

MID-TERM REVIEW OF

CHN - 2152 CAPACITY BUILDING ON ENVIRONMENTAL PROTECTION BUREAU IN GUIZHOU PROVINCE

NORAD COLLECTED REVIEWS 15/2008

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Norad collected reviews

The report is presented in a series, compiled by Norad to disseminate and share analyses of development cooperation. The views and interpretations are those of the authors and do not necessarily represent those of the Norwegian Agency for Development Cooperation.

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MID-TERM REVIEW

of

<p>CHN - 2152</p> <p>CAPACITY BUILDING ON ENVIRONMENTAL PROTECTION BUREAU IN GUIZHOU PROVINCE</p>

FINAL REPORT

25 June 2008

PREFACE

This report covers the Mid-Term Review of the project:

Capacity Building in Environmental Protection Bureau in Guizhou Province, PR China

The Project was reviewed in May 2008. The Review Team, a joint undertaking by the Norwegian Embassy in Beijing and Norad (hereafter referred to as “the Team”), undertook the main field work in China during 5 – 9 May 2008. The joint Team selected to undertake this review primarily for internal learning purposes.

Such a mid-term review is part of the normal project cycle in Norwegian-supported projects. The Project was reviewed based on a desk study of written documents, interviews with the Norwegian partners in the Project and a field visit to China. Discussions were held with relevant Chinese partners.

The report contains a brief introduction to the project features and a systematic review of the most significant aspects of the Project, together with the Team’s own assessment of the project performance and status. The standard elements of the review are: effectiveness, efficiency, relevance, impact and sustainability.

Based on significant, relevant and detailed comments given by the project’s various partners the report was prepared in April/May and submitted to the Embassy for comments on 9 May 2008 upon the Team’s departure. Comments on the draft report were received from the Norwegian Pollution Control Authority (SFT) and from Ministry of Commerce (MOFCOM). These comments are incorporated in the final report.

The Review was undertaken by a joint team from the Norwegian Embassy in Beijing and Norad and comprised the following members:

- ◇ Hans Olav Ibrekk, Norad, Team Leader;
- ◇ Trond Løvdal, Norad; and
- ◇ Line Kofoed, Norwegian Embassy Beijing.

Representatives of MOFCOM joined the Team during the visit to Zunyi. Zunyi Environmental Protection Bureau (ZEPB) was well prepared, and provided the Team with all relevant information. Guizhou Provincial EPB participated during the meetings. The Team wants to thank all the involved project parties both in Norway and China for their open and kind contributions during the review, as well as the hospitality.

25 June 2008

List of Acronyms and Abbreviations

AD	-	Appropriation Document
Agreement	-	The bilateral agreement between NORAD and MOFCOM (previous MOFTEC)
AM	-	Annual meeting
AR	-	Annual Report
CP	-	Cleaner Production
DOFCOM	-	Guizhou Provincial Department of Commerce
EPB	-	Environmental Protection Bureau
FECO	-	Foreign Economic Cooperation Office
GEPB	-	Guizhou Environmental Protection Bureau
LFA	-	Logical Framework Approach
MEP	-	Ministry of Environmental Protection
MOFCOM	-	Ministry of Commerce
NOK	-	Norwegian kroner
NO _x	-	Nitrogen oxides
NORAD	-	Norwegian Agency for Development Cooperation
OA	-	Output Area
O&M	-	Operation and Maintenance
PD	-	Project Document
PIC	-	Project Implementation Committee
PLG	-	Project Leading Group
POP	-	Persistent Organic Pollutants
PP	-	Project Proposal
RMB	-	Ren Min Bi (Chinese Peoples' Money – Yuan)
SC	-	Steering Committee
SEPA	-	State Environmental Protection Administration
SFT	-	Norwegian Pollution Control Authority
SO ₂	-	Sulphur dioxide
ToR	-	Terms of Reference
TR	-	Travel Report
ZEPB	-	Zunyi Environmental Protection Bureau

