CENTRE IN BRIEF

The Chinese National Cleaner Production Centre (CNCPC) was established in December 1994 with the approval of China’s State Environmental Protection Administration (SEPA), which has since then become the Ministry of Environmental Protection (MEP). In June of 1995, under the guidance and financial support of UNIDO and UNEP, the CNCPC joined the world-wide project the UNIDO/UNEP National Cleaner Production Centre (NCPC) programme. The CNCPC is affiliated to the Chinese Research Academy of Environmental Sciences (CRAES) and is also directly under the administration and guidance of the MEP and its Cleaner Production (CP) Unit.

At present, the CNCPC has 26 full-time staff and 10 students who are doing applied research in connection to their Doctor or Master courses. The full-time staff includes 5 research fellows and 6 associate research fellows. There are 6 departments in the Centre. The total annual budget is approximately EUR 810,000. The Centre is currently active in different sectors (e.g. chemical industry, metalurgy industry, brewing, building materials, fertilizer, and textile).

ABOUT THESE CASE STUDIES SERIES

The Joint UNIDO-UNEP Programme on Resource Efficient and Cleaner Production (RECP) aims at improving the resource productivity and environmental performance of businesses and other organizations in developing and transition countries. The Programme is implemented in partnership with a network of National Cleaner Production Centres (NCPCs) that have currently been established in over 40 countries. This case study series documents how NCPCs have been set up and are being managed and governed in their respective national contexts. They illustrate the accompanying Primer on Good Organization, Management and Governance Practices for RECP Service Providers.
**STRATEGY**

The CNCPC aims to be a strong policy and technical support to the central government of China, and strives to be a leader in the CP area all over the country, through technological and policy advice, training and information dissemination. The CNCPC is transforming from a pure market-oriented CP service provider to an integrated public-interest-oriented institution with roles both as CP policy adviser and CP technologies developer and provider. The CNCPC is fully managed and controlled by the directors, and there is no Board in place. The directors have full rights and obligations to run and administrate the Centre. The CNCPC has a close and good relationship not only with the MEP, but also with the National Development and Reform Commission (NDRC), the Ministry of Industries and Information Technology (MIIT) and the Ministry of Science and Technology. The CNCPC is playing a significant role in assisting these ministries to plan and draw up CP programmes and large-scale CP-related projects at national level.

The business plan of CNCPC mainly covers the following aspects: (i) continuously providing CP policy advice to MEP as well as to NDRC and MIIT, so as to play an active and significant role in the administration and promotion of CP activities all over China; (ii) keep developing and delivering CP trainings for different target groups including consulting firms, administration officials and managers from companies; and (iii) making more efforts in providing in-plant CP services to companies; and research on new and clean technologies.

**AUTONOMY**

CNCPC is operating as an independent unit of the Chinese Research Academy of Environmental Sciences (CRAES). Both CNCPC and CRAES are independent entities established under the MEP and operating under the direct guidance and administration of MEP. CNCPC has 2 directors, both are employees of CRAES. The CNCPC shares the same financial accounting as CRAES, but it has full control of financial issues, including the annual budget and distribution and utilization of revenues. The CNCPC has its own statutes and by-laws related to staff and resource management and organization, etc. It can enter into contracts for service delivery and freely manage 90 per cent of the obtained funds. The CNCPC interviews and hires staff freely and independently and elaborates the corresponding legal working contracts.

For nearly 10 years, the CNCPC has reached a break even level with the income from clients. It is thus independent from subsidies or grants from the government. The major strategic alliances of CNCPC include MEP, NDRC, MIIT and all provincial environmental protection bureaus.

**OPERATIONAL MANAGEMENT**

The CNCPC elaborates its annual plan with specific target performance indicators and makes a summing-up every year to evaluate the real achievements of each activity or project in the plan. Every year, the annual plan and summing-up report are disseminated to each staff in the Centre to let them know what has happened with their efforts and what will happen in the future.

The Centre gives a clear description for each department along with specific job descriptions for each staff member within a department. The staff member gets strict and clear guidance from the managers or directly from the directors if they are involved in a large-scale project which is controlled by the directors. Hands-on practice and specific continuous training is provided to new staff. In general, the CNCPC sees CP-related training or seminars as very valuable. At the end of the year, or the completion of a project, the Centre possibly rewards the staff. The staff is highly involved in the design and application of potential projects. All of these are jointly and thoroughly worked out by directors and key staff from the Centre.

The financial management of CNCPC is directly guided by the financial department of CRAES, even though CNCPC has an independent legal position. However, the CNCPC has the full right to plan and distribute its incomes without the approval from CRAES. However, the financial procedures should follow the rules prescribed by CRAES. The financial account of the CNCPC is normally audited together with the accounts of CRAES.

The CNCPC has gained a good reputation among clients for its high-quality services and serious attitudes to the technical issues encountered in the delivery process. As for internal ethics, CNCPC should make more efforts to establish its own code of conduct and ensure regular reviews of adherence to the code of conduct.
In the meantime, more ethics training courses should be organized and be provided to the staff and stakeholders.

