *grants made or loans advanced by the Federal Government or the Provincial Governments;*
   b. *aid and assistance, grants, advances, donations and other non-obligatory funds received from foreign governments, national or international agencies, and non-governmental organizations;*
   c. *contributions from private organizations, and other persons"*, Article 9(2).

Institutional arrangements, therefore, for the collection and administration of pollution charges are being worked out. Legal advice is being sought to try and resolve this issue and preserve the use of pollution charges in the manner recommended by the ESC. Provisions are also needed to ensure an equitable participation of government, private sector and NGOs on the boards of the PSDFs to oversee and ensure the agreed utilization of the pollution charges.

Financial Incentives for Industry

Following extensive negotiations with the government in the ESC, the Pakistan Environmental Protection Council approved a detailed proposal for provision of fiscal incentives to industry for pollution abatement or compliance with NEQS. The current status of these incentive measures as reported by the Federal EPA is shown in Box 2.

Box 2:

Agreed Recommendations		Current Status (March 1998)	
(a)	National Development Finance Corporation may be designated as the DFI for channeling soft-term credit to industries for environmental purposes.	(a)	State Bank regretted to extend the credit line to industry through NDFC for this purpose.
(b)	Purchase of equipment for pollution abatement may be given the most favored treatment, i.e. 10%, with regard to import duty, sales tax, and no regulatory duty.	(b)	Presently pollution equipment are subjected to 10% customs duty with no regulatory duty.
(c)	Most favored tax treatment may be extended to those developing indigenous technology for pollution control.	(c)	No action has been taken. Recommendations for the next financial year have been made.
(d)	The amount collected from pollution charges and other sources for the Provincial Environmental Trust Funds may be matched by proportional grants from the government.	(d)	This proposal has been deferred due to the current financial constraints of the government.
e)	The use of the Provincial Environmental Trust Funds may be decided by the respective governing boards in accordance with the guidelines laid down in the recommendations of the Environmental Standards Committee.	e)	This may be considered for incorporation into the draft rules.
(f)	Provision of accelerated depreciation of anti-pollution equipment within three years for income tax purposes.	(f)	Existing depreciation of plant/machinery is allowable as follows: normal depreciation 10% initial depreciation 25% extra depreciation for double shifts 50% triple shift 100%

Another obstacle identified by industry is the lack of credit availability for environmental technology or investment. Private financial institutions in the country are reluctant to provide loans for environmental projects because they do not see them as profitable ventures. In any case, since savings from environmental investments are likely to be indirect and realized over a long term, industry is not willing to take on loans at commercial rates. With this realization, SDPI has begun an investigation into the

possible establishment of green credit facilities on soft terms. Certain international donors have expressed interest in such credit windows and there may be potential to mobilize others. If suitable, efficient and effective channels are established, a case can be made for the international community to live up to their global commitments to protect, conserve and support environmental activities in developing countries. After all, this has been the commitment made by northern countries in numerous international conventions and treaties on the environment.

Increasing Technical Capacity

Effective implementation of this programme requires increased technical capacity in the private sector as well as of government monitoring agencies. Information and experiences of industry in other countries will be of use as options and improvements are identified in Pakistan. EPAs need greater technical capacity and trained manpower to monitor compliance of industrial emissions with NEQS. The EPAs are currently in the process of standardizing analytical sampling and testing procedures, and draft regulations for certification of environmental laboratories have been prepared. All these efforts must be accompanied by extensive training and awareness raising in industry, preferably, by a multi-party initiative involving EPAs, relevant government departments, chambers of commerce and industry, environmental NGOs and other national or international agencies. A detailed action plan for implementation of the environmental monitoring programme, including awareness and training for industry, has recently been finalized by the Federal EPA and SDPI.

There are also two independent initiatives currently underway to extend such services to industry and government, and to facilitate compliance with NEQS. These are SDPI's project on Technology Transfer for Sustainable Industrial Development, and FPCCI's Environmental Technology Programme for Industry (see Annex III for additional private sector initiatives).

SDPI's programme on ***Technology Transfer for Sustainable Industrial Development (TTSID)***, funded by the Swiss Federal Office for Foreign Economic Affairs, is providing support to industry and government for the promotion of policies and practices for sustainable industrial production through 5 distinct components. (a) Business-government roundtables are facilitating regular consultations between the private sector and government on environmental issues[10]. (b) Supported by technical research, recommendations emerging from these consultations are used to provide advice to the government for the development and implementation of national environmental policy. (c) The training component of TTSID develops training materials by conducting environmental studies in selected industrial sub-sectors followed by hands-on training and workshops. This component also provides support to industry in building capacity in self-monitoring, implementation of in-plant pollution control measures, and in identification of end-op-pipe treatment options. (d) Through the information and advisory services component, the project is producing information packages on environmental issues for selected industrial sub-sectors, developing directories of equipment, service and technology suppliers, and a database for the exchange of information. (e) Finally, the project is also developing proposals for innovative financial mechanisms for the establishment of green credit facilities for environmental projects in industry.

