



Project in Development and the Environment

Integrating Environmental Control Strategies in Morocco

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The objective of the Project in Development and the Environment (PRIDE) is to help the U.S. Agency for International Development (AID) design and implement programs that foster the agency's environmental and natural resources strategy for sustainable economic growth in the Near East and Eastern Europe.

PRIDE provides AID and participating countries with advisory assistance, training, and information services in four program areas: (1) strategic planning, (2) environmental policy analysis, (3) private sector initiatives, and (4) environmental information, education, communication, and institutional strengthening.

The project is being implemented by a consortium selected through open competition in 1991. Chemonics International is the prime contractor; subcontractors include RCG/Hagler, Bailly, Inc.; Science Applications International Corporation; Capital Systems Group, Inc.; Environomics, Inc.; Industrial Economics, Inc.; Lincoln University; and Resource Management International, Inc. In addition, AID has entered into a cooperative agreement with the World Environment Center to support implementation of PRIDE.

The opinions expressed in this paper are those of the author(s) and do not necessarily reflect the positions of the sponsoring agency or contractors.

Integrating Environmental Control Strategies in Morocco

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August, 1994

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SECTION I OVERVIEW OF PURPOSE AND ACCOMPLISHMENTS

The primary purpose of this one-week mission was to review the legal and regulatory framework in Morocco for pollution prevention programs and evaluate how to improve requirements for implementing them effectively. Another purpose of the trip was to acquaint Moroccan officials with institutional arrangements and incentives that stimulate pollution prevention.

To that end, extensive meetings were held with government officials, multilateral donor representatives, and private sector personnel to exchange views on ways and means to achieve pollution prevention.

The principal accomplishments of the mission included:

- Holding information briefings and meetings.
- Sharing the institutional and programmatic experience in pollution prevention of other developing countries.
- Critiquing the proposed Moroccan Legal Strategy, the work of the Legal Commission of the National Council on the Environment, and the existing Moroccan environmental management institutional/legal framework.
- Suggesting a series of USAID-sponsored actions that will strengthen the upcoming World Bank environmental management program by incorporating clean technology/pollution prevention activities.

SECTION II

SUMMARY OF ACTIVITIES AND MEETINGS

An important purpose of the mission was to assess the readiness of Moroccan government officials to embark on a program of pollution prevention for the industrial sector, from both an institutional/legal and conceptual standpoint. The one-week mission, which included numerous meetings and document reviews, led to two fundamental conclusions:

- Morocco is without any existing institutional/regulatory/programmatic infrastructure to currently undertake and manage a pollution prevention program.
- Moroccan governmental officials enthusiastically embraced the concept of integrating command-and-control (CAC) and market-based (MB) incentives to stimulate pollution prevention within a broader environmental management program.

The activities that led to these conclusions include the following:

- A number of meetings with Dr. Ezedine Hadj-Mabrouk, UNDP project manager and World Bank employee. Dr. Hadj-Mabrouk is responsible for packaging the upcoming \$6 million technical assistance loan to help Morocco establish its environmental management program, scheduled to get under way in early 1995. The World Bank environmental project includes the following relevant components (see Annex A for more details):
 - Enhancing the legal regulatory framework.
 - Designing an enforcement/compliance system in environmental protection (to include identification of market-oriented solutions).
 - Promoting an environmental education and awareness program.
 - Establishing a national environment information network.
- Five meetings with Mme. Layachi, director of the Undersecretariat for the Environment, who demonstrated a unique interest in the mission. She arranged for the PRIDE advisor to brief the Legal Commission of the National Council of the Environment (18-20 people representing most of the other ministries) and the staff of the Undersecretariat for Environmental Protection (16-18 persons on her staff). The briefings covered the pollution prevention concept, how an industrial audit can cost-effectively produce greater efficiency and less pollution, and how incentives to achieve pollution prevention were integrated into the programs of other developing countries (see Annex B for the briefing document in both English and French).

In addition, Mme. Layachi invited the PRIDE advisor to summarize his findings and recommendations to her and the Legal Commission on the last day of his

mission. She particularly wanted comments on the Morocco Legal Strategy for Environmental Protection, prepared by M. Alain Piquemal, professor of law at the University of Nice-Sophia Antipolis, France; the work of the Legal Commission; and recommendations for Morocco's next steps to develop an environmental regulatory program. Mme. Layachi then arranged for the advisor to summarize the recommendations to her superior, M. Serghini, undersecretary of state for environmental protection, accompanied by USAID's Rick Scott and Dr. Hadj-Mabrouk.