TABLE OF CONTENTS

PREFACE

LIST OF ACRONYMS AND ABBREVIATIONS

TABLE OF CONTENTS

1.	INTRODUCTION. BACKGROUND AND REVIEW APPROACH.....	5
2.	COMMENTS ON PROJECT DESIGN.....	6
2.1	INTRODUCTION.....	6
2.2	PROJECT OBJECTIVES	6
2.3	PROJECT OUTPUTS, ACTIVITIES, INPUTS AND BUDGETS	6
2.3.1	<i>Project Outputs and Activities.....</i>	<i>6</i>
2.3.2	<i>Project Inputs and Budgets</i>	<i>7</i>
2.4	PROJECT INDICATORS AND ASSUMPTIONS	8
2.5	PROJECT PARTNERS AND PROJECT MANAGEMENT	8
3.	PROJECT STATUS ASSESSMENT	9
3.1	OVERALL PROJECT PROGRESS AND STATUS	9
3.1.1	<i>Introduction.....</i>	<i>9</i>
3.1.2	<i>Status Output Area I: Monitoring and Inspection Staff.....</i>	<i>9</i>
3.1.3	<i>Status Output Area II: Level of Knowledge with ZEPB Staff.....</i>	<i>10</i>
3.1.4	<i>Status Output Area III: ZEPB's Reporting System.....</i>	<i>10</i>
3.1.5	<i>Status Output Area IV: Environmental Awareness in Enterprises.....</i>	<i>11</i>
3.1.6	<i>Dissemination of Results, Use of Results and the Bangfu Component.....</i>	<i>11</i>
3.2	FINANCIAL STATUS OF THE PROJECT.....	12
3.3	REVIEW OF STANDARD EVALUATION ELEMENTS	12
3.3.1	<i>Introduction.....</i>	<i>12</i>
3.3.2	<i>Effectiveness.....</i>	<i>13</i>
3.3.3	<i>Efficiency.....</i>	<i>13</i>
3.3.4	<i>Impact.....</i>	<i>14</i>
3.3.5	<i>Relevance</i>	<i>14</i>
3.3.6	<i>Sustainability.....</i>	<i>14</i>
3.5	PARTICULAR ASPECTS.....	15
3.5.1	<i>Reporting.....</i>	<i>15</i>
3.5.2	<i>Performance of Norwegian Institutions in the Project.....</i>	<i>16</i>
3.5.3	<i>Performance of the Chinese Institutions in the Project.....</i>	<i>17</i>
3.5.4	<i>Socio-Cultural Performance and Communication.....</i>	<i>17</i>
3.5.5	<i>Gender Aspects.....</i>	<i>17</i>
3.5.6	<i>Anti Corruption</i>	<i>18</i>
4.	CONCLUSIONS AND RECOMMENDATIONS	19
4.1	MAIN FINDINGS AND CONCLUSIONS	19
4.2	LESSONS LEARNED.....	20
4.3	RECOMMENDATIONS FOR PROJECT CLOSURE.....	21
ANNEX I.....		22
ANNEX II.....		24
ANNEX III.....		26
ANNEX IV.....		30

1. INTRODUCTION. BACKGROUND AND REVIEW APPROACH

A bilateral Agreement was entered into between the Norwegian Embassy in Beijing, and the Ministry of Commerce (MOFCOM) 17 January 2005 providing NOK 7 million in support from Norway to the Project entitled “*Capacity Building on Environmental Protection Bureau in Guizhou Province*” (hereafter referred to as “the Project”). 12 January 2005 a Contract was signed between Zunyi Environmental Protection Bureau (ZEPB) and the Norwegian Pollution Control Authority (SFT), being the two leading executing partners in the Project. The Project activities had been under preparation since 2001 awaiting the funding approval, and could thus start immediately.

The Terms of Reference (ToR) for the Review Team (hereafter referred to as “the Team”) is enclosed in *Annex I*. The review is named “mid-term”, but in fact the Project at the time of the review already was nearly completed, and only about half a year remained.

The Team studied relevant reports and information prior to the field trip to China and had a meeting with the Norwegian project partner SFT. In Beijing, prior to and following the visit in the provinces, the Team met with the Embassy. The Team visited Zunyi 5 - 7 May 2008 and had discussions with representatives of the GEPB, ZEBP, the Monitoring Station, MOFCOM and the International Economic Cooperation Division of the Guizhou Provincial Department of Commerce (DOFCOM) in order to get the best basis for the assessment of the Project and its local specifics. The Team visited two enterprises in Zunyi to assess the quality of inspections and the involvement of businesses in the Project.

2. COMMENTS ON PROJECT DESIGN

2.1 Introduction

The Project Document (PD) dated September 2002, describes the layout and content of the Project in detail. The PD is designed using the Logical Framework Approach (LFA). Combined with other documents on the Project file (appraisal, Appropriation Document (AD), annual reports (ARs), agreed minutes from annual consultations etc.), the PD gives a good overview of, and insight into, the various components of the Project.

2.2 Project Objectives

Detailed information on the Project's goals, purpose, indicators and outputs can be found in Annex II. In both the bilateral Agreement and the Contract, the goal is formulated as: "*Industrial pollution in Zunyi Municipality is reduced*". The following purpose has been formulated for the Project: "*Improved quantitative and qualitative performance of Zunyi EPB, especially the staff dealing with monitoring, inspection and information management*". In the Agreement an addition to the purpose stated in the AD has been made "...", *and to increase knowledge of cleaner production in local industries.*" This addition is not included in Annex I to the Agreement; however it is included in the Contract between SFT and ZEPB.

During Appraisal a number of issues were identified that went beyond the original PD. In discussions with the ZEPB it was agreed to enlarge the cleaner production (CP) component, reduce IT funds, include institutional support from a more advanced EPB (the "*Bangfu cheng*"-component), capacity building on emergency issues, public information and participation, develop the regular reporting on environmental indicators further and to encourage the local EPB to set environmental goals in their 5-year planning. Finally, it was considered key to ensure that the project became a pilot project at the national level through the active involvement of SEPA (now Ministry of Environmental Protection (MEP)). The AD endorses these revisions; however, the PD was not updated to reflect these changes. Even though most of these elements have been included in the detailed work plan it is of the Team's opinion that the PD should have been updated, especially since the PD was developed in 2002 and the funding was approved in 2005.

2.3 Project Outputs, Activities, Inputs and Budgets

2.3.1 Project Outputs and Activities

The Agreement lists the following expected outputs from the Project:

- Output 1: Monitoring and inspection staff will be able to verify compliance with discharge permits;
- Output 2: The level of knowledge with EPB staff on appropriate environmental management procedures is substantially raised;
- Output 3: ZEPB's reporting system and reports are substantially improved; and
- Output 4: Environmental awareness raised in selected key pollution enterprises.

Within each output area specific activities have been identified, as presented in the Project's LFA. Detailed Project plans have been prepared based on the original PD.

