

## Chapter 6: Institutions for Environmental Management

195. Environmental issues are key to economic growth and poverty reduction in Bangladesh. In its relatively short history as an independent nation, the government has made significant strides in the development of policies and institutions for environmental management. A number of public sector environmental institutions have been established particularly at the national level. There is growing public awareness of environmental issues which have entered into the vocabulary of many public sector institutions. Further, the government has affirmed its commitment to the Millennium Development Goals (MDGs), including the goal of ensuring environmental sustainability, which requires the integration of the principles of sustainable development into country policies and programs, and reversal of the loss of environmental resources. The Government is also committed to the Plan of Implementation adopted at the World Summit on Sustainable Development (WSSD) in Johannesburg in 2002, and is party to a range of international environmental agreements, including the Kyoto Protocol. Despite these achievements and commitments, however, the present approach to environmental management, as illustrated in this chapter, remains centralized and ad-hoc, with implementation falling far short of legislated intention. This chapter provides a brief analysis of environmental institutions in Bangladesh, highlighting key areas where institutional strengthening is needed.

### I. The Institutional Context for Environmental Management

196. After independence in 1971, some of the key environmental initiatives undertaken by the Government were the enactment of the Water Pollution Control Act, 1973, the Bangladesh Wildlife Preservation Act, 1973, and the Environmental Pollution Control Ordinance, 1977. It was in the 1980s that environmental issues became seen as much more linked to broader development issues and became institutionalized in 1989 with the establishment of the present Ministry of Environment and Forests (MoEF).

197. Formal responsibilities for environment management are vested in MoEF, but many other institutions, directly and indirectly, are involved in managing or shaping the environment. These include public sector, private sector and civil society organizations. At the highest level, the National Environment Council (NEC), established in 1993 and headed by the Prime Minister, and the Executive Committee of the National Environment Council (ECNEC), headed by the Minister of Environment and Forest, are designed to provide guidance to line Ministries on national environmental issues. Moreover, the Planning Commission of the Ministry of Planning has the authority to supervise and coordinate cross-sectoral and inter-ministerial activities influencing the use of environment and natural resources. The potential role of this Ministry is important since it controls funding for the implementation of the Government's Five Year Plan. Development partners and civil society have also exerted an important influence on environmental decision-making, with a range of NGOs now active on both 'green' and 'brown' environmental issues.

198. While the institutionalization of environmental issues into broader development practices has been gradual and in many respects (such as EA laws) donor driven<sup>112</sup>, since the beginning of the 1990's, the Government has taken a number of important steps to strengthen environmental management in Bangladesh. An enabling legal environment has been created,

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<sup>112</sup> (Ahammed & Harvey, 2004)

in particular through the Environment Court Act (2000), and the Environmental Conservation Act (1995) and Rules (1997), followed by a series of new pieces of environmental legislation issued since 2000<sup>113</sup>. Environmental policy formulation has been led by the development of the National Conservation Strategy (NCS) in 1991, adoption of the National Environment Policy (NEP) in 1992 and National Forest Policy in 1994, and the National Environment Management Action Plan (NEMAP) in 1995. Practice lags behind legislation and policy, however, despite isolated examples of successful initiatives, such as the elimination of leaded gasoline, the phasing-out of two-stroke three-wheelers from the streets of Dhaka, and the ban on thin polythene bags.

## **II. The Ministry of Environment and Forest: Custodian of the Environment**

199. Until 1989, there was no separate Ministry dealing exclusively with environment. In August of that year, the MoEF was created, with the Forest Department being transferred to the new Ministry from the Ministry of Agriculture, and the Department of Environmental Pollution Control being transferred from the Local Government Division, and in the process being re-named the Department of Environment.

### *A Broad Environmental Mandate, but Resources Focused on Forestry*

200. The main function of the MoEF is to act as the guide and custodian for the conservation and development of the environment and, in the pursuit of that goal, to ensure through appropriate laws and regulations that natural resources, including land, air, water and forests, are exploited and managed in an environmentally sustainable manner. The mandate of the MoEF is broadly defined by the National Environmental Policy (1992) and the National Forest Policy (1994), and is described in the allocation of business among the Ministries of the Government of Bangladesh. As indicated below, the formal functions of the MoEF emphasize forest management activities:

- Define overall Government policy regarding forests and the environment, and to implement and evaluate such policies through its departments;
- Manage forest resources, and conserve and develop forest land, forest resources and wildlife;
- Maintain natural and environmental stability;
- Increase the country's forest resources in a planned manner and arrange to meet the demands for these resources; and,
- Effect environmental improvement and pollution control.

The MoEF is a permanent member of the Executive Committee of the National Economic Council (NEC), a key decision-making body for economic policy issues. The NEC also has the authority to approve all public investment projects.

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<sup>113</sup> Including the Environment Conservation (Amendment) Act 2000, Environment Conservation (Amendment) Act 2002, Environment Court Act 2000, Conservation of Play Ground, Open Space, Parks and Natural Wetlands Act (in all municipal areas of the country), 2000, Environment Court (Amendment) Act 2002, Brick Burning Control (Amendment) Act 2001, and Three Amendments (in 2002 and 2003) to Environment Conservation Rules 1997.

201. The MoEF pursues its activities through five institutions: the Forest Department (FD), Department of Environment (DoE), Bangladesh Forest Industries Development Corporation (BFIDC), Bangladesh Forest Research Institute (BFRI), and the Bangladesh National Herbarium. There are about 8,900 staff under the different agencies of MoEF, of which more than three-quarters are in the FD (6,939 employees), and fewer than 3% in the DoE. MoEF has an annual budget (both development and revenue) of about BDT 2 billion (about US\$34 million), which is less than 0.5% of the Government's total revenue and development budget. Of this total, over 80% is allocated to the FD and less than 1% to the DoE. Of the total MoEF budget, about 30% is used for the payment of salaries, compared with 60% of the DoE budget allocated for this purpose. Largely as a result of the focus of MoEF resources on forestry, institutional capacity for environmental planning and monitoring, essential functions of a national environmental custodian, remains weak. MoEF does not have any system in place to monitor environmental quality, biodiversity, status of protected areas, levels of pollution or environmental degradation, and there is no mechanism to make such information available to the public on a regular basis.

*The Insufficiently Funded Mandate of the Department of Environment*

202. The DoE was formed in 1989 with a mandate for environmental management later formalized under the Environment Conservation Act, 1995 (ECA'95). The DoE is headed by a Director General, with Divisional offices in Dhaka, Chittagong, Bogra, Khulna, Barisal and Sylhet (see Appendix II for an organogram of the DoE). As the technical arm of the Ministry, DoE is responsible for environmental planning, management, monitoring and enforcement. The mandate of the Department has expanded over time, evolving from an exclusive focus on pollution control to include natural resources and environmental management, now covering:

- monitoring environmental quality;
- promoting environmental awareness through public information programs;
- controlling and monitoring industrial pollution;
- reviewing environmental impact assessments and managing the environmental clearance process; and,
- establishing regulations and guidelines for activities affecting the environment.

In addition to the above duties, DoE also coordinates implementation of a number of international protocols and conventions to which Bangladesh is a signatory. In economic terms, most of the functions that DoE is mandated to serve (e.g. monitoring environmental quality and industrial pollution, environmental awareness and education, establishing regulations and guidelines) are public goods. One exception is the environmental review and environmental clearance process which is a service that DoE provides for a fee to developers, which has both public and private good characteristics.