- A meeting in Mohammedia/Casablanca with M. Abdelkader Benbekhaled of the Samir Oil Refinery about the feasibility of pollution prevention incentives in Morocco (his response being cautiously affirmative). Another meeting took place with GEM Project personnel in Rabat regarding their audit experience in Morocco.
- Other activities included reviewing documents, including the Morocco Legal Strategy and the Legal Commission's report, dated June 3, 1994, "Revision of Environmental Legislation."

SECTION III RECOMMENDATIONS AND NEXT STEPS

The following points are excerpted from the PRIDE advisor's presentation to Mme. Layachi and the Legal Commission summarizing his findings, conclusions, and recommendations (see Annex C), as follows:

A. General Observations

There is no legal infrastructure in Morocco to effectively manage the effluents of industrial activity in Morocco, despite the existence of more than 300 laws related to environmental regulation, some dating back to 1913. Furthermore, there is very limited technical and legal expertise in Morocco in developing and implementing environmental laws and standards.

On the other hand, there is a substantial appreciation of the potential value of market incentives and audits. The GOM wishes to seriously explore the management framework presented by the advisor that integrates CAC and MB incentives into an environmental management system to help stimulate pollution prevention.

The outlook of some government officials, who saw the authority of industry as equal and not subordinate to governmental authority for environmental regulation, was troubling. Environmental regulation, even under a soft market-oriented system, needs an arbiter, and government is the appropriate entity to play that role.

Accordingly, the PRIDE advisor urged the government to establish sectoral priorities and assert its authority as soon as possible. Training a cadre of technical managers for both the public and private sectors will also be critical.

The PRIDE advisor also made some suggestions on the kinds of laws and regulations that will be needed, especially those relating to the integration of CAC and MB incentives. The development of environmental impact assessment and hazardous waste management regulations will also be important. Before a hazardous waste management program is formulated, a national hazardous waste management strategy should be developed to identify industrial sources and volumes of waste in an effort to determine the dimension of the problem and needed technologies.

Regrettably, it was not possible during this short mission to review the organization of the Undersecretariat. The organization of this institution will be extremely important to the effective implementation of the program after new laws are passed.

B. The Moroccan Legal Strategy

This document is a good "think piece." It is very theoretical and offers a comprehensive menu of legal options. This document needs to be extended so there is greater focus on the Moroccan legal culture and how the linkages between the incentives of a CAC system and MB system might be integrated into that culture and then made workable. Further recommendations specifically center on identifying the market incentives, prioritizing sectors, defining the technical foundations of a management system, and specifying the roles of monitoring and sanctions.

C. The Work of the Legal Commission of the National Council of the Environment

Each ministry is reviewing the laws and regulations that apply to its particular sector with a view to identifying gaps and legal needs. The breadth of the Commission's report, "Revision of Environmental Legislation," is impressive, but there was no time to review the individual sectoral pieces to determine their quality. The individual sectoral pieces need to undergo a thorough review for quality and consistency. In addition, a strategy needs to be developed to address the cross-cutting issues highlighted in the sectoral analyses that will be important to industrial pollution management. Finally, an Action Plan needs to be developed that phases parliamentary consideration of the identified gaps over time. The plan should be based on the priorities of the Commission, not the Government's general secretary, who is not nearly as prepared as the Commission to articulate priorities.

D. Next Steps

The following actions are recommended:

Support the World Bank environmental management program that begins in 1995. While in principle the Bank's work is to include CAC and MB approaches, there is very little experience in integrating these. Therefore, USAID should undertake two actions to support the World Bank effort:

- Develop a set of national reference laws (similar to those developed for Nepal) that integrate the two incentive systems in a Moroccan context. The first stage is a technical study, three to four weeks, that examines market incentive options, prioritizes sectors, characterizes management needs, performs cost/benefit analyses, and recommends interim standards. The second stage, five to six weeks, develops reference laws for air and water discharges, environmental impact assessments, and hazardous waste management. (Development of a hazardous waste management framework should be preceded, however, by a national hazardous waste management strategy, because hazardous waste volumes and impacts are virtually unknown in Morocco today; it will be the implementation of air and water pollution controls that will likely create problems in managing the collection and disposal of hazardous residues derived from such controls.)

- Pilot the integrated systems in one or two select cities, e.g. Safi, Marrakesh, or Rabat, including implementing laws, operationalizing programs, performing audits, etc. UNDP has already established contacts in these and other cities to further the goals of environmental management through a decentralized management system. A pilot effort would be especially useful to World Bank contractors.

Update the Environmental Legal Strategy for Morocco as a guide for World Bank and, if applicable, PRIDE efforts. The World Bank contract does not include developing standards; they are needed. These should be by sector and include both discharge standards and ambient standards. They should also include technology and equipment standards for hazardous waste treatment, storage, and disposal facilities. They will take over a year to develop and, when completed, should supplant any interim standards. (A strategy on standards should be developed before this work is undertaken). No one is focusing on standards, which are fundamental to all of the recommendations.