The Team considers the detailed planning to be orderly and tidy, and it clearly shows that the project planners had a well-founded professional basis and good knowledge of similar project activities elsewhere. The Team notes the commendable attempt to break up the Project into smaller, more easy-to-handle sub-projects. The Project plan has been a good and efficient tool in implementing the project. However, due to language barriers a question could be raised to what extent ZEPB has the capacity and knowledge to be actively involved in the detailed and extensive

planning. It should be noted that ZEPB has expressed concerns over lack of involvement in Project planning, especially the first two years when SFT in essence did most of the planning although joint planning exercises were held. Since October 2006 ZEPB has been more actively involved in project planning. Language is considered as a key risk factor and barrier to implementation of the various activities.

It could also be questioned whether such a detailed plan would allow for flexibility to accommodate needs as they arise during implementation. The Team has noted that the Project LFA was prepared in 2002 and the implementation plan is based on the original design. In the same period significant changes have occurred in China in terms of commitment to environmental issues. The validity of the underlying assumptions for the design of the Project could therefore have been changed, necessitating additional revisions to the Project plan.

MOFCOM and the Embassy requested to receive annual overall Project plans at an aggregated level, with activities and approximate budget as documentation for the Annual Consultations. The Team finds the information about progress and planned activities in the Annual Report (AR) could be improved in order to get a better overview of the progress made and activities planned. The AR standard is used by the Embassy in all projects as a tool for discussion in Annual Consultations. Since the new elements identified in the appraisal and the AD are not reflected in the Project's goal hierarchy, it is difficult to assess to what extent these have been addressed as requested. (They are, however, reflected in the agreed minutes of the Annual Consultations)

2.3.2 Project Inputs and Budgets

The PD describes in detail the direct financial and manpower input to the Project. Estimates have been made of man-hours input, number of international flights, equipment etc. both on the Chinese and Norwegian side. The Agreement includes a detailed budget breakdown. The key inputs are:

- Funding Norway: NOK 7 million;
- Funding China: NOK 1.14 million (mostly in-kind);
- Personnel:
 - SFT personnel: 134.5 man-weeks;
 - ZEPB personnel: 384.5 man-weeks;
 - GEPB personnel: 21 man-weeks; and
 - Interpreters: 42.5 man-weeks
- Misc. equipment and material (air monitoring equipment, training and workshop material and consumables, computer software and hardware).

The overall budget for the Project is attached to the Agreement between MFA and MOFCOM, dated 17 January 2005. More detailed budgetary information is presented in the Contract between ZEPB and SFT, dated 12. January 2005, where hourly rates for Norwegian personnel and the terms for payments, travel, subsistence and unforeseeable expenses are explained. The Contract also explicitly states that Chinese man-hours in general will not be covered by the Grant.

The parties are of the opinion that the planned budget in total is appropriate. The PD describes an implementation strategy where there is described freedom for adjustments for the purpose of optimal use of activities and resources. The Appraisal supports such a strategy. The budget frame for the Project is considered to be appropriate.

The overall distribution of the total budget, presented in the table in Annex II, gives an acceptable overview of the main components of the Project. However, based on the budget breakdown presented in the Agreement it is not possible to get an overview of the full administrative and Project management costs. Detailed information on the use of resources between the various components can be found in the Project plans. This breakdown indicates that about half of SFT's input is allocated to Output Area 1.

From the budget reports it is not easy to deduce how much has been used for *administration and travel* as this is not clearly reflected in the budget. The Team does not have enough information to state that it is *too* high; however, it raises the question.

According to the Contract SFT should include a specification of all travel costs in travel reports. None of the travel reports seen by the Team has included this information.

2.4 Project Indicators and Assumptions

In Annex 1 to the Agreement, no indicators are included. The PD provides detailed indicators for all activities. As can be seen in Annex III, several of the suggested short-term indicators have been difficult to measure. Indicators are also output and not outcome oriented. In the Team's opinion the selected indicators are not fully appropriate. There is no specific requirement to report progress related to the specified indicators, a general weakness in the reporting format.

In general, the assumptions made in the PD are relevant and valid. Based on the progress made the issues of ownership, language capabilities, staff continuity and political will enforces existing legislation, are still relevant and have proved to be the key concerns during implementation.

In Annex I to the Agreement it is stated that "*The success of the Project will be to secure it as a national pilot project, and to secure dissemination of the Project to other cities' EPB.*" Following this objective the appraisal identified a set of risk factors related to the lack of utilization of the Project as a national level pilot, difficulties with identifying a *bangfu* (sister city), and optimistic assumptions about the budget's flexibility to accommodate changes in the work plan. The Review finds that the mentioned risks factors have proven to be, and is still, very relevant.

2.5 Project Partners and Project Management

The Project organization is clear and provides adequate information to assess each actor's role and responsibility. SEPA's involvement, mainly through the GEPB, has been limited. Formal reporting has been through MOFCOM, and MOFCOM has participated at key Project events.

At the Zunyi level excellent cooperation has been established with the various entities and there has been active participation in the Project Implementation Committee (PIC). All substantial issues have been discussed by the PIC, including annual work plans, ARs, reallocation of funds, inclusion of new activities etc. The PIC has contributed effectively to the process. It was envisaged to establish a Project Leading Group (PLG) comprised of members from the municipal level in Zunyi. This group has not been established. It should however, be noted that the municipal Deputy-Mayor, in his capacity as responsible for environmental affairs, has followed the Project closely, thereby ensuring good contacts with local authorities.