203. While ECA '95 assigns the DoE broad responsibilities for the control of pollution, its natural resource conservation mandate is more constrained. Only limited power is assigned, extending to the designation of Ecologically Critical Areas (ECAs - eight of which have now been declared), and the prescription of uses of such areas. DoE's legal authority to declare any ecosystem an ECA is also a source of contention between the DoE and the FD. Further,

modalities for management of these areas have yet to be established, although a GEF-supported project has been initiated to build the capacity of DoE for the management of coastal and wetland biodiversity at Cox's Bazar and Hakaluki Haor.

204. DoE continues to be understaffed, with only 191 staff positions, of which only 85 are managerial or technical, the lowest level of environment agency staffing per capita in South-East Asia. By comparison, Hong Kong has a similar agency with more than 1500 staff.<sup>114</sup> DoE is also under-budgeted relative to its broad mandate, with a revenue budget allocation of about BDT 25 million (less than US\$ 0.5 million). The Department's revenue budget covers only salary, limited travel and certain basic logistics, with most programmatic and logistical requirements being met from project budgets supported by a variety of development partners. The lack of coordination between these projects, and the impossibility of transferring resources between them, are significant factors in contributing to the further fragmentation of DoE's already limited capacity.

*The Environmental Clearance Process: Dominant, but not Transparent*

205. DoE, including its six divisional offices, is responsible for reviewing and approving EA reports. According to provisions made in ECA 1995, DoE is authorized to issue environmental clearance on all types of industrial and non-industrial units and projects. This environmental clearance process dominates DoE's workload. In 2000-2001, DoE processed almost 1,300 environmental clearance applications, a threefold increase since the enactment of the ECA in 1995.<sup>115</sup> The requirement for higher impact facilities to annually renew their environmental clearances increases the administrative burden on the Department still further.

206. ECA 1995 requires that no industrial unit or project be established without obtaining an Environmental Clearance Certificate from DoE. All projects are categorized into one of four groups: Green, Orange A, Orange B and Red. DoE offices in each of the six divisions receive applications and issue Environmental Clearance Certificates for proposed investments within that division. The divisional offices verify supporting documents and pass it on to the divisional head, who assigns an inspector for follow-up. For Green and Orange A category projects, once the inspector submits his report (typically within 5-7 days) the divisional head makes a decision within three days of receiving the report. Files for Orange B and Red category projects are sent to the Senior Chemist/Assistant Director. The files are then forwarded by the divisional office to the Environmental Clearance Committee of the DoE in Dhaka, and then passed to the Director General of the DoE for final clearance<sup>116</sup>. Most Environmental Clearances issued by DoE are from the Dhaka divisional office.

207. The EA process is not transparent in part because of legal loopholes and limitations in EA laws and regulations. There is no legal requirement for public consultation during the Environmental Assessment (EA) process, or even for the provision of information to affected people in conducting these assessments,<sup>117</sup> although there have been instances when DoE has arranged for the presentation of an EA in the presence of DoE staff and invited experts.

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<sup>114</sup> See Lam and Brown, 1997

<sup>115</sup> DoE, 2002

<sup>116</sup> BEI, 2006

<sup>117</sup> Ahammed & Harvey, 2004 - although the EIA Guidelines for Industries 1997 suggest that an environmental impact assessment should involve the public, this has no legal force.

Asking for public comment and input into decision-making depends upon the interest of the entrepreneur. Clear legal provisions for EIA compliance and monitoring are also absent. As such, there is little emphasis on project monitoring, and implementation of EIAs is ad hoc and dependent on the requirements of donor agencies where these are involved.<sup>118</sup>

208. The EA process is a major source of external influence on the Department. There are several reasons for this. While the ECA 1995 requires environmental clearance for development projects, it also reserves the ability of the Government *not* to require any environmental clearance. This keeps open the possibility for project proponents to exert influence to avoid this requirement.<sup>119</sup> Wide powers are accorded to the Director General of the DoE who has significant discretionary power to suggest any actions necessary to meet the objectives of the Act, including the power to order closure of industrial units in the event that they do not meet adequate environmental standards. Further, in order to obtain environmental clearances, businesses and project proponents rely on a number of intermediaries or service providers to help obtain environmental clearances from DoE and its divisional offices.

209. A survey of fourteen such service providers showed that some 90% of the total fees for environmental clearances are paid to the service providers (usually about US\$900 for “Red” category clearances, rising to more than US\$10,000 for very large developments).<sup>120</sup> In principle, the services provided include preparation of EIAs and EMPs, but the lack of transparency and consultation in the process provides little incentive for the effective identification and mitigation of potential environmental impacts. The issue of rent-seeking is certainly not peculiar to DoE and cuts across public sector institutions in Bangladesh (see Box 6.1). In DoE and its divisional offices however, the emphasis on the EA clearance process has come at the cost of compromising its work in other technical areas. For example, the engagement of laboratory personnel in environmental clearance activities has caused the labs to be left unused, and staff to be unavailable for routine monitoring activities.<sup>121</sup>

#### *Weak Environmental Monitoring Capacity*

210. With the bulk of its effort focused on the environmental clearance process, DoE has little spare capacity to systematically monitor and analyze environmental information. Although monitoring environmental quality has been conducted on an ad hoc basis for years, there has been no systematic compilation, interpretation, or subsequent publication of these data. Without any quality control or public scrutiny of the data, the little environmental data available is generally of questionable reliability. An important step towards quality-assured environmental monitoring has been taken, however, with the systematic collection of air quality data under the Air Quality Management Project, and the DoE’s recent commitment to publish an Air Quality Index on a daily basis.

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<sup>118</sup> Momtaz, 2002

<sup>119</sup> Ahammed & Harvey, 2004

<sup>120</sup> BEI, 2006

<sup>121</sup> Interviews conducted for preparation of this report, 2004

### Box 6.1: Governance in Bangladesh

The pervasiveness of corruption is a broad public sector governance issue in Bangladesh. As a recent World Bank study points out, even after a quarter of a century of independence, the State does not ensure “rule of law” or provide a well functioning regulatory and policy environment (World Bank, 2002). The cross-country corruption perception index prepared by Transparency International places Bangladesh 145 out of 146 countries surveyed (TI, 2005).

Contributing to weakness in public sector governance is a weak judiciary, a corrupt public sector procurement system and police. For instance, surveys undertaken by the Bangladesh Chapter of Transparency International, revealed that 89% of respondents believed that it was almost impossible to get quick and fair judicial judgments without money or influence, and 63% of households involved in court cases had bribed court officials (World Bank, 1999).

Research undertaken as part of a Bank study titled *Taming Leviathan* also provides evidence for clientelism and patronage in public administration, as well as estimates of the economic costs of poor governance. For example, surveys show that as a result of bribes paid, the registered price of land is reduced by 25% on an average, amounting to a loss of Tk. 400 million of government revenue annually (ibid.). Due to rising public pressure, the Government passed the Anti Corruption Commission Act in 2004, which created legal space to establish an independent body to address corruption, (replacing the earlier Bureau of Anti-corruption, itself believed to be widely corrupt). The extent to which this new body will be autonomous remains to be seen.

