

## *Local Environmental Funds in China*

### *by Xinyuan LU and Jinnan WANG*

#### **I. Background**

Since 1988, various provinces and municipalities have established environmental funds. Different models were chosen for differences in function and financial sources. Drawing on the experience of the Shenyang Environmental Investment Company, more than 20 provinces and municipalities have sponsored pilot environmental investment companies. The following is a brief introduction to two typical approaches.

##### *1.1 The Shenyang Environmental Investment Company*

The Shenyang Environmental Investment Company (hereinafter called the Company) was established as a result of policy reform. Established in 1988, the Company is typical of environmental funds based on the pollution levy.

##### *(i) General Background*

The Company is based on an environmental protection fund capitalized at US\$1.190 billion (10 billion yuan). Loans began to be provided for environmental purposes, including control of pollution, in 1983. The Company is wholly responsible for the operation of all its capital. Revenue from the pollution levy is included in the government budget before it goes into the fund. The fund invests primarily in projects defined in the government's pollution control plan. Exemption from repayment of the principal is possible in specific circumstances. Personnel, capital, and accounting procedures of the Company are independent from the government. The Company is a legal entity subject to industrial and commercial registration and to paying tax.

##### *(ii) Business Scope*

The business scope of the Company covers the following:

- participating in the selection of projects to be funded and formulating a preliminary annual loans program;
- reviewing the budgets and technical programs of projects receiving loans. Designing and organizing bid invitation and tendering;
- organizing, coordinating and supervising the projects and monitoring investment performance; and
- collection of loan interest and ensuring repayment of the principal.

##### *(iii) External Relationships*

The Company is affiliated with the Shenyang Municipal Environmental Protection Bureau, with the manager of the Company nominated by the Bureau. The Company and the Bureau must agree on projects to be offered loans. The Bureau delegates responsibility for the management of the environmental fund to the Company, which is subject to the coordination and control of the Bureau. The Company has also established working relationships with government departments such as the finance bureau and the planning and economic commissions. All funds controlled by the Company are deposited in a bank. The extension of loans is a responsibility of the bank. Consequently, a close relationship is established between the bank and the Company.

*(iv) Achievements*

Since 1988, all revenue from the pollution levy has been channeled to the environmental fund, and 95% of the fund has been allocated. The fund has also attracted inflows from enterprises. It has, therefore, greatly increased in size. By the end of 1994, a total of US\$23.80 million (0.2 billion yuan) had been invested in 340 projects for environmental protection purposes. Excluding those projects exempt from repayment, the environmental fund still retained US\$4.762 million (40 million yuan) as floating capital. The interest on the loaned funds amounted to US\$1.791 million (15.045 million yuan). 92% of the projects receiving loans were assessed as well designed and 93.5% of the projects to be constructed had been successfully organized through bid invitation.

*(v) General Evaluation*

The experiments undertaken by the Company have introduced a mechanism for funding investments in pollution control, centralized fund management and supervisory procedures, and promoted wider use of, and familiarity with, loans among enterprises. Given the transition from a planned to a market economy, the new practices are timely. Distribution of funds has changed from one based on automatic allocation to one of interest-bearing loans. The Shenyang Investment Company is an important, progressive experiment which has raised the efficacy of revenue use.

The Shenyang model needs to be further refined. The focus of future reform will be a revision of its operational methods, the administrative arrangements and investment distribution policies (e.g. between investments in policy type public projects and investments in profit oriented projects).

## 1.2 *Tianjin Municipal Industrial Pollution Control Fund*

*(i) Sources and Size of the Fund*

The Tianjin Municipal Industrial Pollution Control Fund (hereinafter abbreviated as the Tianjin Fund) was established in July 1993. The fund's capital was provided from a US\$19 million loan by the World Bank, part of the revenue from the pollution levy, and interest on loans to enterprises. The Chinese side, represented by the Tianjin Municipal Environmental Protection Bureau contribution of money collected by the pollution levy will total US\$12.5 million (105 million yuan) over the five years of the World Bank loan contributions. At the end of this period, the Bureau will continue to provide contributions in order to repay the interest and principal on the World Bank loan and to maintain the general size of the fund.