The Chinese side should be commended for considerable continuity in participation. Several staff members have been involved since the initial discussions in 2001. This continuity is an invaluable factor influencing the outcomes of this Project positively. This has also been key to ensure ownership by the Chinese side.

The general view of the Team is that the personnel involved in the Project have good professional competence relevant for the tasks to be undertaken within the Project. They have a good understanding of their respective work and for what purpose the work is done.

3. PROJECT STATUS ASSESSMENT

3.1 Overall Project Progress and Status

3.1.1 Introduction.

The Team has made its assessments based on the written material made available, such as interviews with the Chinese and Norwegian Project managers and staff. A brief assessment of the status of the four Output Areas (OA) follows, as well as progress made in relation to the stated indicators. A detailed assessment of achievements according to the PD is included in Annex III.

It is a general problem in this, and similar projects, that baseline data is lacking. Since a detailed baseline is lacking, it is difficult to assess the achievements of the Project. Furthermore, the counterfactual situation is also difficult to assess. A baseline should have assessed the situation in comparable cities where no international intervention had occurred. Some of the recorded changes in the Project area might be attributed to other factors outside the control of the Project. The results achieved should be viewed in the context that this is a rather small Project implemented over a period of four years addressing multi-faceted and complex issues in a rather large city (Zunyi) and in one of the poorest provinces in China (Guizhou).

3.1.2 Status Output Area I: Monitoring and Inspection Staff

This OA has constituted the main part of the Project (about half of SFT's manpower input). Through training seminars and joint inspections ZEPB staff has improved their skills. The inspection procedures have been strengthened and improved. Through joint planning and exchange of information the Project participants got to know each other initially and areas for future cooperation were identified. Due to language barriers it took time to develop the necessary joint understanding and cooperation.

The Norwegian approach to inspections, based on an European Union approach, was adapted to the local conditions in Zunyi. Initially, it was difficult for the participants in the various training activities to relate to the presentations made by SFT to the Chinese context. This improved during implementation when SFT's knowledge of the local context increased.

The Chinese partners demonstrated a high level of competence, thereby ensuring a reasonable quick uptake of ideas on how to improve inspections. Twenty-two key polluting industries, which were subject to inspections once a month, were the target industries for the Project. Through the support provided ZEPB was equipped to identify the main polluters and concentrate their inspection activities on these rather than implementing a uniform inspection frequency. The Project has contributed to the following changes:

- The worst non-compliers are identified (11 factories);
- The inspection frequency for some of the 11 worst non-compliers have been increased;
- Time used on on-site inspections is increased by approximately 1 hour;
- The inspections are more detailed. The inspectors now focus more on process conditions and production data. The inspectors also focus on relevant working routines at the factory;
- If the inspectors find serious problems at the factory, a more detailed report will be sent to the factory. The first report of this kind will be made based on the inspection at the Ti-factory;
- General information about environmental effects of pollutants will be included in the reports to the factories.

ZEPB, local EPBs and the Monitoring Station expressed that, based on their experiences so far, they find the new approach very useful. Coordination and cooperation between inspectors and environmental monitoring entities have improved as a result of the Project, setting the stage for

similar coordination at other levels.

All purchased equipment is in daily use. There has been an emphasis on focusing on the need for equipment from the Chinese side, however, through the Project the emphasis has shifted from a focus on measuring end of pipe emissions to considering the whole production process, i.e. a move away from end of pipe focus. ZEPB has made a commitment to use internal funds to replace and repair equipment.

The improved and strengthened inspections have reportedly had some policy implications since some enterprises have been closed and others are planning to move outside the city. It has been difficult to ascertain whether this is a direct result of the Project or a result of other factors, e.g. economic. Reportedly, fines are now regularly levied at non-complying industries.

The work carried out under OA I is progressing according to the work plan and the Team has ascertained that all outputs will be met satisfactorily. The Team got the impression that the standard of work was good, that sound field, inspection and reporting routines are established, and that there has been good cooperation between local and SFT staff. Staff have received adequate training and are aware of their respective tasks and responsibilities. Results achieved are significant.

However, only about 20 inspectors have received adequate training. In total there are about 70 inspectors, some of these have attended various training programs, but still need considerably more training. The project has not been designed with basis in 'train the trainer' concept. Therefore the long-term sustainability and dissemination of the revised inspections procedures is in jeopardy outside the ZEPB when the Project reaches its conclusion.

3.1.3 Status Output Area II: Level of Knowledge with ZEPB Staff

As part of this OA a competence and training plan was developed (presented in an annex to travel report 19-29 September 2006). The plan is not yet implemented in full, however, a large number of training activities have been undertaken – a total of 16 training programs are planned of which 11 have been implemented so far. A large number of staff and representatives from industries have been trained. To what extent this training has resulted in improved performance, has been difficult to verify. As indicated under OA I the quality of inspections has improved, the dialogue between authorities and industries has been improved and in general, awareness has been raised.

A key challenge for all training activities has been the availability of competent interpreters. ZEPB has been responsible for providing interpretation and translation. ZEPB has had difficulties in ensuring continuity in providing these services, thereby reducing the overall efficiency of the training activities and the cooperation. The language training has improved language skills considerably. Language classes have been well-attended resulting in a higher number of attendees than planned. Two lap-tops and a projector were purchased to be used for training purposes (endorsed by SFT).