Bangladesh’s National Strategy for Accelerated Poverty Reduction (2005) recognizes that “a major thrust of the PRS [Poverty Reduction Strategy] has to be on ensuring good governance”, and governance is the core focus of the World Bank’s Country Assistance Strategy (CAS) for the period 2006-2009. The CAS emphasizes the broader governance issues facing Bangladesh, including an overly centralized public sector, unhealthy competition between major political parties, weak public financial management, corruption related to procurement, and a weak civil service and judiciary, all of which compromises effective service delivery, including law and order, and is detrimental to the investment climate.

### *Organizational Culture of DOE*

211. Numerous studies based on empirical work in developing and developed countries have pointed out the importance of leadership for organizations to perform well.<sup>122</sup> Committed leadership is seen as key to sustaining worker motivation, a sense of organizational mission and clear performance expectations. DoE and MoEF however, are characterized by frequent changes of leadership. In DoE, the leadership of the Director General has been severely compromised by the fact that this position has changed hands more frequently than once a year, for the last seven years.

212. Another key factor contributing to high performing organizations is an implicit trust and contract between leaders and employees, as illustrated by research in a range of developing and developed countries.<sup>123</sup> Worker dedication and motivation is further supported by an organization that is perceived as having a high sense of mission, is client responsive and is anchored by a management style that encourages worker participation, decision-making and problem solving. By contrast, the operating environment within DoE is characterized by frequent changes in management, administrative red tape that delays decision-making, and an organizational culture that is influenced by informal lines of authority to higher levels. Director Generals are always appointed from backgrounds not

<sup>122</sup> Wilson, 1989, Grindle, 1997; Khaleghian and DasGupta, 2005

<sup>123</sup> Grindle, 1997

linked to management of the environment. Moreover, interviews with various staff and stakeholders showed that there is lack of accountability in the internal workings of the organization. Externally DoE is seen less as an advocate for environmental sustainability and more as a policing agent, contributing to its “image crisis”. Moreover, DoE is a very centralized department with representation at the divisional level only. Effective application of the Department’s limited resources is hampered by the lack of regular coordination between the DoE and its divisional offices, to whose work little importance is attached. This is discussed in more detail below.

*The Forest Department: Defining Roles in Conservation and Social Forestry*

213. The FD, established in 1862, is responsible for the conservation and management of Bangladesh’s forest resources through implementation of the Forest Policy, Forest Master Plan, and enforcement of the Forestry Act, as well as implementation of aspects of the National Environment Policy, such as those pertaining to the conservation of biodiversity and wildlife, and the sustainable management of forestry resources. The FD is headed by the Chief Commissioner of Forests, and forest management takes place through officers working at the divisional level.<sup>124</sup> In addition, each of the divisions is divided into circles staffed by forest officers, rangers, and guards, with each forest officer covering two or three upazilas.

214. Bangladesh has limited forest cover, at 10% of land area, down from 20% in the 1960s.<sup>125</sup> In part, the decline can be attributed to governance issues linked to the forest sector. An issue widely reported in the press is the complicity of FD officials in illicit tree felling<sup>126</sup>, and fieldwork carried out during the course of this study reinforced the widespread believe in the lucrative nature of some FD postings.

215. Over the last two decades the FD has shifted its emphasis away from policing and conservation towards community and extension-related roles associated with the rising importance of Social Forestry. The National Forest Policy (1994) marked a departure from the commercial emphasis of earlier policies, emphasizing a commitment to sustainable development, poverty alleviation, the participation of local communities, support for private sector afforestation initiatives, and global environmental concerns (including biodiversity conservation and climate change). Implementation of this policy took an important step forward with the enactment of the Forest Amendment Act, 2000, which established Social Forestry as a function of the FD.

216. The Forest Sector Review, 2004<sup>127</sup>, recommended that the FD be split into two directorates, (i) the Directorate of Park Service and Conservation, and (ii) the Directorate of Social Forestry, both to be placed under an Inspector General for Renewable Natural Resources. The role of the Directorate of Park Service and Conservation would be to manage protected areas and Ecologically Critical Areas (as declared by DoE), while the Directorate of Social Forestry would manage community forestry initiatives, including those in Reserve Forest areas. To date, there has been little progress in implementing these reforms.

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<sup>124</sup> Forestry division do not coincide precisely with administrative divisions.

<sup>125</sup> FAO, 2000. The FAO definition requires both that tree cover be 10% or more, and that the predominant land use be forestry. MODIS satellite imagery suggests that the true area with 10% or more tree cover may be as much as 35% of total land area.

<sup>126</sup> TI, 2000

<sup>127</sup> Bangladesh Forest Department (2004). The Forestry Sector Review Report.

### III. Environmental Management at Sub-National Levels

217. Bangladesh has a long tradition of sub-national government. Since independence, sub-national government structures have changed periodically with different political regimes, none of which have lasted for a long enough time to become rooted and consolidated as effective institutions of service delivery.<sup>128</sup> Currently, there are six divisions, 64 districts or zilas, 460 sub-districts or upazilas, 4,500 union parishads and 68,000 gram sarkars. Of these, the principal elected local government structures are the union parishads. There is no elected representation at the divisional, district or upazila level. Officers at these levels operate with upward accountability, representing a deconcentrated model of infrastructure and service delivery. Representatives are elected, however, to union parishads and pourashavas (municipalities). At the village level, Gram Sarkars, established through the Gram Sarkar (Village Government) Act promulgated in 2003, function with 13 members representing identified socio-economic groups.

218. There is no uniform structure to sub-national representation of central government agencies, with the FD, for example, being structured around forest cover, and a divisional structure that differs from those of local government. Most of the larger government agencies, however, follow the administrative pattern, with a hierarchy of offices down to the Upazila level.

219. At the sub-national level, it is the upazila administration that is principally responsible for basic service delivery. Many central government departments and agencies are represented at this level but the officers remain under the authority of the central government. Planning and coordination of development activities in the upazila are undertaken by the Upazila Nirbahi Officer (UNO), who is appointed by the central government and the Upazila Development Coordination Committee (UDCC). The UDCC consists of the chairmen of each union within the upazila, and who chair the committee on a rotating basis. Members of Parliament (MPs) act as special advisors to the UDCC, exercising considerable influence, and the UNO is a member secretary. The UDCC is responsible for allocating the Annual Development Plan (block) grants within the upazila. Formal responsibilities of the UDCC include reviewing, preparing, and overseeing development projects, and advising union parishads on development schemes. Coordination at this level is weak, in part because neither the Deputy Commissioner at the district level, nor the UNO are responsible for preparation and coordination of comprehensive regional development plans.<sup>129</sup> Upazila level offices of government organizations normally report to two different bodies, first to their own higher level official at the district level, and second to the upazila administration, which is effectively the UNO.

220. Union parishads have been vested with a range of development functions, including construction and maintenance of small scale infrastructure (katcha roads, bridges, canals, and culverts), potable water supply, and flood control infrastructure. They are also responsible for planning and monitoring of the ADP, and local revenue mobilization and collection. They generate very little revenue of their own, however, depending heavily on block grants from central government allocations, supplemented in some cases by resources from local programs supported by development partners and NGOs. They also have little discretion

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<sup>128</sup> Westergaard & Mustafa Alam, 1995

<sup>129</sup> ADB et al. 2003

over using the money that is collected and face numerous restrictions in the use of block grants by detailed guidelines. Further, decisions relating to implementation of programs in basic services such as health, education, and water supply, lie with government line departments at the upazila level. Even though union chairman could potentially play an important role through their participation as chairman of the UDCC, in practice their roles are largely constrained to advocacy.