*(ii) Scope of Fund Assistance*

The fund offers financial assistance to municipal institutions and agencies for industrial pollution control projects such as:

- projects intended to control the release of pollutants and projects promoting technical innovation in resource and energy saving;
- comprehensive waste control projects and those promoting centralized treatment of wastes;
- other pollution control projects with clear social or economic efficiency benefits.

The fund may provide credit to the project, up to a maximum of 70% of the total investment value of the project.



*(iii) Structure of the Fund*

A Board of Directors serves as the principal authority of the fund. Two of its seven members were nominated by Tianjin Municipal Environmental Protection Bureau, one by the Municipal Sightseeing and Health Administrative Committee, and one by each of the Financial Affairs Bureau and Economic Commission. In addition, two persons from the local industrial bureau serve as advisors. Of the two nominees of the Environmental Protection Bureau, one serves as the President of the Board and the other is the Executive Director. When the board stands adjourned, the Executive Director exercises responsibility on its behalf. The executive board meeting must be attended by the President, the Executive Director and a director of the board from the Financial Affairs Bureau. The standing institution of the fund is the fund Management Office established under the Board of Directors and to which it is accountable. This office operates as an independent institution with sole responsibility for both fund gains and losses. The office has established four affiliated departments: a technical department, an economics department, an accounting affairs department and, an administrative department.

*(iv) Institution in which Fund Money is Deposited*

All money under the control of the fund is deposited with the International Business Department of the Tianjin Branch of the China Construction Bank. When the Fund Management Office was being established, the Construction Bank provided considerable assistance to the Office in undertaking economic evaluations and accounting audits of projects. This work is now conducted by the Fund Management Office itself.

*(v) Status of Fund Operation*

To date, the fund has agreed contracts with ten other institutions with a total contracted credit amount of US\$13.152 billion (110.48 billion yuan). In addition, the fund has established contact with, and is conducting assessments of, nearly 20 more projects with a total investment value of about US\$4.762 million (40 million yuan).

*2.0 A Framework for China National Environmental Fund**2.1 Selecting the Type of NEF*

The existing fund systems in China can be categorized into three types:

*1. Special Government Fund*

**Advantages:** Adapted to existing policies, experience available, ease of operation; simple administration and structure.

**Disadvantages:** Attached to government agencies and not independent; limited fund sources; single method of investment; organizational problems.

*2. Public Welfare Fund*

**Advantages:** Simple to establish; wide range of fund sources; simple internal structure.

**Disadvantages:** Disparity between fund sources and demands on fund; narrow field for investment; restricted scope for development.

### 3. Commercial Investment Fund

**Advantages:** Good capability in fund distribution; compatible with principles and standards of a market economy; good prospects for development of the fund.

**Disadvantages:** Policy and administration barriers; cannot receive donations; difficult to control investment orientation; lack of practical experience in the operation of such a fund.

Based on the current situation in China and experiences of other environmental funds, it is suggested that a mixed environmental fund be established in China. It should draw on the advantages of the above three types of funds. The main features of such a mixed environmental fund include:

- it can receive money from various sources;
- it can fulfill multiple investment functions, with objectives to fund both policy type and commercial investments;
- its organizational structure is compatible with institutional arrangements of a market economy and thus the fund has better long term development prospects; and
- it can guide the orientation of environmental investment and facilitate improved efficacy and effectiveness of environmental investment.

## II. Goals

As a national fund, the NEF would be able to receive funds from various sources, develop a capital market for environmental protection, and provide support to environmental projects. Its long term objective can be realized in two stages:

**Stage I:** Establishing the fund, defining a project appraisal procedure, and supporting projects in progress. The following specific tasks are suggested: (1) the NEF should focus on priority projects and those with low risk, such as river basin pollution control and treatment projects; (2) revenue from the pollution levy and potential environmental taxes should be channeled to the NEF to provide income. This money can be used to repay debts and increase the capitalization of the fund; (3) projects in this first stage should be extremely well organized and managed to ensure that NEF income is self-sustaining; (4) the NEF should cooperate with, and facilitate the development of, existing funds for pollution control and treatment, including funds managed by agencies attached to environmental protection bureaus and companies to improve both national and local efforts in environmental protection; (5) the NEF should maintain contact with a wide range of domestic and international financing sources, including banks and investment funds.