Chinese staff have on several three visited Norway (covered under several OAs) to get acquainted with the situation in Norway. The planned study tours have been implemented according to the plan. SFT has furthermore, covered some costs over its own budget for some participants.

The work under OA II is making progress according to the plan; however, the Team has not been able to ascertain whether the training has led to changes in performance.

3.1.4 Status Output Area III: ZEPB's Reporting System

This OA has been revised during implementation of the Project and several outputs have been taken out of the Project, partly as a result of the appraisal (reinforcing the need to prepare an updated PD). This is considered acceptable. The focus of the PD was to improve the format for reporting of inspections. However, when work related to this issue was about to be started, the management level

of ZEPB decided to change the focus to quality assurance of data. A “Procedure for quality check and management of quarterly emission reports from industry” was subsequently drafted in March 2006. The procedure has later been amended according to experiences gained and will be reviewed and, if necessary, revised in September 2008.

After discussion ZEPB agreed with SFT, that a simple database should be developed instead of a comprehensive one. This database is now operational and in daily use (in essence as part of ZEPB intranet). Furthermore, ZEPB now regularly post environmental information on the internet. This is a considerable improvement in the reporting procedures.

3.1.5 Status Output Area IV: Environmental Awareness in Enterprises

Two awareness seminars for industry have been held. Not all invited representatives from the 22 key polluters attended. In general, these seminars have been well received and considered useful.

The other key component under this OA has been delayed due to difficulties with identifying a skilled CP consultant. There were some differences between SFT and the ZEPB on the choice of a CP consultant, finally both parties agreed to engage a CP consultant from Tongji University in Shanghai. Six enterprises participate in the CP component. SFT is only involved in the Steering Group for the CP activity. A draft report for this activity has been submitted.

It is difficult to understand reason for the long search for a qualified Chinese CP consultant, as several international organizations, including Norwegian ones, have supported CP capacity building activities. Based on information provided to the Team during the site visit, the Team’s opinion is that this component is successful and will make a considerable contribution to improving the performance of participating industries. Dissemination of results and how to involve other enterprises to ensure real and effective uptake of the ideas are of concern.

According to SFT’s travel reports, several activities have been undertaken to address capacity building on emergency issues, public information, participation, strengthening public information and cooperation, and the involvement of civil society. This has also been a key component of the study trips to Norway.

The work under OA IV has been delayed. Based on information provided the Team is of the opinion that the goal of this component will be achieved.

3.1.6 Dissemination of Results, Use of Results and the Bangfu Component

According to the Annex to the Agreement “*The success of the Project will be to secure it as a national pilot project, and to secure dissemination of the Project to other cities’ EPB.*” SEPA is responsible for dissemination of results to other ministries and provinces. SEPA has only been present at high level events and has not actively been engaged in the Project. Due to little SEPA involvement in the Project so far, there is reason to question whether this objective will be met. The Team is of the opinion that the Project will not meet the objective of becoming a national pilot project. According to the Agreement, GEPB is responsible for dissemination of the Project results to other cities in the Province. This has reportedly taken place and the Team believes that the Project has been somewhat effective at the provincial level and very effective at the local level. MOFCOM considers the Project a local level project and not a national level project.

A part of the Project budget has been set aside for preparing a small information pamphlet on the Project presenting the key achievements and experiences. This will be produced after the Project completion.

A key output of the Project is improved quality of inspections and new inspection procedures have been prepared. It is difficult to assess if the improved inspections lead to improved outcomes in terms of significant environmental improvements (tangible effects of reduced pollution, 20%

reduction in discharges from three pilot enterprises, etc.) Since only a few inspectors have been trained (20 out of a total of 70), it is questionable if other EPB's will implement the inspection procedures without training. The quality of inspections has been greatly enhanced in Zunyi and non-compliance is now being reported on a regular basis. The team has not been able to clearly establish how enforcement of no compliance takes place beyond issuing fines.

As part of the Project the concept of a Bangfu city was introduced. Dalian was selected as the bangfu city and representatives from Zunyi have made four study trips to Dalian and staff from Dalian has visited Zunyi once. It is still somewhat unclear what the real and practical value of the Bangfu concept has been. Travel reports have been prepared, but not translated into English. ZEPB should ensure that key lessons learned from the cooperation with Dalian are included in the final report of the Project. The bangfu concept has been picked up by a SIDA-financed project also including Guizhou province.

GEPB has submitted a report to MEP (FECO) on the project as part of dissemination of their experiences. GEPB has been active and encouraged participation from other EPBs in the province in the Project.

3.2 **Financial Status of the Project**

According to the budget most of the allocated funds have been disbursed. The majority of the contingency fund has also been disbursed, but there is a surplus left due to the fact that the funds allocated for the evaluation (mid-term review) will not be disbursed as it has been conducted in-house (jointly by Norad and the Embassy). The remaining funds must be reallocated to other activities (refer to Main Findings and Conclusions).

The budgeted man-hours for the Project concerning SFT have been satisfactory. SFT has under reported the number of man-hours used. There has also been major under reporting for the GEPB and ZEPB man-hours as compared to budgeted and actual man-hours.

Assessing the work actually done, it is the Team's overall impression that the expenditures are close to the budget with only minor (and acceptable) deviations. The technical progress in the Project so far also indicates that the total budget will not be exceeded by the end of the Project.