### *Partially De-concentrated Model of Environmental Management*

221. The environmental management system in Bangladesh constitutes an extremely centralized and partially deconcentrated model of environmental management. At the divisional level, there is a Divisional Environmental Advisory Committee headed by the Divisional Commissioner with representation from various government agencies. While the MoEF has forest officers posted below the divisional level, the DoE does not have any representation below this level. An important gap in existing formal rules (the Constitution and other laws) is that the divisions, districts, upazilas, unions do not have a clearly defined role to play in environmental management. Lack of an appropriate mandate and institutional arrangements below the divisional level is a key factor contributing to difficulties in implementing environmental policies and regulations.

222. DoE has divisional offices in each of the 6 administrative divisions of the country.<sup>130</sup> In addition to their role in the environmental clearance process discussed earlier, they play a monitoring and enforcement role, but are not mandated to provide technical advice to firms and stakeholders (see Box 6.2). Moreover, they get little systematic support from the DoE headquarters at the national level to carry out their activities. The mandate of the Divisional Environmental Advisory Committees is to advise on environmental issues, give directives to district level agencies, and coordinate among line agencies at the regional and local levels. These institutional arrangements have not been fully functional, however, and as a result, Divisional Environmental Advisory Committees rarely meet, and lack authority to ensure implementation of decisions taken.

223. At the upazila level, there is no designated environmental focal point or coordination mechanism, and little consideration is given to environmental concerns. Except in rare cases or complaints, officials at the upazila level are not in touch with the divisional offices of the DoE. Field visits to several upazilas during the course of this study found that environmental issues are addressed in an ad hoc manner by sectoral officers at the upazila level, particularly when activities in one sector (for example, agricultural runoff) influence activities in another sector (such as productivity and sustainability of fisheries in local ponds). There is no leadership or mechanism, however, for addressing environmental sustainability issues across sector activities at the upazila level. Line ministry representatives pursue sectoral agendas, with environmental sustainability falling through the cracks.<sup>131</sup> Considering that officers at this level are not elected but appointed at the national level, leadership from the line ministries will be crucial in greater integration of environmental issues at the upazila level. Further, the UNO and the UDCC could play a much greater role in addressing environmental sustainability issues at this level.

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<sup>130</sup> Namely Dhaka, Chittagong, Khulna, Rajshahi, Barisal and Sylhet

<sup>131</sup> Examples might include health officers interested in providing health services but not in environmental health issues, or agricultural officers focusing on productivity but not agro-chemical environmental risks

### **Box 6.2: Functioning of Divisional Offices of the DoE**

A field visit to the Rajshahi divisional office of the DoE, located in the town of Bogra, provides a snapshot of the capacity constraints faced at this level. There are 17 staff in this office, but only one environmental inspector (compared to three inspectors in the Dhaka division), and the revenue budget allocation for the divisional office was approximately US\$ 30,000 in FY05.

The divisional office is mandated to issue environmental licenses for investments falling under the ECA 95's Orange-A category (Orange-B and Red categories fall under the purview of DoE at the national level). Within this category, there are numerous small- and medium-scale industries (e.g. rice husking, brick making, dyeing and handloom industries). One constraint faced by the Bogra staff is that many firms do not know they have to obtain environmental clearances.

The main role of the office is monitoring environmental quality and inspection, including oversight of a number of large public sector firms, including sugar mills, distilleries, and a chemical factory, all of which are highly polluting. Monitoring capacity is very limited, however, and the divisional office is not mandated to provide technical advice to firms.

The divisional DoE collects fees for issuing and renewing environmental clearances. There is little incentive for the staff to do this systematically, however, as this revenue is returned to the national exchequer. Regarding linkages with other levels of government, interviews suggested that guidance from the center to the Divisional office is ad hoc, and there are no links between the Divisional office and upazila or union offices.

Source: World Bank

### *The Potentially Important Environmental Role of Union Parishads*

224. Union parishads presently have a limited role in environmental governance. Their mandates include maintenance of village markets, public ponds, graveyards, and recreational places. A potentially important environmental role for union parishads is conferred under ECA '95, which requires that while applying for environmental clearance from the DoE, the applicant is to obtain and submit a No Objection Certificate issued by the Chairman of the union parishad (or Municipal Chairman in pourashavas, and the City Corporation Executive in metropolitan areas). With no systematic review or assessment process in place, however, these certificates are normally procured through private negotiation. Nevertheless, if greater public consultation could be introduced into this process, union parishads could perform a valuable role in environmental management, particularly considering their unique positions as locally-based elected representatives.

225. In addition to the No Objection Clearance function in the EIA process, union parishads perform a variety of further environmental management roles, particularly in the development of local infrastructure, management of water supply and sanitation investments, and influence over the allocation of natural resource leases, including fisheries. At the upazila level, union parishad Chairmen are members of various committees and chair the UDCC by rotation. With enhanced awareness of environmental concerns, union parishads could become an important local force for environmental protection and improvement.

## **IV. Environmental Management in Other Sectors: Incentives and Coordination**

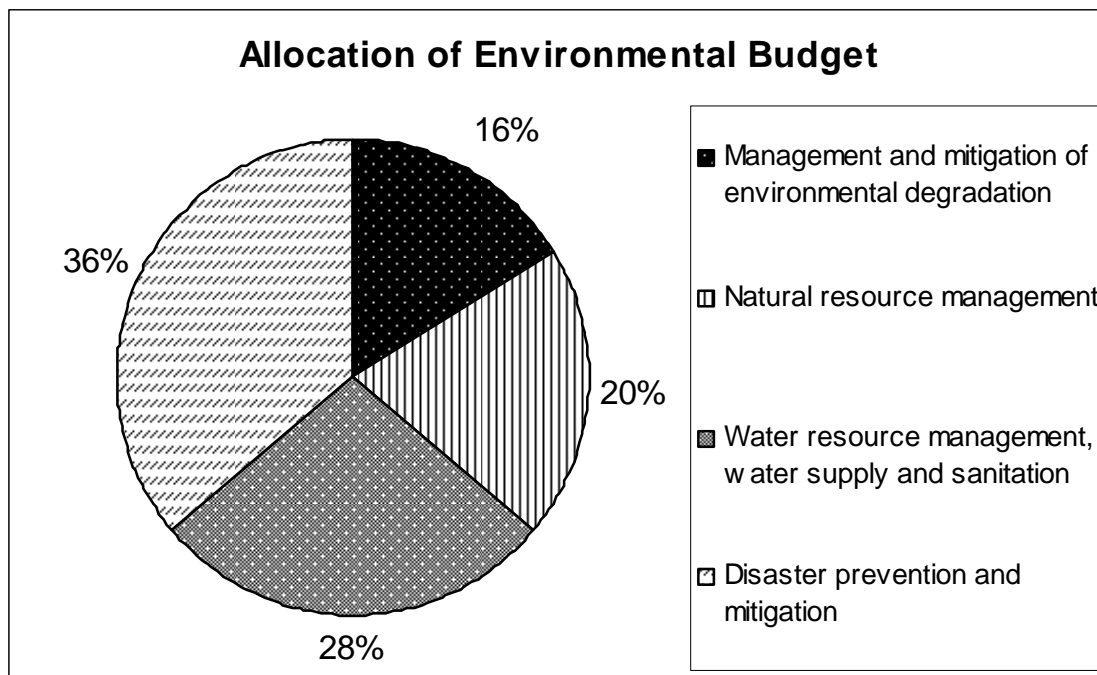
226. The MoEF and its Departments, while directly mandated to undertake environmental management functions, only account for a small percentage of total public expenditure on environmental management. Line ministries whose activities have major implications for the

environment include Energy, Transportation, Agriculture, Fisheries and Livestock, Water Resources, and Relief and Disaster Management, among others. Almost 10% of public expenditure is allocated for environmental purposes, based on a broad definition of environmental expenditures that includes the following categories:

- Degradation related public expenditures – including public expenditures for activities such as the establishment of laboratories for soil testing, for arsenic testing in water, for clean fuel projects, projects for reduction of water logging, and other cleanup activities;
- Resource related public expenditures – including public expenditures for programs such as afforestation, establishment of eco-parks, aquaculture development, integrated coastal management, and agricultural research programs;
- Water related public expenditures – including public expenditures on water supply, sanitation, and canal maintenance;
- Disaster related public expenditures – including public expenditures on flood protection structures, programs to develop early warning system of disasters, river bank protection programs, and construction of shelters.

A recent review of public environmental expenditures in Bangladesh conducted for this report<sup>132</sup> found these resources to be allocated between the four categories described above as summarized in Figure 6.1.

**Figure 6.1: Public Environmental Expenditures**



<sup>132</sup> E. Haque, 2005. Public Expenditures on the Environment in Bangladesh - background paper for CEA

227. Trends in public expenditure for environmental management are indicated in Table 6.1. In this Table, degradation and resource related public expenditures as defined above are grouped together as EE1, on the basis that these primarily constitute expenditures on environmental monitoring, protection and remediation. Water and disaster related expenditures as defined above, which are more associated with the provision of services and protection from natural disasters, are added to EE1 to form a more broadly defined category of environmental expenditures, EE2.

228. As Table 6.1 indicates, the level of public expenditure on the environment has been relatively consistent over the last decade, with EE1 at about 0.5% of GDP, and EE2 approximately equivalent to 1.5% of GDP. The increase in environmental expenditures in 2001-02 was largely a response to the floods of 1998, which were followed by an increase in public expenditure for a variety of purposes, including flood control and afforestation. The higher levels of EE1 expenditure in 1995-96 are not directly comparable, as they include expenditure on sanitation, which is incorporated in the EE2 estimates for subsequent years.

**Table 6.1: Trends in Environmental Expenditure**

	1995-96	1998-99	2001-02	2002-03
EE1 share of Public Expenditure	5.24%*	3.28%	4.62%	3.28%
EE1 share of GDP	0.70%*	0.44%	0.69%	0.48%
MoEF share of EE1	-	2.67%	3.14%	5.03%
EE2 share of Public Expenditure	-	10.81%	13.01%	9.11%
EE2 share of GDP	-	1.46%	1.94%	1.33%
MoEF share of EE2	-	0.81%	1.11%	1.81%

Sources: E. Haque, 2005, Public Expenditures on the Environment in Bangladesh (background paper for CEA), and C. Brandon, L. Rylander, 1997, Private/Public Sector Roles in Improving Pollution Management in Bangladesh.

Notes: EE1 covers degradation- and resource-related public expenditures as defined above. EE2 includes water- and disaster-related public expenditures as defined above, as well as all EE1 expenditures.

\*EE1 estimates for 1995-96 include expenditures on sanitation, which in subsequent years are included in EE2.

229. Table 6.1 also indicates MoEF's share in public environmental expenditures. While this share has been rising, it is striking to note that the Ministry only accounts for 5% of the Government's budget for environmental monitoring, protection and remediation (EE1), and less than 2% of environmental expenditures more broadly defined (EE2). These figures serve to underline first, the importance of environmental management policies and actions in other ministries, and second, the need for MoEF to play a proactive role in coordinating cross-sectoral environmental initiatives. The status of these twin imperatives is considered briefly below.

#### *Sectoral Capacity for Environmental Management: Building Systems and Incentives*

230. A range of sectoral policies have significant consequences from an environmental perspective, in particular the Water Policy, Forest Policy, Fisheries Policy, Tourism Policy, Energy Policy, Petroleum Policy, Agriculture Policy, and Industry Policy. While the integration of environmental concerns into sector policies is still poor, there have been recent

improvements, for example the inclusion of references to environmental management in the Industrial Policy (see Box 6.3). While such developments mark a growing recognition of the need to ensure environmental sustainability in sectoral initiatives, there is not yet any systematic process through which the environmental soundness of such policies may be assessed and monitored.<sup>133</sup>

**Box 6.3: Industrial Policy (1999) – a Glass Half Full**

One of the 17 objectives of the Industrial Policy is “to ensure a process of industrialization which is environmentally sound and consistent with the resource endowment of the country” (Chapter 2, Section 2.12).

The section on Institutional Support, under ‘Environmental Protection’, states “To control pollution of the environment, relevant provisions of the Environmental Conservation Act 1995 and rules framed there-under will be enforced. All sponsoring authorities must ensure that new projects incorporate requisite environmental studies, environment pollution control and other environment related precautionary measures. Existing industries, which are likely to cause environmental pollution and endanger public health, must take appropriate measures for controlling environmental pollution. Industries will be encouraged to obtain ISO 14000 certification.” (Chapter-XV, Section 15.6).

Despite these good environmental intentions, however, none of the 24 strategies of the policy relate to environmental management, and the chapter on fiscal and financial incentives provides no resources for pollution management.

The National Council for Industrial Development (NCID) was instituted in 1999 to provide effective guidance for implementation of the Industrial Policy, and is headed by the Prime Minister, with the Minister for Environment and Forest included as a Member. The Executive Committee of the NCID, however, does not include any representation from MoEF.

231. A growing number of line agencies are undertaking initiatives to build environmental management capacity, such as measures adopted by the Local Government Engineering Division (see Box 6.4). The further development of environmental management capacity within key sectoral agencies is essential to meet the Millennium Development Goal of ensuring environmental sustainability, and by distributing the burden of day-to-day environmental management, will enable MoEF to focus on more effective regulatory oversight. In order to strengthen the incentives for development of sectoral environmental management capacity, a key element of MoEF’s oversight role is to build demand for improved environmental performance, in particular through the provision of public information based on monitoring of environmental quality and the analysis of potential responses.

*Cross-Sectoral Coordination: a Proactive Strategy for MoEF*

232. MoEF is responsible for working with other ministries to review and monitor the impact of development projects on the environment across all sectors. Public sector projects under consideration by the Planning Commission are in principal passed to the MoEF for environmental review. With limited technical expertise available to fulfil this role, however, the opportunity offered by this ‘environment lens’ in the public planning process is not utilized to its full advantage, and several recent studies have pointed to the lack of

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<sup>133</sup> Rahman and Aina, 2005

coordination between MoEF and line Ministries.<sup>134</sup> No specific guidelines for the preparation and review of environmental assessments for non-industrial projects have been issued, and the process of providing environmental clearances for such public sector projects is ad hoc. While there is a need to monitor the implementation of environmental management plans for development projects undertaken by line ministries, DoE lacks the resources, and further, has no authority to undertake legal proceedings against line agencies in the event that they do not address the environmental impacts of their activities.