**Stage II:** Once the necessary reform is completed, that is, the NEF is authorized to use revenue from the pollution levy and environmental taxes as fund sources and to undertake investments according to the fund's criteria, the following actions can then be implemented: (1) seek to attract funds for the NEF from a wide variety of sources. At this stage, projects should be open to a wide range of potential investors; (2) set up a clear project appraisal system which includes assessment of the compatibility of project proposals with government policies and commercial loan conditions; (3) removal of some policies which make provision for subsidies except in regions where revenue from taxes or appropriation from government funds are used to support special projects under specific government policies; (4) use money from the NEF to deepen development of a market for environmental services and technologies which support environmental objectives.



### III. Legal Structure, Governance and Administration

It is suggested that the organizational structure of the fund be set up in two phases. In the first phase, the administrative arrangements for the NEF should be established. An administrative committee or board of directors for the fund, responsible for supervising and managing the work of the fund, should be set up. The administrative committee should consist of representatives of different institutions such as the State Planning Commission (SPC), Ministry of Finance (MOF) and State Commission for Economic System Reform, with NEPA playing a lead role. The committee will be responsible for determining the objectives and development strategy of the NEF, defining regulations, rules, and a plan of operations, making decisions on staffing, etc. A preparatory NEF office or management center should also be established. The administrative committee and preparatory office/management center are both transitional organizations. After one or two years of operation, a national environmental investment company should be set up.

The administrative committee of the NEF will entrust responsibility for managing the NEF's assets to a competent organization and delegate investment management control to the national environmental investment company. The asset management organization and the investment company will sign contracts with the NEF. It is preferable that the asset management organization be a large commercial entity.

The environmental investment company will be the main body responsible for disbursing the assets of the NEF. Its principal function is to use the available assets effectively and according to the specified objectives and principles of the NEF to realize the basic goal of the fund. The investment company and the NEF should be structured as two independent corporations. A contract between the NEF administrative

committee and the investment company will establish the rules for management of fund investments.

In a second phase, the national environmental investment company (NEIC) will be set up. The administrative structure of the NEIC as a corporate entity will be determined according to company law and other relevant laws and regulations.

The administrative structure of the NEIC will comprise a board of directors, a president, a supervisory board, and several business units. Major responsibilities of the board of directors include defining rules, regulations and operational plans for the NEF, reviewing reports submitted by the president, auditing the financial accounts of the company, making decisions on staff appointments and termination of employment, etc. The board of directors will consist of five to thirteen members, with the chairman being the legal representative of the board. According to the rules and regulations of the NEIC, the chairman and key members of the board will be nominated or appointed by departments of the State Council responsible for environmental protection.

The president of the NEIC will be appointed or removed by the board of directors. Responsibilities of the president include managing and administering the NEIC, implementing decisions made by the board of directors; preparing and implementing the annual workplan; coordinating project evaluations; preparing loan plans, overseeing implementation of loan policies and ensuring timely collection of loan principal and interest; and sustaining and increasing the value of the money provided from the NEF to the NEIC.

A board of three supervisors will be set up, and will be responsible for legal supervision of the operation and overseeing the financial affairs of the NEIC. Also, in order to meet the practical needs of the business environment

within which the NEF will operate, departments focused on funding government policy projects and commercial fund management will be established.

#### **IV. Funding and Fundraising**

The fund's income will come from three major sources: appropriations from the Chinese government, multilateral and bilateral assistance, and commercial investments. Proposed appropriations from the government include a special fund which channels contributions by financial sectors of central government to the NEF (this money could be used as seed capital) and a certain amount of money from local EPBs collected by NEPA. Funds from international donors would come principally from the World Bank, the Asian Development Bank and some developed countries.