Complete sectoral reviews under the Legal Commission. Exercise quality control for procedures; develop a strategy for cross-cutting issues; develop an action plan to prioritize parliamentary consideration of legal gaps.

Do not formulate an Environment Code. The proposed framework law should be sufficient authority if it is crafted well (the advisor was unable to personally review it.)

SECTION IV EPILOGUE

USAID's Rick Scott and Dr. Hadj-Mabrouk agree that the foregoing recommendations should be implemented. In fact, they believe the proposed pilot programs ought to extend to three cities, not one or two. At the final meeting on Friday, June 29, Mr. Scott decided he would write up the recommendations and begin an internal USAID approval process (a new mission chief is due on board shortly). He will add the recommendation of Mme. Layachi for another PRIDE mission to participate in selecting World Bank contractors for legal infrastructure and to review their outputs to ensure that they conform to the principles in the models discussed. A PRIDE follow-on engagement at some level seems likely.

The exit meeting with the undersecretary was very encouraging. He seemed to want to integrate the recommendations into Morocco's plans. According to Dr. Hadj-Mabrouk and Mr. Scott, he appeared especially interested in the recommendations that dealt with pilot testing the integrated systems at the local government level to assure a smooth transition at the national level.

ANNEX A

WORLD BANK PROJECT

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Document of
The World Bank

FOR OFFICIAL USE ONLY

Report No. P-6109-MOR

MEMORANDUM AND RECOMMENDATION
OF THE
PRESIDENT OF THE
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
TO THE
EXECUTIVE DIRECTORS
ON A
PROPOSED LOAN
IN AN AMOUNT EQUIVALENT TO US\$6.0 MILLION
TO THE
KINGDOM OF MOROCCO
FOR AN
ENVIRONMENTAL MANAGEMENT PROJECT

AUGUST 16, 1993

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B. Project Description

Reinforcing the Institutional and Legal Framework

3.02 The project enhances the institutional framework through: (a) strengthening the technical and administrative capacity of USE, the clarification of environmental functions of sectoral ministries and the local governments, their articulation with sector activities and the USE's functions; (b) restructuring the NCE; (c) enhancing and updating the legal and regulatory framework; (d) designing an enforcement/compliance system; (e) promoting environmental education and awareness; and (f) establishing a National Environment Information Network (NEIN). Details of the project description are found in section IV of the project files.

3.03 Strengthening the Technical and Administrative Capacity. The purpose of this component is to apply on a pilot basis, the three-tiered organization between the central environmental authority (USE), selected sector ministries (Agriculture and Public Works) and one local government (wilaya of Fes), in which serious environmental pollution problems exist. The Ministries of Agriculture and Public Works have confirmed their commitment to undertake a joint work program (see the project files, section IIIId) for strengthening their common environmental functions and fostering their working relationship in addressing cross sectoral environmental issues. Furthermore a separate budget was allocated in the project for each of the two sector ministries in order to provide them with resources necessary to implement their work program.

3.04 This Institutional Strengthening Component (US\$1.87 million) would include: (a) consultant services to assist the USE, the two sector ministries and the environmental cell in Fes to: (i) develop operational procedures and guidelines; (ii) organize their own environmental program; (iii) set up appropriate mechanisms for information sharing and cooperation between the USE and the sector ministries and agencies; as well as (iv) assist the USE in establishing nation-wide monitoring which would entail the coordination of all monitoring activities; (b) training high level staff in environmental planning, environment management techniques, monitoring and enforcement, pollution modelling, environmental economics, environmental assessment and audit reviews and financial management, including short visits to environmental protection agencies; and (c) purchase of office equipment, field vehicles, and computer hardware and software.

3.05 Restructuring the National Council of the Environment (NCE). In order to make the NCE an effective national policy-making body involving all sector ministries for addressing cross sectoral issues of environmental protection, its restructuring is envisaged through: (i) the adequate expansion of permanent membership including additional ministries and concerned public entities as well as non-governmental organizations; (ii) the up-grading of the level of representation with more detailed definition of the NCE's role; (iii) the clear definition of the NCE's meeting procedures and formation of five thematic commissions; (iv) the organization and re-definition of Regional

Councils for Environment as decentralized instrument of the NCE; and (v) the allocation of a budget for its operation. Based on the framework agreed with the Bank appraisal mission (see section IVc of the project files), the Government will prepare a revised decree which will initiate the restructuring of the NCE.

3.06 The Environmental Action Plan which is now being prepared with the assistance of UNDP/UNESCO is scheduled to be submitted to the NCE for review in December 1994. The project will establish the necessary institutional and legal foundations to enable the Government to implement the activities in the Action Plan. As a condition of loan effectiveness, the Government will submit to the Government Council the revised decree for the NCE's restructuring.