A similar initiative is FPCCI's *Environmental Technology Programme for Industry (ETPI)*, funded by The Netherlands government. Its primary objective is to promote the use of environmentally sound technologies for the production of environmentally safe products in Pakistan's manufacturing and industrial sectors. This will be achieved by on-site training and demonstration projects for adopting

10. SDPI's support for the Environmental Standards Committee has been made possible through this programme.

measures for pollution abatement, waste management and recycling, chemical recovery, more efficient utilization of natural and/or economic resources, production and installation of instrumentation and control systems for utilizing more efficient and environmentally safe production technologies. The project has five components: the development of a user-friendly database of relevant information; institutional networking within and between key industrial institutions of the country; dissemination and communication to promote cleaner industrial production; institutional support and training to create environmental capacity within industrial chambers and associations; and demonstration projects in selected industrial sub-sectors to demonstrate the economic feasibility and environmental efficacy of environmental technologies.

The ETPI and TTSID programmes are complementary in nature, and although modest in scale, will help meet some of the immediate training and advisory requirements in this context.

Role of Non-Governmental Organizations

The role of NGOs in this entire process has been a crucial one from the start and one that has been acknowledged both by government and industry. PEPC's appointment of the leader of an NGO (The Aga Khan University) as President of the Environmental Standards Committee with SDPI (another leading environmental NGO) as its secretariat is the first case in point. Secondly, the presence of NGOs has provided an openness and transparency to the negotiation process, and has allowed a balanced expression of opinions that catered to the interests of all concerned parties. Third, certain NGOs are playing an important role in raising awareness not only within industry but also of the public about the importance and need for environmental conservation. Fourth, a few NGOs working in this sector such as IUCN and SDPI are making efforts to strengthen capacity of both the private sector and the government (see section on increasing technical capacity above). Fifth, NGOs are expected to have an important monitoring function in future implementation of the programme. Sixth, the sharing of technical expertise between the private sector, government and NGOs has resulted in an unprecedented constructive partnership between these diverse entities.

Although an appreciable role has been played by NGOs in the process so far, it must be recognized that there are very few NGOs with the requisite technical knowledge or programmes in related areas. Just as with the government and private sector, environmental NGOs also need a strengthening of their technical capacity. There are a large number of advocacy groups in the country which have also not been sufficiently mobilized to campaign for pollution controls on industry. The potential, therefore, exists for a much more involved interaction of NGOs in this area.

Achievements

The achievements of all these efforts have been significant. The establishment of a transparent, broad-based, national consultative process has been instrumental in moving the programme for implementation of NEQS as far as it has come. In fact, this experience is now being replicated at the provincial level in the implementation of the industrial development component of the Sarhad Provincial Conservation Strategy. The endorsement of the basic principles of the programme and its simultaneous inclusion in the Environmental Protection Act concretizes the initial move towards sustainable industrial development in Pakistan.

Uphill Effort

It has not been smooth sailing the whole time. Certain sectors of the strong industrial lobby are still trying to postpone implementation; government enthusiasm has been luke warm at best; PEPC has remained inactive for long periods; economic crises and political unrest with at least three changes in the government (including frequent changes at senior levels in the Ministry of Environment – the main government counterpart) since 1996 have made outcomes and direction of the process very uncertain; there continues to be disagreements on the means of collection and use of the pollution charge; the Environmental Protection Act was enacted after a long delay and a hard struggle. The danger of the entire initiative being shelved at a moment's notice is still possible.

One of the outstanding areas of disagreement in the negotiating process is the lack of a suitable institutional arrangement for the collection and disbursement of the pollution charge. While the government claims it is legally bound to use PSDFs for this purpose, industry insists on placing the funds in the private sector (see section on Mode of Collection and Use of Funds above). This remains to be a contentious issue because of the prevailing mistrust or apprehension of the private sector regarding the government's bureaucratic procedures.