3.3 **Review of Standard Evaluation Elements**

3.3.1 **Introduction**

Below follows a brief assessment of the standard evaluation elements as referred to in the Development Cooperation Manual used by the MFA, and specifically asked for in the TOR. The nominations given to rate the performance are given as follows:

Excellent	Project achieved (or is highly likely to achieve) <i>all its major</i> relevant outputs/objectives.
Good	Project achieved <i>most of its major</i> relevant outputs/objectives, with only a few shortcomings
Satisfactory	Project achieved (or is likely to achieve) <i>some of its major</i> relevant outputs/objectives, with some shortcomings
Unsatisfactory	Project <i>failed to</i> (or is likely not to) <i>achieve most of its major</i> relevant outputs/objectives, and has significant shortcomings.
Highly unsatisfactory	Project <i>failed to</i> or is likely not to) <i>achieve any of its major</i> relevant outputs/objectives and has not yielded worthwhile results.

3.3.2 Effectiveness

The *effectiveness* largely describes the Project progress as compared to the work plans and budgets, and the extent to which the targets (outputs) and objectives have been achieved so far. The prospect of achievement within the remaining Project period is also relevant in this case.

Overall, it seems that the Project will reach its intended outputs. As to the question of whether the outputs will be reached by the end of the Project, it seems clear that most targets will be met, although this Project can not presently be categorized as a national level pilot project. Significant results have been achieved through the CP component, new inspections procedures have been developed, and a large number of staff have received various training. It is difficult to assess the quality of the training provided and to what extent performance has been improved at this stage. However, there are no reasons to believe that the training has been sub-standard. It has nevertheless been difficult to assess the efficiency of the individual activities.

The Project has used a combination of workshops, on the job training and study tours as primary vehicles for capacity building. The largest component has been workshops – totally 16 workshops are planned. The quality of these workshops has varied, however, in general most workshops have been well received by the participants and formal evaluations have been prepared. SFT has provided 6 workshops and in general these have been well received, however, it has been noted that the contextual understanding (naturally) some times has been weak. Initially, most power points were only in English, however, this was changed and lately power points are translated in advanced.

With the above shortcomings and commendable successes, the overall effectiveness of the Project must be characterised as **good**, varying from *satisfactory* to *excellent*.

3.3.3 Efficiency

Efficiency is a measure of productivity, meaning comparing inputs against outputs. The term involves the assessment of achievements/results as compared to the input of resources.

As half a year still remains of the Project, the Team must also in this case make some reservations as to the fulfilment of outputs. However, it is clear that most of the outputs are delivered (or assumed to be delivered) according to plans. Several of the outputs however, have been formulated in a manner that make them difficult to measure. The Team believes that “the level of knowledge” and “awareness raised” indeed has been made, but not fully satisfactory.

The efficiency of each main Project component is difficult to assess because the Team could not get a full overview of the all inputs such as direct financing (Norwegian and Chinese side), and man-hours input (Chinese side).

The overall impression of the Team however, is that the input in terms of man-months and money to the Project, has given “value for money”. Most of the Chinese staff also revealed appropriate dedication to the professional content of the work during the review, and according to their Norwegian colleagues this has been the case throughout the Project.

With the above significant uncertainties, the overall efficiency of Project must be characterised as **good**.

3.3.4 Impact

Impact is a measure of all positive and negative consequences/effects of the Project, whether planned for and expected, foreseen or not foreseen, direct or indirect. Such effects could be economic, political, social, technical or environmental, both on local and national level. The long-term impacts are difficult to assess in this case, as the Project is still ongoing.

Based on the assessment or progress in Chapter 3.1 the Team notes that the Project have had demonstrated impact at the local level, although a detailed baseline is lacking and the counterfactual situation is unclear. Inspections of industries have been improved, enforcement strengthened and the training of the Project staff seems to have been adequate, holding a high standard. This newly acquired knowledge and skills of the staff will (hopefully) also be a long-term benefit to ZEPB and GEPB, and it is expected that the staff will transfer their knowledge to other colleagues outside the Project. The English language capabilities of the Project staff have, according to themselves and their Norwegian counterparts, improved during the Project. Such increased language capabilities will benefit other foreign cooperation projects later and will give the staff involved improved opportunities to participate in such projects.

The Team has noted that during the implementation period of the Project significant changes has occurred to the overall system for pollution control and management in China. Within recent years the Chinese government has put environmental protection high on the political agenda, as evidence by the upgrading of the SEPA to a ministry (MEP). In general, the legal framework and enforcement has been strengthened. A key question is therefore to what extent it is possible to directly attribute changes in Zunyi to the Norwegian support, especially since the Project has not been able to significantly influence the central level, as originally envisaged in the Agreement.

According to Annex I to the Agreement “*The success of the Project will be to secure it as a national pilot project, and to secure dissemination of the Project to other cities’ EPB.*” The Team is of the opinion that the Project has not been a national pilot project, but effective at provincial and local level.

Based on the above, the overall impact of the Project must be characterised as **good** at the local and provincial level and presently **not satisfactorily** at the national level.

3.3.5 Relevance

Relevance is a measure of whether the original rationale behind the Project still is in keeping with the priorities of the national and local policy, priorities and needs, and the usefulness of the Project in this respect. The aspect covers the direction of the Project as compared to possible social and political changes that have materialised since the programme start-up.