3.07 This component (US\$0.25 million) will include: (a) support to the NCE to manage and coordinate its operations; (b) technical assistance for development of procedures and operations of the NCE and its commissions, including the identification of a set of policy and economic studies in selected environmental problems that will be identified by the sector ministries and industrial associations; (c) development of technical capabilities of the commissions members to analyze policy options and examine environmental problems submitted to their attention; and (d) purchase of office equipment and computer hardware and software.

3.08 Enhancement of the Legal and Regulatory Framework. The implementation of a sound environmental management system should be supported by the drafting, issuance and implementation of laws and regulations. Until the draft environmental law is enacted and becomes operational, the Government has decided to adopt the following legal measures: (a) review and update existing regulations derived from existing laws; (b) issue a decree making the Environment Impact Assessment (EIA) an effective policy instrument, after the newly established EIA unit of the USE issues the appropriate EIA procedures in December 1993 (these procedures are being prepared by USE with assistance from consultants financed under METAP); (c) prepare the two self-executing laws missing from the existing legal framework, which are the Permit Law for Integrated Pollution Control and the Chemicals and Toxic Wastes Control Law (section 1.13 (a) and (b)). These two laws are scheduled to be submitted to the Government Council by the beginning of the third year of project implementation.

3.09 Under this proposed arrangement, financing in the amount of (US\$0.97 million) will be provided for: (a) consultants to assist the USE and the Ministries of Agriculture and Agrarian Reform (MAAR) and Public Works (MPW) to update existing regulations, provide needed technical assistance to the task forces that will prepare the two draft laws (after undertaking the necessary studies) and the assessment of the environmental guidelines under the EEC Free Trade Agreement; (b) workshops to support the participatory process of reviewing and fine tuning the regulations and legal measures; (c) training programs for sector ministries, including the Ministry of Justice and the Government's secretariat general, in environmental law, environmental impact assessment, environmental audits, processing and ways to promote better

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Start early

understanding and awareness of environmental legal issues; and (d) purchase of computer hardware and software and the establishment of a legal documentation center at the USE.

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3.10 Designing an Enforcement/Compliance System in Environmental Protection. The purpose of this subcomponent is to design the roll back approach and finance a series of complementary studies to enable USE to apply this approach on a national scale. These studies will rely on the demonstration projects (section V) which the Government has designed in order to test the results and recommendations of these studies. During the interim period in which the integrated pollution control law will be prepared, the application decree of October 1933 related to the classification of the industrial establishments will be used. The olive oil industries and the tanneries in Fes were selected for this pilot application: Their respective associations representing the owners of the tanneries and olive oil industries in Fes will enter into an agreement with USE to gradually decrease the pollution loads of their affiliated companies over a specific time. The association will, in turn, negotiate a schedule of necessary measures with the individual companies to meet the aggregate pollution load decrease proposed by the Government. The USE has already established with the financial and technical assistance of the Federal Republic of Germany, a well-equipped environmental laboratory to determine in advance the maximum pollution loads. With this sub-component, USE should be able to monitor, through the newly established environmental cell in Fes, the pollution contracts and test a series of enforcement measures and financial incentives to treat industrial water in these industries.

3.11 This component (US\$0.97 million) will include: (a) consultant services to design the roll back approach and to prepare operational procedures and guidelines for drafting and reviewing pollution proposals and contracts; (b) training of environmental inspectors in reviewing industrial proposals, evaluating environmental problems, and monitoring and following-up on pollution contracts; (c) workshops and seminars for private and public industrial entities, and private consulting firms, on the command and control and roll back approaches, environmental impact assessment, audit procedures and methodologies for favoring pollution prevention by process change and clean technology, and prefeasibility and feasibility studies for environmental investment opportunities; (d) conducting environmental audits and pollution load assessments; (e) commissioning two studies on: (i) the identification of appropriate economic and financial incentives for providing market-oriented solutions to environmental protection and the establishment of an environmental loan fund to assist private and public entities to finance their pollution abatement costs; (ii) the identification of instruments for encouraging the private sector to prevent pollution in the artisanal and municipal sectors; and (f) preparing two pre-feasibility studies for additional demonstration projects in the sectors of agriculture, (e.g. pesticides), and energy and mining (e.g. phosphates).

3.12 Promoting an Environmental Education and Awareness Program. USE has already prepared with the assistance of Germany, a strategy for promoting an environmental awareness program. This component (US\$0.9 million) will implement the elements of the strategy and will therefore promote public education and awareness outside the formal education system about the social and economic implications of the demonstration projects, and about those sectors which have an impact on human health. The component will include: (a) development of methodologies, training materials, audiovisual materials and TV films; and (b) provision of training courses and specialized workshops to ministerial staff, NGO regional associations and community leaders, on techniques and methodologies for increasing public awareness of environmental issues.