While the dialogue continues, and as the reality of the pollution charge regime looms closer, sections of the private sector which were hitherto inactive in the negotiating process are beginning to raise various objections. The most common of these is that they were not adequately consulted in the process. Numerous concerns about the NEQS parameters and other elements of the programme are being brought up. This is, in part, due to the failure of the industry representation process, and partly because of the insufficient creation of public awareness at the outset of the programme. The last ESC meeting of 6 August 1998, however, has ruled out the possibility of reopening previously settled issues. It remains to be said, nevertheless, that given the evolving nature of the process, mechanisms for dialogue or continual adjustment when necessary must be permanently institutionalized.

Lessons Learned and Recommendations

Perhaps the most important lesson learned has been the usefulness and effectiveness of legitimizing the participatory policy making process. The survival of the initiative despite all sorts of potentially disruptive internal and external factors has been the result of this fact. The participation of a wide cross-section of the stakeholders permitted a wider understanding and greater sense of ownership in the design of the programme. Just as in any participatory consensus building exercise, it has taken time and a great deal of negotiation at the highest levels. It was also recognized that such an initiative would not have been possible with simply a narrow view on operational modalities, but that a much more integrated programme was needed which included institutional support services such as information and advisory services, technical advice on the formulation and monitoring of standards, establishment of innovative financial instruments, capacity building, regulatory and legislative support.

A neutral, business-government roundtable forum (Environmental Standards Committee) was also a must to ensure balanced representation, unbiased mediation and to provide full transparency to the process (in this particular instance the ESC Chairperson, Dr. Shamsh Kassim-Lakha, provided the essential and outstanding facilitating role). This forum had to be at a sufficiently high level to include key decision makers but structured in a way so as to minimize debate on technical details that would distract their

attention (and time) from making important policy choices. The ESC would, therefore, regularly form specific technical sub-committees to investigate options to facilitate the policy making process. Once again, since representation by all stakeholders was allowed on the technical sub-committees as well, suggestions made by them were usually accepted as fair.

The ESC is, in turn, a sub-committee of the Pakistan Environmental Protection Council, the highest environmental policy making body chaired by the Prime Minister or his/her direct nominee. This kind of access to the political establishment can ensure quick and binding decisions. Unfortunately, however, while the ESC has remained extremely active in developing proposals and recommendations over the past three years to its parent body, the frequency or regularity of PEPC meetings has been adversely affected by changing political tides in Pakistan. The life expectancy of a government in office remains unpredictable, national priorities are constantly changing, the almost perpetual state of economic crisis in the country, especially after the imposition of sanctions following the nuclear tests in May 1998, have prevented government from performing on its environmental obligations and commitments.

The following recommendations for future action emerge from the above discussion. Some may need specific technical or financial support, while others simply suggest sustaining the positive momentum achieved so far:

(a) *Institutionalizing government-business dialogue:* In order to maintain the momentum and level of trust established in the consultative process it is necessary to institutionalize the existing arrangements for policy dialogue. A permanent platform is needed to allow the possibility for information exchange, networking and policy dialogue. Ideally, such fora should exist both at provincial as well as national levels.

(b) *Need for public pressure:* One of the complementary forces that could help keep attention on the industrial pollution abatement programme is public pressure on the government and private sector. This force, however, has not yet been sufficiently tapped. The partnership in this effort must now grow, therefore, to include advocacy groups, media, consumers and other environmental activists.

(c) *Enforcement of existing and agreed pollution prevention regulations:* A reasonably comprehensive set of regulations are in place. The regulatory agencies should take advantage of the fact that the detailed proposals for implementation of NEQS have been jointly developed, and with the consent of the private sector. The government must now enhance its commitment and capacity to enforce these.

(d) *Technical Assistance:* In addition to the technical assistance required by regulatory agencies (including NGOs), an institution must be identified which can address industry's needs for technical assistance, information exchange, undertake research and development on industrial waste management, develop programmes on economic incentives, and provide linkages to national and international organizations to facilitate the transfer of clean technology.

(e) *Elimination of perverse subsidies:* The government does not systematically take into consideration environmental concerns in its national development planning cycles. Research is therefore required to identify and eliminate existing policies that promote economically inefficient and environmentally unsound practices.

(f) *Green cash required:* Desperately needed green credit lines are unlikely to be established by the government or commercial banks anytime soon. International donors, including private sector lending agencies, must be encouraged to stimulate environmentally sustainable industrial development in Pakistan with the provision of soft term credit for environmental projects. The only way this can realistically happen is if a suitable financial and political climate is restored to the country.

In conclusion, there is reason for cautious optimism. Opportunities exist, albeit as tough challenges in the face of today's political and economic realities, to make a permanent transitions to sustainable industrial development in Pakistan. If the momentum generated thus far by the negotiation process can be sustained, there is a strong chance that the pollution charge regime becomes an institutionalized mechanism for industrial pollution control. The beauty of the programme, in addition to its simplicity and transparent formulation, is that it is a completely indigenous effort without any "donor pressure". This fact, in of itself, may also serve as one of its most important sustainability factors.