233. The analysis presented in the preceding chapters underlines the challenges inherent in developing effective cross-sectoral coordination for environmental management. For example, as considered in Chapter 3, the management of water quality in Dhaka requires coordinated action by DWASA, DoE, Dhaka City Corporation, Bangladesh Water Development Board, Ministry of Industry, and the Department of Shipping, in some cases with overlapping mandates and jurisdictions. In addition, the interests of key industries, such as tanneries and textiles, must be represented, and mechanisms provided to inform and empower local citizens and community groups affected by poor water quality and lack of access to sanitation.

#### **Box 6.4: Environmental Management at LGED**

The Local Government Engineering Department (LGED) plays a pivotal role in rural infrastructure development. In order to be able to deliver sustainable projects, LGED has pursued a strategy of mainstreaming environmental concerns in project development and implementation, and has supported training in environmental management, both for its staff and other stakeholders, including contractors selected to execute works under LGED programs.

Environmental aspects have been considered in LGED projects since 1992, when the first edition of “Guidelines on Environmental Issues related to Physical Planning” was published. These guidelines have since been supplemented with more specific guidance, for example the “Environmental Codes of Practice” prepared for the Rural Transport Infrastructure Project supported by the World Bank. Under the same project, an Environmental Information Management System is also being piloted to ensure that top executives in the Department have access to environmental management information for all on-going projects.

Recent studies, however, have pointed to the limited application of LGED guidelines in rural infrastructure projects (Ahammed & Harvey, 2004). The authors attribute this in part to the urgent need for infrastructure in Bangladesh and of the relative marginalization of environmental concerns with respect to development concerns.

234. A strategy for MoEF to take a more proactive role in the cross-sectoral coordination of environmental management would encompass the following four elements: (i) building demand for change through systematic monitoring, analysis and public disclosure of environmental information; (ii) analysis and recommendation of options for the mitigation of impacts; (iii) facilitation of processes aimed at developing consensus between sectors and relevant stakeholders on agreed courses of action; and, (iv) establishment of indicators and performance-based incentives for implementation, with associated monitoring and evaluation. Although still at an early stage, the reduction of emissions from diesel vehicles is an example of an issue on which the DoE is taking concrete steps to build consensus and coordinate action by a variety of agencies (see Box 6.5).

<sup>134</sup> See Ahammed & Harvey, 2004; Momtaz, 2002

### **Box 6.5: Catalyzing Cross-Sectoral Action – the Case of Diesel Emissions**

With two-stroke three-wheelers now banned from the streets of Dhaka, the worsening air quality can be attributed mostly to diesel vehicles, estimated to contribute more than 80% of emissions from mobile sources. A study conducted by DoE in 2005 recommended a variety of measures to address emissions from these vehicles. Other than those relating to tightening of emission standards, however, implementation of most of these recommendations lies outside the purview of the MoEF, as outlined below:

- Bangladesh Road Transport Authority, the Ministry of Communications, and the Dhaka Transport Coordination Board have the primary roles to play in (i) promoting the replacement of the bus fleet with CNG or cleaner diesel vehicles, (ii) establishing bus franchise conditions that include emissions standards, and (iii) setting fares and protecting routes to provide adequate revenue for investment in fleet maintenance and renewal. Bangladesh Road Transport Authority also plays the lead role in incorporating emissions tests in vehicle fitness tests;
- The National Board of Revenue has a key role to play in establishing incentives for investment in cleaner vehicles through duties that reflect the environmental costs of importing old diesel vehicles and engines;
- The availability of cleaner fuels depends primarily on the Petroleum Corporation, which must implement the recommendation to import low sulfur diesel, and the Rupantrita Pakritick Gas Company Limited, responsible for ensuring adequate availability of CNG for the renewed bus fleet.

While implementation of these recommendations lies outside its direct control, MoEF has an important mandate to promote these actions through the provision of air quality information and policy analysis. By building public awareness of the health risks posed by diesel emissions, and by establishing inter-agency consensus on appropriate remedial actions, MoEF can be instrumental in creating the public support and institutional momentum necessary for action. The Ministry can also play a role in sustaining such momentum through the provision of financial support for investments in cleaner transportation. The DoE has made important advances in this direction by distributing the diesel options study and constituting a cross-sectoral committee to recommend specific measures for emissions reduction.

## **V. Role of the Judiciary**

235. Currently environmental cases may only be heard by the two Environmental Courts established in 2002 under the Environment Court Act, 2000, in Chittagong and Dhaka. The number of cases brought to date is limited, and the record of successful prosecutions is poor. Until recently, only nine cases had been brought in Chittagong, mostly against hill cutters. In one case a verdict against the defaulter was pronounced in the form of a nominal fine. In the last year, however, about a dozen further cases have been lodged, mostly against brick kilns. In Dhaka, only about ten cases have been filed by the DoE, but in total some 84 cases have been brought before the Dhaka Environment Court. Most of the recent cases have been filed against polluting textile dyeing industries by private parties, whose motivations have become a cause of concern to the DoE. As the number of cases heard has been minimal, the Environment Courts have requested permission to also entertain non-environmental suits.

236. The higher courts (the High Court and Supreme Court) have considered public interest litigation cases on environmental matters, with the Bangladesh Environmental Lawyers Association (BELA) playing an instrumental role in introducing this practice, inspiring the judiciary to take a more active role at the highest level in cases of environmental

interest. An important achievement won by BELA in response to its appeal was the Supreme Court decision in 1998 to grant citizens and NGOs the right to enforce environmental laws.<sup>135</sup>

## **VI. NGOs and Civil Society**

237. A large number of environmental and natural resource management NGOs have played an important role in raising awareness of environmental issues, piloting innovative environmental management practices, and introducing environmental considerations into broader decision-making. For example, the Forum of Environmental Journalists, Bangladesh (FEJB), has been particularly effective in creating environmental awareness, and a number of State of the Environment Reports have been produced by civil society organizations. Field research carried out as part of this study also indicated that numerous NGOs are active at the upazila and union levels in undertaking activities such as tree planting, delivery of sanitation programs, and working with fisherman to improve the sustainability of fisheries. In Dhaka, NGOs are involved in the management of municipal solid waste, and have been successful in accessing carbon financing to support their initiatives.

238. The Coalition of Environmental NGOs (CEN) was formed in the late 1990's, attached to the Association of Development Agencies Bangladesh (ADAB), to coordinate the engagement of civil society on environmental issues of concern, but did not develop into an authoritative entity. As a result of the activities of environmental NGOs, civil society has become more confident and forceful in asserting its views on environmental issues, and the DoE has become increasingly receptive to working with civil society groups. In addition to this activist stance, some of the larger, more broadly-based NGOs have established their own environmental units, both to help manage the environmental impacts of their own activities, and to promote environmentally beneficial investments.