In the future the NEF could raise funds from domestic and international capital markets by encouraging individual contributions and issuing bonds. In addition, the revenue from some potential environmental taxes could be included.

#### **V. Investment Orientation of the Fund**

Based on the principle of separating the administrative jurisdictions of central and local government under a market system, and taking the NEF purpose into account, the fund should be used for the following purposes:

- to establish pilot and demonstration projects for industrial pollution prevention and control, including the demonstration and dissemination of cleaner production technology in key polluting sectors, the diffusion and application of best practical technology for environmental protection, reuse of waste and treatment of regional pollution problems;

- to implement centralized control and comprehensive treatment projects which address major urban pollution problems;
- to solve pollution problems including protection of drinking water sources, prevention, control and emergency treatment of pollution;
- to undertake demonstration projects to ensure compliance with international conventions and agreements, including development of technologies for reducing greenhouse gas emissions and replacing ozone-depleting substances; demonstration projects to protect biodiversity and establish nature reserves; and environmental protection projects for shared rivers and ports close to borders;
- to develop cross-regional and trans-river basin projects in pollution control;
- to develop "green" products as well as introduce environmental equipment and technologies, and
- to undertake profitable investments consistent with environmental protection goals.

#### **VI. Methods of Distributing Money from the NEF**

Since the NEF is not a pure investment fund, its money can be used in the following ways:

**Loans:** For most environmental protection and pollution treatment projects it is appropriate to distribute funds in the form of loans. Loan repayments can be used to augment the cash flow of the fund. Assistance from many international multilateral sources has been provided in the form of loans which are required to be used and repaid in the same form.



**Investment:** In some cases, the total amount of cash flow generated by environmental projects is insufficient to repay the loans. In other cases, the projects seek to establish commercial organizations. In these cases, it is more appropriate to invest in the form of capital shares. The NEF will invest in these types of projects as a shareholder and retain a certain proportion of shares. The NEF will participate in decision making process associated with the projects, but in principle will not participate in daily operational and management activities.

#### **Reduction of interest and principal**

**repayment:** Currently, most environmental projects are not very profitable. It is difficult for such borrowers to pay interest. Moreover, some borrowers cannot repay the principal. For those projects needing to treat and control pollution urgently, the NEF could reduce interest payments and provide a grant for part of the principal. In order to encourage developers to invest in environmental projects, it may be necessary to provide economic benefits as an incentive.

**Paying interest due on loans:** In order to encourage relevant organizations to use commercial loans and credits for environmental projects, the NEF can establish a sub-fund for paying interest on loans. This sub-fund could be used to provide guarantees and to pay the interest on loans from commercial banks for environmental projects.

**Diversified investment:** The amount of the fund that remains unused should be kept and increased through diversified investment. Activities in this area need to be approved by the fund's Board of Directors and will be implemented by the managing company.

## **VII. Loan Terms, Application and Approval**

The NEF will operate as a project manager. Possible projects include industrial development and public interest projects, with the former taking precedence. Concerning public interest projects, the managers of fixed assets or tangible assets resulting from investments will submit proposals for loans from the NEF and local financial agencies will guarantee the proposed projects. For projects which cross different administrative boundaries, agreement on responsibilities will be reached by the relevant provincial and municipal governments and the project owners.

The procedure for loan application and approval is:

- for all projects that meet the criteria established by the NEF and are in accordance with the standards set for fund applications, applicants will submit the relevant forms to the NEIC following completion of all the necessary preparatory work;
- the operations department of the NEF will make an assessment of the project or entrust a relevant organization to undertake this task. The assessment will cover the type of equipment or technology to be used, the investment budget, cost effectiveness, environmental benefits, and loan repayment capability;
- after a proposed project passes this assessment, and at the request of the NEF operations department, the loan applicant will develop an investment plan according to established procedures and provide valid guarantee documents from local financial, banking and other organizations;

- the operations department of the NEF will make an overall assessment and determine implementation plans for the loan, based on the annual development plan ratified by the NEF's administrative committee. After signing contracts with the borrower, the operations department of the NEF will inform the fund's trustee bank and request the necessary formal procedures for granting the loan;
- after the project is approved, the NEF operations department will submit the necessary documentation to the NEF administration committee for record keeping;
- the borrower will be responsible for implementing the project and meeting the conditions of the loan.