BUSINESS

The CNCPC has been making efforts in innovation of CP services, mainly covering 3 aspects.

The first aspect is related to CP audits and technology research and development. When conducting a CP audit for an enterprise, the auditors may face some bottle-neck problems with no technology or option available in the market. The Centre has therefore been appointing its qualified staff to make experiments and tests to research these problems and try to solve them. As a result, a specific high or medium cost CP option will be generated and implemented in the enterprise based on the success of the new technology or option tested on experimental level.

The second aspect is training. The CNCPC is delivering 3 types of training. The first type is a 5-day National Training Course for CP Auditors, with over 18,000 persons having received training and obtaining certificates from 2001 to 2009. The second type is training workshops for local government officials to enhance their understanding of the China CP Promotion Law and its related regulations and administrative procedures, and improve their ability to enforce these legal prescriptions. The third and last type is an advanced senior training course for CP auditors who have practiced CP auditing during at least 2 years in at least 5 companies. This training focuses on improving their in-plant skills (namely data analysis and mass balances) as well as their ability to identify solutions based on waste generation, its cause and its flow. In addition, the advanced senior training course also introduces energy efficiency, energy saving and energy auditing.

The third aspect in the innovated CP services consists in various new ideas on CP auditing made mandatory by the MEP. As stipulated in the CP Promotion Law, two categories of enterprises have to conduct compulsory CP audits. The first group comprises the enterprises that discharge or emit pollutants above the local or national standards, and the second group comprises the enterprises using or discharging/angeling hazardous substances in their production processes. In order to control the quality of compulsory CP audits, the Centre has recommended the MEP to issue a regulation in order to require local environmental administrations to make an assessment and acceptance procedure for all the compulsory audits. This will enable the Regulator to evaluate the quality of the CP audits and the potential effectiveness of high/medium cost CP options.

Finally, the focus of the CNCPC’s work has shifted from enterprise-level CP audits and training towards providing technical support and policy advice on CP for governmental bodies (such as the MEP and the China National Development and Reform Commission (NDRC)), and carrying on large-scale national science and technology projects.

At the start of each year, the CNCPC asks all management level staff to plan the services and markets to be delivered in the upcoming year (or years). All the involved staff members meet to prepare plans and tender responses. The CNCPC always keeps close relations with every possible partner and once there is a potential for bidding an important national project, all the possible partners are invited to work together.

The CNCPC has good and close relations with various sector associations and local CP centres, but the connection is loose and only focuses on technical aspects. There was a national network for CP in China with more than 90 institutional members, but the institutions changed substantially, so the network is now inactive. It is foreseen that the CNCPC launches a new national network with some totally new proactive institutions and local CP centres.
Success stories are used in the training courses and have been disseminated on-line to show the strength of the CNCPC, which results in more and more business opportunities.

EXPERTISE

The CNCPC has already understood the importance of knowledge management and is making efforts to improving its system. The Centre has already set up its internal library, and the staff of the Centre can search for any project documents, reports, CP-related references, newsletters, etc. After the completion of a project, the project team is required to provide a hardcopy of the project report to the library and if possible, the electronic version of the project report is disseminated to all the division managers as reference. Generally, a small internal seminar is organized at the end of main projects, and the project team is required to present its achievements.

The CNCPC organizes a staff meeting every 2 weeks or 4 weeks to share information on the different current activities and to discuss any problems encountered during the implementation of projects.

EXPERIENCE WITH PRIMER APPLICATION

By applying the Primer, the CNCPC had the opportunity to make a systematic and all-round review of its past 15 years of operations and can clearly identify its advantages and disadvantages.

In the light of this review, the most important element for the success of the CNCPC is a close and good relationship with key stakeholders, especially the MEP. Through policy advice provided by the CNCPC to the MEP, key measures are promoted by the administrative system in order to enhance CP at local and enterprise level. Additionally, the CNCPC develops various business areas but retains a good balance among them. For example, the CNCPC strengthens its technical skills and performances by conducting CP audits at enterprise level and conducting research on clean technologies to solve bottle-neck problems encountered during the CP audits. The achievements and results are used as a showcase for information dissemination and training courses and provide technical foundations for policy advice.

Since the Primer is quite useful to keep eyes on all the aspects of operation, management and governance of the Centre, the CNCPC plans to make a self-assessment once a year by using the Primer. If possible, the CNCPC would like to introduce the Primer to the sub national/provincial CP centres to improve their organization, management and governance, so as to improve the whole capacity of CP service providers in China.

Before designing and providing policy advice on quality control of in-plant CP auditing, the capacity of provincial environmental protection bureaus and their technical supporter (provincial CP centres) has to be enhanced greatly. Hence, any support on the development of measurement indicators for quality control of in-plant CP auditing and corresponding capacity building will be very valuable for China and for the CNCPC.

Concerning the plan of action, the CNCPC will encourage increased involvement of managers/division chiefs in the decision making process. The CNCPC will also enhance relationships with stakeholders at local level (strengthened sub-national network), and provide more policy advice on quality control of in-plant CP auditing so as to ensure effectiveness.