3.13 Establishment of a National Environment Information Network (NEIN). There is not currently in Morocco a coordinated effort to pool the relevant environmental information from sector ministries, national agencies and universities into one decentralized source of user-oriented information. The objective of establishing the NEIN is to enable the ministries to operate as a resource sharing, state-of-the-art service network. The NEIN will consist of two major technical tasks: (a) the development of a database search network where environmental data and information could be retrieved from international electronic databases containing technological information for use by the private and public sectors; (b) the building of a domestic database network whereby public domain environmental information generated by the ministries and agencies could be made available to users and shared among the members of the NEIN. The NEIN will be first developed and tested in USE, the Ministries of Public Works and Agriculture and the Province of Fes, if it is successful the network will be expanded to other agencies in the forthcoming environment investment project.

3.14 This component (US\$2.17 million) will provide: (a) consulting services to: (i) develop a policy paper by the Government on the development, access, exchange and sharing of environmental information at the national level as well as establishing a fee-for-service system; (ii) design and implement the NEIN on a pilot scale, in the form of a central node at the USE and two sector nodes at the Ministries of Public Works and Agriculture and one regional node in the Province of Fes; (b) train information specialists in data collection, database search and analysis for the central and service nodes; (c) provide access to international databases on CD-ROM or dedicated telephone lines on the availability of environmental technologies and services to end users; and (d) purchase of field vehicles, office equipment, microcomputer hardware and software, and licenses to international databases; and (e) establish a documentation center related to environment.

3.15 The project will: (a) provide 272 person-months (pm) of international and local consultants; (b) organize and implement 33 technical and specialized workshops which will be attended by 600-800 professionals from the sector ministries, local government, NGOs and private and public sector consulting and industrial firms for which a training plan is summarized in Schedule 1; (c) provide training abroad to 26 professionals in the different environmental

fields of specialization; (d) finance a total of 6 policy, economic, financial and legal studies; and (e) purchase a total amount of US\$1.7 million of office equipment and supplies, audio-visual materials, computer maintenance and access to international databases.

C. Project Cost and Financing

3.16 The total cost of the proposed project is estimated at US\$10.84 million, including taxes and duties, with a foreign exchange component estimated at US\$4.45 million, or 41 % of total project cost (detailed estimated costs are in the attached Technical Annex - Note 2). The base cost amounts to US\$9.72 million for prices estimated in March 1993. Project costs and expenditure accounts by components are summarized in the Project Costs Summary (Technical Annex - Note 3).

3.17 The proposed Bank loan of US\$6.0 million would finance 68 % of total project cost net of taxes and duties. It would cover about 88% of foreign exchange expenditures, and about 47% of the estimated local costs net of taxes and duties. These local costs are for the financing of the services of local consultants. The Project Costs Summary shows the project financial plan, with a breakdown by expenditure categories and project components.

3.18 The total amount needed to finance recurrent costs arising from this project which amounts to US\$3.7 million representing 34 % of total cost. The main project categories that will continue beyond project completion are: (a) local salaries with an annual amount of about US\$0.5 million for about 30 professional staff of USE and MAAR, MPW and the Province of Fes; and (b) operating costs estimated at US\$0.4 million per annum, which include office space, services, materials, and fares and subsistence to provide for the continuous interaction between the USE, the sector ministries and the local Government.

3.19 The projected budgetary requirements for USE, MAAR, MPW and the Province of Fes during the 1994-1998 period, the years of project implementation will reach an estimated yearly annual cost of about US\$1.3 million. This budget will be exclusively earmarked to USE.

IV. Project Organization and Implementation

D. Project Implementation

4.01 The proposed project would be implemented over a period of approximately four years and is expected to be completed by June 30, 1998, and closed by December 31, 1998. The USE will be the executing agency for this project (a detailed implementation and procurement plan is found in the attached Technical Annex - Note 3). The project will be coordinated by an inter-ministerial steering committee which will be chaired by USE and will include as members the representatives of the Ministries of Agriculture, Economic and Social Affairs, Finance and Public Works. This committee will provide over all policy guidance, review work programs and resolve any inter-

ANNEX B

BRIEFING DOCUMENT

PROGRAM INCENTIVES TO ACHIEVE POLLUTION PREVENTION

Presentation by:

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Sponsored by USAID, Bureau for Asia and the Near East

WHAT IS POLLUTION PREVENTION?