Annex I

Environmental Quality Standards (Selected Parameters) For 10 Asian Countries

Parameters in mg/l	Pakistan	Sri Lanka	Thailand	Malaysia	China	Singapore	Taiwan	India	Korea	Hong Kong	Philippines	Asian Ave excluding Pak
BOD	80	30	60	50	150	50	100	100	100	10	30	68
COD	150	250	60	100		100	200	260	100	50		140
TSS	150	50	150	50	400	50	300	350	100	10	30	149
TDS	3500		2000			2000		5000		3000		3000
Oil & grease	10	10	5	10		10	30	10			5	11.43
Phenol	0.1	1	1	1	0.01	0.2	5	1	5	0.005	0.05	1.43
Chloride	1000				500	600		1000		1000		775
Sulphate	600					500		1000		800		766.67
Sulfide	1	2	1			0.2	1	1		0.2		0.90
Ammonia	40	50								1		25.50
Chromium	1	0.1	0.5	0.05	0.5	1	2	0.1	3		0.05	0.81
Iron	2			5		20	10			2	1	7.60

Source: NEQS: Revision and Determination of Industry and Receiving Body Specific Standards
Ministry of Environment, Urban Affairs, Forestry and Wildlife, 21 July 1996

Annex II

List of liquid and metal parameters to be included in the pollution charge regime and the definition of their respective Pollution Units

Parameter	**1 Pollution Unit**
COD	50 kgs
TSS	50 kgs
Oil and Grease	3 kgs
Mercury	20 g
Chromium	500 g
Nickel	500 g
Lead	500 g
Copper	1000 g
Cadmium	100 g
Pesticides and Herbicides	100 g

List of Gaseous and Particulate Matter to be included in pollution charge regime

Parameter	Quantity of One Pollution Unit
Carbon Monoxide (CO)	400 Kg
Oxides of Nitrogen (NOx)	200 Kg
Oxides of Sulfur (SOx)	200 Kg
Particulate Matter (Coal)	250 Kg
Particulate Matter (Oil)	150 Kg
Particulate Matter (Cement)	100 Kg
Particulate Matter (Other Sources)	250 Kg

Source: Guidelines for Determination of a Pollution Charge for Industry
SDPI and Pakistan Environmental Protection Agency, March 1998

Note: The application of the law would require monitoring and reporting against the complete list of NEQS. However, such an approach is neither necessary nor cost effective. Recognizing the lack of experience and technical capacity in industry and government monitoring agencies the above list has been selected only as an initial starting point.

Annex III

Other Environmental Management Initiatives by the Private Sector

FPCCI started a monthly environmental magazine, *Environmental News,* from February 1998. With a circulation of 5,000-8,000 it is solely financed through private sector sources. It has been designated as an official publication of the waste management conference to be organized by the Asia Business Forum in Thailand, 1998. *Environmental News* has organized many programmes in support of the environmental movement in the country. It also sponsors an environmental award for the organizations/individuals who have established their commitment for the environment.

INEM-Pakistan will be launched in 1998 in collaboration with INEM International. Its major functions will be to strengthen private sector institutions on environmental issues, dissemination and communication of environmental solutions, advisory services for the private sector on the subjects of environmental legislation, negotiations, technologies, and implementation modalities. INEM is considered as the continuation of ETPI's soft components.

Pakistan Tanners Association (PTA) has established a private company "Environmental Management Limited" that is implementing a combined effluent treatment plant, solid waste management, occupational health and safety programme, and a drainage system for about 160 tanneries located in Korangi Industrial area.

In Punjab **PTA** is implementing the Cleaner Technology Programme with assistance for The Netherlands government. The project has completed initial environmental examinations of more than 260 tanneries. Prototype environmental packages are under implementation in selected tanneries. The emphasis of the project is on in-house improvement, primary treatment systems, and chemical recovery plants.

Pakistan Society of Sugar Technologists (PSST) and **Pakistan Sugar Mills Association (PSMA)** are jointly working with ETPI on the environmental policy for the sugar sector of Pakistan.

Korangi Association of Trade and Industry (KATI) started the Upgradation of Korangi Industrial Area project in 1997. The project has targeted installation of a series of combined effluent treatment systems. These plants will be linked with KWSB (Karachi Water and Sewerage Board) treatment plants.
Source: Details supplied by FPCCI.

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