**Loan Terms:** The following factors will be considered by the NEF in evaluating loan proposals:

- Investment structure of the project: In order to increase the scale of investment, and to spread the risk between the fund and the borrowing enterprise, the borrower will be required to raise counterpart funds not lower than 30% of the total project.
- Duration of loans: The loan period is generally three to five years, but exceptions will be made for special projects where the loan period can be as long as seven years. Extensions will not exceed two years.
- Favorable loan interest rate: The interest rate and overdue interest rate charged for loans made to industrial enterprises for technological modernization projects can be 10% lower than the prevailing market, when necessary. The interest rate of loans in foreign exchange is set as a floating rate, and is 1.5% higher than the loan rate of the World Bank. Project developers who receive

such loans will bear all foreign exchange risks. For some public interest projects a certain amount of loan interest can be deducted but the deduction should not mean that the loan is less than the project's capital cost.

- Methods of repayment: Because the fund's income will come from many sources, money repaid by borrowers is received and then redistributed. The National Environmental Investment Company (NEIC) should define arrangements for fund use and repayment for all projects, prepare schedules for loan repayment to the NEF, and make the necessary financial arrangements.

## VIII. Relations between the NEF and Relevant Government Institutions

These include relations between the NEF and NEPA, between the NEF and other government ministries and commissions, between the NEF and the trustee bank where its money is lodged and between the NEF and state policy organizations charged with promoting investment to achieve national objectives.

### (i) *Relationship between the NEF and NEPA*

In terms of long term development, it is inevitable that a relationship be established between the NEF and national agencies responsible for environmental protection according to the principle of separating administrative functions from business functions. However, in order to accurately reflect the nature of the fund's activities, it is not practical to separate the NEF from the administrative agencies responsible for environmental protection. NEPA should thus be identified as the responsible administrative agency of the fund.

It should be noted that the relationship between a "responsible administrative agency" and the NEF is very different from that of



command and compliance between administrative agencies and enterprises in a planned economy. The current administrative function is embodied by appointing an administrator of the fund, such as the chairman of the Board of Directors, in supervising the operation of the fund and in establishing policies to guide action. While subject to supervision by NEPA, the NEF has full power to make independent decisions on operational matters within the framework of relevant national investment policies, environmental policies and environmental investment plans. With an improvement in the operational capability of the NEF, the direct influence of NEPA on the fund will gradually decrease. It is anticipated, however, that NEPA will retain some influence by providing policy guidance and participating in significant investment projects.

*(ii) Relationship between the NEF and Relevant Ministries and Commissions*

Relevant ministries and commissions include the State Planning Commission (SPC), the Ministry of Finance (MOF) and the People's Bank of China. The SPC and the MOF should be invited to participate in establishing the fund. They could be invited to appoint directors or members of a committee responsible for the administrative organization of the NEF, together with directors or members from other institutions and agencies. The appointees would be able to participate in the administration and supervision of the NEF and provide policy guidance on its operation.

According to China's banking law, the People's Bank has the authority to approve the establishment, modification and termination of the business scope of funds. After the NEF is established, it will be subject to the leadership, administration, coordination, supervision and auditing of the People's Bank of China concerning its business affairs.

*(iii) Relation between the NEF and its Trustee Bank*

This refers to the association between the fund and the commercial bank where the NEF holds its account. As noted above, a large commercial bank is the most appropriate trustee organization for the NEF. The board of directors of the fund should sign an agreement to entrust the fund's assets to this bank. The NEF will then deposit all of its funds in an account. It should be stipulated in the agreement that the disbursement of money associated with the NEF's investment should be managed and operated by the bank.