- **A way to reduce pollution at the source; often refers to actions taken before the pollution is generated and released to the environment.**

- **Can be achieved by:**
 - a process change
 - a substitution of materials
 - better "housekeeping" practices
 - installation of "clean technology"
 - reduction of energy demand

IS POLLUTION PREVENTION COST-EFFECTIVE?

- **Yes! These actions save money compared with traditional treatment programs.**
- **Savings come from:**
 - greater production efficiency, resulting in lower costs
 - reduced capital costs for treatment and compliance
 - reduced energy demand
 - short-term payback periods for implementation costs (from immediate to two years)
- **Other benefits**
 - sustainable environment to live and work in
 - lower social costs through improved public health
 - reduced exposure to environmental liabilities

CASE EXAMPLE

Summary of pollution prevention assessment of a lead acid battery manufacturer in Egypt.

Unit Operation	Pollution Prevention Action and Environmental/Product Quality Benefit	Implementation Cost	Financial Benefit	Payback Period
The plant was divided into 10 operational units for analytical focus.	Analysis produced 19 discrete actions, including housekeeping measures, process modifications, process eliminations, and equipment purchases, with benefits detailed.	Total of \$687,000 (ranging from no cost to low cost to a high single cost of \$291,000).	Calculated savings in first 2 years if actions are implemented: \$1,875,000.	Individual actions range from immediate to 6 months to 2 years for cost payback.

Summary of Actual Benefits to Battery Manufacturer

- reduces employee exposure to lead dust
- reduces energy and water use per unit output
- reduces the amount of lead purchased
- reduces lead-contaminated wastewater
- improves product quality
- creates a net savings to manufacturer

**IF POLLUTION PREVENTION ANALYSES ARE SO GOOD,
WHY HASN'T THE PRIVATE SECTOR DONE THEM ON IT'S OWN?**

- **Easier to keep doing things the old way**
- **Technical capabilities need to be developed**
- **Knowledge of appropriate technologies and their benefits needs to be developed.**
- **Knowledge of financing techniques and sources needs to be developed.**
- **Government must put the right programs in place**

WHAT IS THE GOVERNMENT'S ROLE?

- **To provide national leadership**
 - If the government doesn't care, why should we?
 - Important to listen to and dialogue with industry and NGOs
- **To create a legal infrastructure that blends two incentive systems:**
 - Command-and-control incentives comprised of standards, permits, monitoring, and sanctions (usually negative); and
 - Market-based incentives comprised of, among others, tax incentives, waste exchanges, markets for recycled products, environmental funds used to finance technologies, user fees, and pollution charges (usually positive).

(Maximum effectiveness is achieved when the two incentive systems are harmonized; one cannot work well without the other).
- **To stimulate the development of technical competence in both the public and private sectors.**
- **To phase in the legal system (the programs) gradually.**

WHAT KIND OF ENVIRONMENTAL REGULATORY FRAMEWORK ATTRACTS INTERNATIONAL INVESTORS?

- **Above all, stable institutions, including:**
 - a stable government
 - an inviting business climate with incentives and access to international markets
 - a stable regulatory climate
 - an emphasis on government/private sector cooperation
 - an enforceable regulatory system
 - no surprises
 - well managed exposure to environmental liabilities
 - a sound EIS program for new development
 - an equitable system with all industries treated fairly (government vs. private sector enterprises?)
 - a well-trained technical workforce

INDUSTRIALIZATION IS ACCELERATING THE CONSIDERATION OF ENVIRONMENTAL REGULATION IN THE DEVELOPING WORLD

- **Learning from the hard experience of industrialized countries (US expects to spend approx. \$750 billion in the next 40-50 years on environmental cleanup alone).**
- **The costs of cleanup are always much greater than the costs of prevention.**
- **If approaching industrialization is not greeted with a program to require clean technologies, industrial impacts 15 years hence will undermine any prospect for long-term sustainable development.**
 - An industrial growth rate of 4% a year, if environmentally sound ways to reduce pollution are not instituted, will also be accompanied by a 4% growth rate in capital costs for treatment.
 - These realities are stimulating developing countries to focus increasingly on effective Environmental Impact Assessment (EIA) and other pollution control laws.
- **Obviously, pollution prevention must be a key element in EIA laws for new industry as well as companion pollution control laws for existing industry.**

LET'S LOOK AT THE EXPERIENCE OF OTHER COUNTRIES IN STIMULATING POLLUTION PREVENTION

- **USA**

- Retrofitting market-based incentives onto a highly sophisticated command-and-control system.
- New EPA leadership more willing to dialogue with industry.

- **The Baltic Republics**

- Rushed headlong into a market system without properly "anchoring" it with command-and-control elements.
- Reaction to former Soviet domination.