239. The private sector plays a dual role, acting both as a major source of environmental degradation<sup>136</sup>, and providing a range of environmental management services. The provision of professional environmental services has not grown at the rate it might have, however, in part due to the low level of private sector engagement by the DoE, as well as the limited emphasis placed on the quality of EIAs and environmental data collection. International clients, both private investors and development partners, are an important source of demand for such inputs. There have also been isolated examples of good collaboration between the public and private sectors to address specific environmental concerns, such as the phasing out of ozone depleting substances and the introduction of appropriate low cost pollution management technology into the textile sector.

## **VII. Strengthening Institutions for Environmental Management: Recommendations and Areas for World Bank Support**

240. As the analysis above suggests, weaknesses in implementation of environmental laws and regulations in Bangladesh can be attributed to a number of governance factors, including:

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<sup>135</sup> <http://www.elaw.org/news/impact/text.asp?id=321>

<sup>136</sup> see Matin, 1995

- overly centralized environmental management system with practically no institutional mechanism at the lower administrative levels (upazila and below) to address environmental issues;
- MoEF resources disproportionately allocated to the forestry department;
- low revenue allocation to DoE and heavy dependence of the Department on donor funds;
- weaknesses in formal laws, such as the absence of a legal requirement for public disclosure and participation in EA laws and regulations;
- the top-down organizational culture of DoE, combined with the lack of horizontal accountability between DoE and sector Ministries, and lack of vertical accountability between DoE and its divisional offices.

241. Strengthening environmental management in Bangladesh will therefore require action on a number of fronts, from national planning down to local decision-making, and across a variety of sectors. At the national level, more regular functioning of the National Environment Council and its Executive Committee would greatly enhance inter-sectoral coordination. At the local level, establishing a mechanism for public consultation prior to a No Objection Certificate being issued by the union parishad Chairman would significantly improve accountability in the process. Continued efforts to build environmental management capacity in sectoral agencies, and to strengthen environmental assessment in public sector planning, are essential to achieving the MDG of mainstreaming sustainable development into country policies and programs. Above all, however, it is clear that a crucial requirement for better environmental management in Bangladesh is improved functioning of the DoE.

*Strengthening DoE by Implementing its Strategic Plan*

242. Given the wide remit of DoE's mandate, and the extremely limited human and financial resources at the Department's disposal, it is essential that the Department target its actions to achieve the greatest impact with the scarce resources available. Recently, DoE undertook an institutional assessment and developed a strategic plan (and an action plan for its implementation) to clarify its goals, expected results and major initiatives (see Box 6.6) through the CIDA-supported Bangladesh Environment Management Project (BEMP) project.<sup>137</sup> This plan was approved by DoE and should be implemented. One limitation of this plan, however, is that it does not sufficiently address strengthening of DoE capacity at sub-national levels.

243. Even with a concerted effort to target its activities, by any reasonable standard there are not enough human and physical resources to allow DoE to fulfil its mandate and implement its Strategic Plan.<sup>138</sup> In a country of 130 million, the DoE has been allocated only about 75 managerial and technical staff, barely more than one officer for each of the country's administrative districts. When DoE was first created in 1989, there was a government commitment to allocate 650 staff over time. The organizational structure recommended by BEMP to enable DoE to implement its Strategic Plan suggests:

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<sup>137</sup> In targeting the use of its scarce resources, an outstanding issue requiring clarification is the role of the DoE in natural resource management and biodiversity conservation

<sup>138</sup> BEMP, 2003. Restructuring the DoE Organization

- expansion from 191 to 490 posts, with field positions increasing from 121 to 361 (see Figure 6.2);
- creation of a standards and enforcement branch, with capacity for legal support; and
- separation of the enforcement, monitoring and clearance functions at the field level.

**Box 6.6: Strategic Plan of the DoE**

**Mission** - DoE’s mission is to help secure a clean and healthy environment for the benefit of present and future generations through:

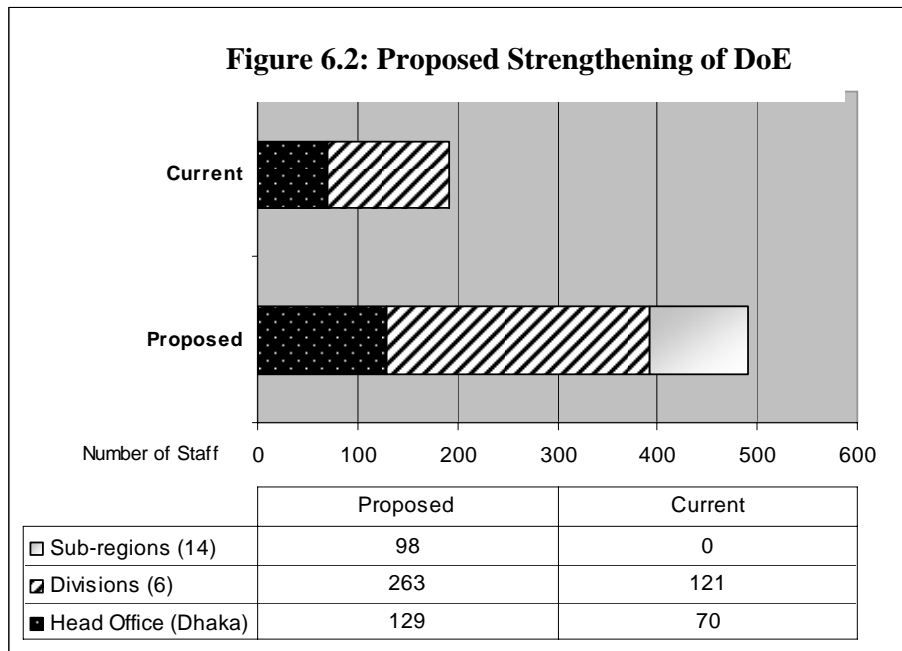
- Fair and consistent application of environmental rules and regulations;
- Guiding, training and promoting awareness of environmental issues;
- Sustainable action in critical environmental problems that demonstrate practical solutions, and that galvanize public support and involvement.

**Strategic Priorities** - DoE’s five-year strategy involves working to improve the DoE’s performance in all areas of its mandate while focusing on five strategic directions:

- Enforce the Environmental Conservation Act and meet international obligations;
- Administer the environmental clearance process competently and transparently;
- Address major air and water quality management problems;
- Expand public awareness efforts;
- Build DoE capacity.

**Building Capacity** - to better fulfill its mandate, the capacity of the DoE has to increase significantly. Accordingly, the first steps are (i) restructuring the Department, and (ii) increasing the number and competence of its human resources.

Source: Strategic Plan of the DoE, 2002



Source: BEMP (2003) – Restructuring the DoE Organization

244. DoE is primarily a regulatory and enforcement department, and to successfully carry-out its mission, it needs staff in the field with access to adequately funded logistical and laboratory resources. The emphasis on additional field positions will allow DoE to expand its field presence to 20 regional offices, bringing greater community presence and more effective response to complaints and enforcement issues. While the medium-term goal is to develop field offices in each of the 20 “old districts”, over the longer term the aim is to expand coverage to each of the country’s 64 administrative districts.

245. As indicated above, DoE provides no systematic support to its divisional offices. Moreover, the divisional offices of the DOE cannot provide technical advice to the industries they monitor. Even though they are engaged in revenue collection (through fees for renewal of environmental clearances), they have little incentive to do this systematically, since these resources are returned to the exchequer. A change in roles and incentives would allow divisional offices to play a stronger role in providing technical advice to the firms they work with, such that they are seen less as a policing and more as a technical support agency.