China is gradually developing her environmental laws, institutions and procedures to be functional instruments for environmental management. At the provincial and local levels enforcement is strengthened, and actions are being taken to reduce air, water and soil pollution. This Project has been very relevant in developing the capacity of the ZEPB and other local EPBs, thereby paving the way for a more effective implementation of environmental laws and regulations.

Based on the above, the overall relevance of the Project must be characterised as **good**.

3.3.6 Sustainability

Sustainability is a measure of whether the positive effects (or assumed measurable effects) of the Project is likely to continue after the external support is concluded, meaning: will the programme process lead to long term benefits. This is indeed for most projects, maybe the most important element to be assessed, so also in this case.

A brief assessment of various aspects of sustainability is presented below:

Technical Sustainability: The instruments purchased are reportedly in daily use. The equipment is of high quality, and is working properly, is looked after adequately and is repaired and maintained when needed. ZEPB has made a commitment to finance required O&M over their own budget. Some equipment is of foreign manufacture.

Institutional Sustainability: So far, the transfer of knowledge to and training of the participating staff seem to have been good, and the staff have acquired and improved their skills and knowledge. The Norwegian Project staff have also commended their Chinese colleagues for their dedication and high quality work. The various training activities have involved a large number of staff. However, only 20 of the 70 inspectors under the ZEPB have been fully trained. Since the training is not based on the train the trainers-concept, it will be a challenge to ensure that the other inspectors receive the full training without additional external support. ZEPB is reasonably confident that through internal resources all inspectors within ZEPB will receive adequate training. However, there will not be resources for providing training to other EPBs in the province.

In general, it is difficult to guarantee the institutional sustainability on capacity building projects, as the key aspect is whether the trained staff will remain in the institution with their knowledge *after* its completion.

The Team has noted the continuity and dedication of the Chinese staff; however, considering the relatively low number of inspectors fully trained the Team questions the institutional sustainability of the Project. Without a clear exit strategy institutional sustainability will be in jeopardy.

Environmental Sustainability: The environmental sustainability is not an issue with this Project. The Project will pave the way for improvements in ambient air and water quality and contribute in the long run to improving the overall environmental situation in Zunyi.

Economic/Financial Sustainability: The Project has not involved significant transfer of resources to Chinese counterparts. Most of the costs incurred on the Chinese side have been covered by the participating institutions. Therefore the financial sustainability is not directly relevant for this Project. All the Project staff interviewed by the Team hoped that the Project would continue, and their working modality shows that they really *expect* money for continuation to be found somewhere. They seemingly expect “business as usual” also after the Project is concluded. A clear exit strategy needs urgently to be developed.

Based on the above, the overall sustainability of the Project must be characterised as **satisfactory**.

3.5 **Particular Aspects**

3.5.1 **Reporting**

a) Technical Progress Reporting

The annual reporting (AR) has been regular and timely. They are in general orderly set up and give a short, but to the point, overview of status of work and outputs as mandated in the Agreement. In some instances the ARs are maybe too short since they are difficult to read as standalone documents. An example *..the Project has, with the exemption of two activities under output 3, proceeded according to plan*”. No information is provided on which activities are delayed (AR 2006). ARs are discussed and approved at PIC meetings.

SFT’s Travel Reports (TR) are very detailed and contains a lot of information, both from an administrative as well as a professional point of view. The TRs are well written, based on a standardized format and provides relevant information; however, they do not include information on costs as stipulated by the Contract. The TRs are long and the question is whether they are read,

although it should be noted that the TRs also serve as a record for the Project.

The work plans are detailed (may be too detailed?), thereby making it difficult to get information on what will be done at an aggregate level. It is very difficult to relate the progress reporting directly to the work plans. Whether this seemingly is a lack of consistency between annual planning and reporting has been difficult for the Team to ascertain. The AR refers to the TRs for additional information. This is not a good point of departure for progress reporting in the Team's opinion.

In ARs there are no specific reporting using the suggested monitoring indicators. This is a clear weakness (not included in the prescribed format for reporting in the Agreement).

b) Financial Progress Reporting

In the budget summary provided by SFT for the Embassy the linkage of the financial data to the four outputs has been very useful. However, on average the financial reporting has been too detailed and seems to lack conformity. The Embassy requested after the first annual consultation a more aggregated report to suit their needs. This has been done, but it is difficult for the Team to understand SFT's internal financial reports and how these relate to the overall aggregated report.

It would have been advantageous for all parties involved to have agreed upon the reporting format at the outset of the Project.

The Project has been audited by an independent auditor and are found in compliance with international standards. The Team has therefore not evaluated the financial statements as such, but instead looked at the overall disbursements according to the budget for each Output.

c) Information and Dissemination. Workshops and Seminars

The Project has supported many seminars and workshops on various topics, both in China and in Norway. At these workshops mostly information on the approach to industrial pollution control in Norway has been presented. SFT has only to a limited degree presented information on the approach used in other countries. This brings up the question on the relevance, applicability and transferability of Norwegian experiences and approaches to the Chinese setting. The direct relevance could be enhanced by including more specific references to other international experiences as well. This is a general weakness with Norwegian government institutions involved in capacity building programs.

SFT has been requested to provide ZEPB with copies of all presentations given at the various seminars and workshop. This will be useful source material for ZEPB and other interested parties and will serve as a sourcebook for future training activities.

The final report should be disseminated widely.