...AND THE INCENTIVES BEING DEVELOPED IN TWO INTERESTING DEVELOPING COUNTRIES

1. The Philippines

- **Metro Manila is overly industrialized. The GOP wants dispersal of new industry for its aggressive industrialization program.**
- **"Programmatic compliance" within EIA System has been proposed.**
 - For clustered developments in 18 Regional Industrial Centers (RICS) or dispersed "programmatic" development (e.g., energy).
- **Incentives:**
 - Government provides eco-profile (carrying capacity analysis) of RICs; industries may then freely utilize that data for discharge allocations if they settle there.
 - For industrial siting outside of RIC, industries themselves bear the cost of the technical assessments. They must also comply with all standards and other program requirements.
 - Annual "pollution management appraisals" (audits) required; after three years, waste minimization targets are established; when industry reduces its permitted discharge, the increment saved may be traded in the open market to another firm needing an additional discharge allocation under its permit.
- **Results:**
 - Environmental carrying capacities can now be observed for industrial areas.
 - Industry is pressuring government to implement this program.

...AND THE INCENTIVES BEING DEVELOPED IN TWO INTERESTING DEVELOPING COUNTRIES

2. Nepal

- Carpets and textiles, cement, tanning, pulp and paper, chemicals and sugar are the principal industries impacting the Kathmandu Valley. The Government has publicly vowed to re-locate over 200,000 people in the carpet industry.
- New regulations for industrial sector being reviewed by Ministry of Industry.
- For existing industry, incentive system includes:
 - Lag time of nearly 5 years to develop and meet compliance plan.
 - In third year, first tier pollution charges are imposed for privilege of using natural resources for industrial process (water) or waste disposal sink.
 - In fifth year, second tier pollution charges are imposed, if necessary, as surcharge or penalty for remaining out of compliance.
 - Tax incentives for purchase of new pollution control equipment are provided (50% deduction from income).
 - Audits required every 3 years; pollution charge lowered for waste reduction.
 - Pollution prevention fund is established and comprised of pollution charges and permit fees; may be used for matching funds for shared wastewater treatment facilities, loans and grants for monitoring equipment, etc.

...AND THE INCENTIVES BEING DEVELOPED IN TWO INTERESTING DEVELOPING COUNTRIES

2. Nepal (cont.)

- **For new (or relocated) industry, EIA incentive system includes:**
 - Government-sponsored incentives provided for designated industrial development areas such as utilities and infrastructure linkages.
 - Government will also eco-profile (carrying capacity analysis) at its own expense those designated areas; industries may then freely utilize that data for discharge allocations if they settle there.
 - Every three years, the Government will pay for audits in the designated areas; pollution charges are lowered for waste reduction; in addition, saved increments may be traded on the open market to needy permit applicants.

ANNEX C

**EXIT TALKING POINTS
SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS**

EXIT INTERVIEW TALKING POINTS
for
JACK J. SCHRAMM
PRIDE Regulatory Analyst
Sponsored by USAID/Rabat

I. Observations on the Legal Strategy plus Suggestions

1. A good "think piece" -- much of it theoretical; presents comprehensive menu of options.
2. Recognizes the place of market-based (MB) incentives as well as command-and control (CAC) incentives (though the list of market instruments omits several important ones).
3. Explains the legal regulatory or economic rationale of the various regulatory mechanisms.
4. Should accept credit for recommending a sector-by-sector analysis of legal gaps -- a necessary exercise.
5. Recommendations for strengthening certain functions and institutions are good:
 - magistrate and managerial training, enhance capability for cost/benefit analysis, audits, public awareness.
6. Suggestions:
 - (a) Provide more focus in a phase 2
 - (b) Deal more specifically with Moroccan law, and examine Moroccan legal culture
 - (c) Examine the theoretical relationship between CAC system and MB system
 - (d) Suggest optional linkages between the 2 systems in concrete terms, i.e. show how integration might work
 - (e) Express linkages within a management framework that advises all parties of their respective responsibilities
 - (f) Where the linkages take the form of incentives (fees, charges, audits, tax subsidies, loan/grant fund, technical analysis), explain how they advance the goals of the integrated system
 - (g) Suggest a framework for the application of the system, including the prioritization of sectors

- (h) Be specific about the role of technical foundations for the system, especially standards
- (i) Be specific about the role of monitoring in the system -- who performs it, when, how, and why.
- (j) Address the question of sanctions -- what should they be, when and under what circumstances applied.