246. An additional human resource issue that is seen by many DoE staff as an impediment to higher performance, is the lack of an environmental cadre within the Civil Service. Although pay and compensation remain the same, a cadre permits incumbents to transfer between ministries, and to participate in training at the Bangladesh Public Administration Training Centre or the Academy of Planning and Development. Perhaps most importantly, the establishment of an environmental cadre would allow DoE staff to rise beyond the level of Director, which is equivalent only to the grade of Deputy Secretary. The existence of such a cadre would provide more attractive career paths, and would help strengthen the Government’s environmental management capacity beyond the DoE.

247. A difficult but equally important factor that needs to be addressed is the organizational culture of DoE, including the frequent changes in leadership, current top-down style of management, and lack of internal and external accountability. Addressing this “image crisis” is likely to go a long way in improving its relations with other sector Ministries and the broader citizenry.

248. Securing the financial support necessary to implement DoE’s Strategic Plan will be challenging. To enhance the credibility of this effort, three principles should guide the allocation of any new resources:

- increases in financial resources and staffing should be accompanied step-by-step with improvements in transparency, accountability and organizational culture in DoE;
- while project financing may provide essential resources for training, equipment, and specific studies, such support must be accompanied by the increases in revenue budget necessary to finance DoE’s evident need for increased staffing; and,
- given DoE’s heavy dependence on donor funds for programmatic requirements, a mechanism for better coordinating projects and funds needs to be established.

With significant additional resources recently committed by CIDA for technical assistance to DoE, the most important role for the World Bank will be to help address the revenue budget issues through its dialogue with the Ministry of Finance and ongoing program of

development policy lending. The need to implement the DoE's Strategic Plan is reflected in the policy matrix for the series of Development Support Credits supported by the World Bank, and will continue to be incorporated in future development policy lending discussions.

#### *Improving Transparency and Accountability in the EA Clearance Process*

249. Transparency is a crucial element in effective environmental regulation. Informing the public and allowing it to participate in environmental decision-making can help build pressure against polluters, reward good performers, and strengthen the credibility of environmental institutions. Several specific actions can be taken to improve transparency and accountability in the EA clearance process in Bangladesh:

- *Placing information about environmental clearances on the web:* a first step in this direction would be for DoE to place information related to environmental clearances and complaints on the internet, and to update this on a regular basis, to help establish public confidence in the environmental decision-making process;
- *Legal requirement for public consultation in EA clearance process:* if the assessment of environmental impacts is to become an effective and meaningful process, public consultation must become a part of the statutory process, particularly for potentially high risk projects. A first step in this direction would be for the government to prepare an appropriate amendment to ECR '97, requiring such consultation to take place;
- *Establishing guidelines for EA of non-industrial projects:* given that there are currently no legal guidelines for non-industrial projects, the current practice used by project sponsors (including line Ministries) is to send project proposals for environmental clearance to DoE with or without EIA. The clearance of such projects takes place after review by DoE, but the process is ad hoc. Given the importance of addressing environmental considerations, clear guidelines should be prepared by DoE for EA of non-industrial projects, such that the process of granting clearances is not discretionary but has full backing of the law; and
- *Delegation of select environment clearance functions to sub-national level:* the ECA '95 and ECR '97 make no provision for the environmental clearance function of the DoE to be devolved to upazila or union authorities, even for small scale, low impact investments falling under the Green Category. Limiting the list of industrial facilities specified in the ECR '97 as requiring clearance from DoE, and delegating responsibility for clearance of less polluting facilities to local authorities would free-up scarce DoE resources to focus on more serious environmental risks.

#### *Strengthening DoE's Monitoring and Enforcement Functions*

250. Bangladesh has a dearth of reliable data on all indicators of environmental quality, including air quality (both urban and indoor), water quality (both drinking water and surface water), soil degradation, biodiversity, and forest cover. The lack of capacity for sampling, monitoring, and laboratory testing greatly hinders the enforcement of the government's environmental standards and deprives civil society of the ability to participate effectively in environmental decision-making. To help meet the pressing need for more reliable and comprehensive environmental information, the data gathering resources of private sector

bodies and research institutions should be harnessed. The role of government, particularly DoE, could then shift from being the primary collector of environmental data to ensuring data quality, analyzing the results, synthesizing information, and disseminating the findings. Such arrangements could be established by MoEF through executive order.

251. In building DoE's ability to manage and disseminate environmental information, it will be important to prioritize and focus efforts around agreed strategic goals. At the national level, the provision of an annual environmental scorecard would provide such a focus, and build pressure for improved environmental performance. Using a small set of indicators of key environmental concerns in Bangladesh, the scorecard would be updated annually to track improvements and setbacks in environmental management. Locally, focus could be provided through a program to publish the environmental performance of industrial facilities, initially targeting selected industrial facilities of particular concern. This would both encourage industries to improve their performance, and at the same time would provide direction for improved monitoring by DoE.

252. While considerable strides have been made in environmental legislation, enforcement remains largely absent, with existing legal instruments left untested in the judicial system. The DoE has prosecuted very few offences under ECA '95, even at the recently established Environment Courts in Chittagong and Dhaka. If the DoE could bring more environmental cases to court and those were tried properly, this would help build the credibility of the government's environmental intentions. To do so, DoE's capacity in legal affairs will have to be strengthened, and the Department may need assistance in prioritizing suitable cases for action, collecting evidence, preparing the cases, and taking prosecutions to court. Given the difficulty of pursuing legal remedies for environmental purposes, however, DoE should also place greater emphasis on other forms of incentive for enhanced environmental performance, especially financial benefits, in the form of waste-minimizing win-win solutions.

#### *Strengthening Environmental Management Institutions at Sub-national Levels*

253. For DoE to exercise its authority more effectively, it needs to have a more regular and coordinated interaction with its divisional offices. Moreover, officers at the divisional level need to be able to provide technical advice to firms since they are much more in direct contact with industries, firms and stakeholders. At the upazila level, given that DoE has no presence, environmental issues must be addressed by the UNO, line ministry representatives and UDCC, and integrated into local development plans. Considering that officials at the upazila level work in a system of upward accountability, these objectives will be more easily facilitated if the signals for prioritizing environmental concerns come from senior line ministry officials.

254. At the union level there is no constitutional mandate to address environmental issues, and consequently elected union parishad officials cannot be held broadly accountable for environmental concerns without constitutional changes. Greater specific accountability could be introduced, however, through the process of issuing No Objection Certificates for environmental clearances. At present, these are obtained through private negotiation with the chairman of the union parishad. Mandating a process of public consultation in the issuance of these certificates would enhance transparency and help incorporate environmental concerns in development planning at the local level. Support for the development of such a

process could be provided through the World Bank's broader program of assistance for local governance.

*Incentives for Improved Environmental Performance by Industry*

255. Regulatory approaches to improve environmental management should be complemented with incentives for voluntary improvements in environmental performance. In the case of industry, there is scope for this to be achieved through the promotion of waste-minimization and eco-labelling initiatives. While this would primarily attract export-orientated businesses, particularly in the garment manufacturing and aquaculture sectors, consideration could also be given to the promotion of an eco-label for the domestic market.