*(iv) Relationship between the NEF and National Policy Investment Organizations*

National policy organizations responsible for investment are special financial organizations established to ensure the implementation of policies aimed at reorienting China's economic structure during the period of transition to a market economy. The major mission of these organizations is to grant loans to those projects that can achieve very good social benefits, but which cannot show high economic benefits nor repay loans at the standard interest rate, or to those projects that demand a large amount of money and take a long time before they are able to repay the loan and to which, therefore, commercial banks are not willing to grant loans. Environmental projects are one of the important target groups of the national policy investment organizations. Loans are given only to projects that need money at a favorable interest rate.

The operation of the NEF should not substitute for the investment activities of the national policy investment organizations in funding environmental projects. When investing in a large scale environmental project, the NEF should coordinate and cooperate with the national policy investment organization in preparing and implementing plans and in



granting loans. This reflects the capacity of the NEF to contribute funds and to take some of the project risk. For other environmental projects, the NEF should coordinate with the national policy organization.

#### **IX. Ensuring Coherence between National and Local Environmental Funds**

China's finance, taxation and investment systems are currently being adjusted and undergoing reform. Since China is such a large country and its economic development is uneven in different regions, it is not possible to overcome some of the disadvantages of the existing environmental investment system by relying solely on local environmental funds (LEF) or a national fund (NEF) operating in isolation.

LEFs have been the pioneers of reform of environmental funds in China. In order to adapt to the new situation of developing a market oriented economy, the special fund for pollution source control and treatment, the revenue for which comes from the pollution levy, and which was established under a planned economy, is being thoroughly reformed.

Experience in reforming environmental funds can be summarized as follows. On the one hand, it is possible to retain the existing structure of the local special fund for pollution source control and treatment while at the same time reforming some of its procedures and scope so its operation better meets the requirements of a market economy. For example, changes could be made in fund management, areas of investment, prerequisite conditions for project applications, loan interest rate and the terms and conditions of exemptions for repayment of principal. This type of reform is currently being carried out and deepened. The Shenyang Investment Company and the environmental fund in Tianjin are two examples of this.

To deepen the reform of LEFs, the following five issues need to be addressed:

- whether the environmental fund or investment company is subordinate to any governmental institution or is independent;
- the fund's capability to distribute money and the effectiveness of fund spending;
- the policy of exempting principal repayment on loans repaid late;
- the split between national policy related investments and commercial investment; and
- the flexibility to consider all feasible investment opportunities including, but not limited to, investment in key fields of pollution control.

On the other hand, and on the basis of experience in the reform of local special funds, a NEF and LEFs that can meet the requirements of a market economy, could be established. These funds would aim to support the achievement of national environmental policy goals and to reflect the special requirements of environmental protection and investment in environmental projects. With these criteria as prerequisites, the funds could introduce market mechanisms and operate in a way that is consistent with the functioning of a market economy to maintain and increase the value of the fund. These funds should have all the advantages of special government funds, public welfare funds, and investment funds and also have some of the functions of all three in terms of operational procedures, aims, investment skills, investment coverage, and management. The type of NEF to be established should be consistent with the stage of economic transition. Reference could be made to experience in transitional countries of central and eastern Europe such as Poland.



Generally, except for commercial investment funds, various special funds are established to solve problems in a specific field. However, special funds, like environmental funds, are not a panacea.

The differences between these two types of fund implies a difference in spatial coverage. LEFs are not subordinate to a NEF in terms of administration. Both funds, after their legal registration, are considered equals.

NEF(s) and LEF(s) will carry out their respective activities according to their jurisdiction. Although a NEF and LEFs focus on different fields, their business is very similar. When investing in some projects, different funds can take part in the activities of the other, and cooperate on the basis of discussion and consultation. In order to cooperate and coordinate better with LEFs, it is preferable for NEF(s) to establish subordinate agencies or offices in specific regions, with responsibility for its business in these regions.

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