II. Observations on the Work of the Legal Commission

1. These observations are based on your Tuesday briefing and my review of your 3 June 1994 report titled "Revision of Environmental Legislation". Moreover, I have not seen any of the sectoral recommendations and , therefore, cannot critique their quality.
2. I am impressed with the breadth of the work and congratulate you on addressing so many issues in so short a time.
3. I am concerned about quality control. When different groups perform the analysis, wide disparities can result, for example, in formatting, regulatory procedures, and sanctions for sectors whose relative importance may be roughly the same, e.g., classified installations and mining. I'm sure there are better examples.
4. Several working groups identify major gaps in laws such as air, hazardous waste, standards, impact studies, etc. Your section on "Conclusions" acknowledges these gaps as troublesome. Since some of these are cross-sectoral, have you devised a strategy to address these major cross-cutting issues?
5. You are presenting the General Secretary with a huge package of recommendations and , therefore, a major headache. He and his staff are not as knowledgeable as you, so you may need to do further work. I would recommend three internal actions:
 - (a) Review the package for quality control as to procedures
 - (b) Review the package for quality control as to substance
 - (c) Develop an Action Plan that stages parliamentary consideration over time based on your priorities.

III. General Observations and Impressions

1. The Regulatory System: No enforceable system of standards, permits, monitoring responsibilities, and sanctions. Only a limited understanding of how an environmental management program operates. Limited technical and legal expertise. Surprising (for me) appreciation of the potential value of market incentives and audits.

2. Power of Government vs. Power of Industry: Too many government people see their authority as equal to -- and not superior to -- that of industry. While you want to put in place a soft self-help regulatory system with incentives, government is the ultimate arbiter regarding standards and you should not surrender your authority to industry.
3. Now Is a Critical Time: When your environmental management program is enacted you must establish your authority early or expect to play a secondary role only in the future.
4. Placement of Undersecretariat: Since your ministry is largely non-sectoral, you are well positioned to deal with other ministries. Solicit their help using the Legal Commission for further dialogue.
5. Establish Sectoral Priorities: Select and apply defensible criteria that enable you to prioritize. Grow into the job by stages.
6. Trained Staff: Train your personnel in technical disciplines as soon as possible. Look for leaders. Know what skills you will need in advance.
7. Readiness to Regulate: I have not reviewed your draft framework law. I trust it provides additional authority to regulate. In addition, you will need to develop many implementing decrees that will integrate the two incentive systems. Furthermore, you may need separate environmental impact assessment and hazardous waste decrees. As to hazardous waste, you may wish to first develop a national hazardous waste strategy that identifies industrial sources and volumes generated so that a management strategy may be appropriately formulated.

I would not recommend the development of a separate "rollback" law; these provisions should be part of the integrated system as a part of, or in place of, the permit element. Finally, I have not seen your table of organization. I would like to review it and counsel with you on it. How you are organized to do business is exceedingly important from a management point of view.

IV. Next Steps

I recommend the following actions:

1. Complete sectoral reviews under the Legal Commission. See specific recommendations under Section II (5) hereof.
2. I do not recommend the formulation of an Environmental Code. The legal framework law should be designed to provide sufficient authority; however, I have not reviewed it and cannot pass on the adequacy of its provisions.
3. The World Bank is estimated to begin its 2-year project in early 1995. It is to cover the regulatory system and market incentives. Since very few people are

providing legal/programmatic consulting services to integrate these systems in the developing world, we cannot know what experience they will bring to the Moroccan work. And the completion of the work is a long way off. (That the World Bank contractor will be competent is of course without question.) Accordingly, I recommend that PRIDE/USAID be engaged to perform either one or both of the following tasks:

- (a) As guidance for the World Bank contractor, develop a set of national reference laws (similar to Nepal) for Morocco that integrate the two incentive systems, in two stages: first, a 3-4 week technical study that examines the market incentive options, selects sectoral priorities, characterizes sectoral environmental management needs, performs cost/benefit analyses, and recommends interim standards; second, a 5-6 week study (informed by stage one) that develops the following reference laws: air and water discharge regulations, environmental impact assessment regulations, and hazardous waste management regulations, all in close collaboration with the Undersecretariat.
 - (b) Pilot the integrated system in one or two select cities, e.g., Safi, Marrakesh. The above-described work in sub-section (a) would be performed at the local level, though implementation aspects and actual audits would necessarily expand the level of effort. This would serve the World Bank effort very well by creating a local model whose positive aspects could be incorporated later into the World Bank's national model. Sectors other than those being studied by the World Bank might be emphasized.
4. The Environmental Legal Strategy for Morocco should be updated as a guide to both the World Bank and, if relevant and applicable, the PRIDE efforts.
 5. This recommendation does not identify a funding source. The World Bank contract does not include the development of standards. These should be done by sector and include both discharge standards and ambient standards. They should also include technology and equipment standards for hazardous waste treatment, storage, and disposal facilities. These will take over a year to develop and, when completed, should supplant any interim standards. Furthermore, a strategy on standards should be developed before this work is undertaken.