3.5.2 Performance of Norwegian Institutions in the Project

All in all, the Team got the impression that SFT's performance in the Project has been good. All the Chinese partners in the Project also confirmed this impression. The Norwegian experts seemed to have developed a good ability of communicating with their Chinese counterparts, although some of them had never been working in China prior to the Project. Initially, the lack of understanding of the Chinese context reduced the effectiveness of the cooperation and the training provided.

The professional level of the Norwegian experts is considered high, but nothing less had been expected by the Team. Several of SFT's team members have been seconded to Norad and through these secondments they combined have a fairly good experience with working in China and on development cooperation in general. Since there has not been a formal procedure for approval of personnel used by the SFT in this Project it has not been possible for the Team to ascertain whether

SFT has used the right personnel for the various tasks. This is in the view of the Team a general shortcoming with institutional cooperation programs involving government institutions. In contrast, if the cooperation had been undertaken by a consulting firm all personnel used would have been subject to approval by the client. Specific qualification criteria for the Norwegian staff have furthermore not been elaborated as part of the PD.

The Project management on the Norwegian side seems to have been adequate, with shortcomings on the reporting and accounting as mentioned elsewhere in the report. Also, the Team wants to highlight that the Norwegian experts have been actively involved in the inspection activities and not been involved in the CP activities to the same extent, and the Bangfu concept even less so.

At most seminars and workshop SFT's presentations have focused on the Norwegian approach. The Team notes that there has been an extensive travel activity to China from the Norwegian partners' side, a total of 56 international travels have been budgeted for.

3.5.3 Performance of the Chinese Institutions in the Project

In general, the Chinese performance in the Project has been good. On the technical side the staff is very interested and motivated. The management level has not been too active in the process, thereby creating some difficulties to get firm commitment to undertake work. It should however be noted that the Project has not paid for Chinese counterpart staff. They have had to attend to their daily work while implementing the Project. Specific incentives to attend training has not been given either. Considering this the performance of the Chinese staff has been good.

The hospitality of the Chinese side is profound and very much praised by their Norwegian counterparts. The Chinese dedication to the work is also reported to have been good.

The Chinese side has demonstrated a (remarkable) continuity in staffing. The key staff have been involved right from the outset. Some changes have occurred during implementation, however, this has not in the view of the Team increased the risk of implementation due to staff changes.

MOFCOM has followed the Project closely and has had continuity in staffing. SEPA (MEP) has been informed, however, has not participated actively. GEPB has been an active participant throughout the implementation.

3.5.4 Socio-Cultural Performance and Communication

The communication between the Norwegian and Chinese partners has in general been good. The success of any project depends almost completely on the motivation, capabilities and capacities of the individual staff working in the Project. The linkage between the local, provincial and central level has in general a potential for improvement.

Through the Project staff members have established good working and personal relations.

The lack of English language capabilities on the Chinese side obviously created some problems and misunderstandings to start with and has been a continuous challenge, especially since several interpreters have been used. Furthermore, SFT staff members initially lacked understanding of the Chinese context and some of the presentations given were difficult to relate to the local situation.

3.5.5 Gender Aspects

The Project does not seem to have had an active approach of involving women. However, a significant number of female staff has been involved in the project ranging from ZEPB's director, SFT's project leader, MOFCOM's contact person, other SFT staff and about 1/3 of participants at training events are women. It can therefore be concluded that the Project has had a good gender balance during the whole implementation period.

3.5.6 Anti Corruption

During implementation of the Project there has not been a specific emphasis on anti-corruption. Most of the Norwegian funds have been spent by the Norwegian side, while the main share of the Chinese input has been through in-kind contributions. Only a minor part of the budget has been spent on procurement of equipment.

Regarding procurement there are some irregularities. According to the audit, equipment has been purchased without a signed contract, since it is stated by the auditor that when there is a purchase of equipment, a contract should always be signed first. A call for proposals, posted on the internet, has been made for the CP consultant, however, no consultant submitted bids. Therefore a negotiated option was chosen.

A detailed budget has been prepared for the Project and all payments have been checked and verified with reference to the approved budget upon payment.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Main Findings and Conclusions

The following listing summarises the Project characteristics and main findings referred to earlier in the report:

- Regarding the **Project design**:
 - The Project is well designed. Preferably the PD should have been updated to reflect the changed emphasis suggested by the appraisal and the delay in approval. Furthermore, a more detailed baseline should have been established to enable a better assessment of the achievements of the Project.
- Project **status assessment**:
 - Progress is on schedule and overall most deliverables and the purpose of the Project will be met.
 - Total expenditures will be within the allocated budget frame.
 - Effectiveness: Satisfactory.
 - Efficiency: Good.
 - Impact: Good.
 - Relevance: Good.
 - Sustainability: Satisfactory.
 - Caveat: Since a detailed baseline is lacking it is difficult to assess the achievements of the Project. Furthermore, the counterfactual situation is also difficult to assess. Some of the recorded changes in the Project area might be attributed to other factors outside the control of the Project.
- Project staff and **work performance**:
 - Understanding of the Project is good.
 - Technical competence of staff and quality of work is good.
 - Purchased equipment are well operated and taken care of.
 - All training material will be handed over to the Chinese counterparts and the quality is in general good. SFT could preferably have included experiences from other countries in their presentation to reduce the focus on the Norwegian experiences, thereby offering a broader range of ideas and suggestions.
- **Technical progress reporting**: Annual reporting is timely and regular, however, the reporting is maybe too aggregate, making it difficult for outsiders to get a good overview of progress made.
- **Financial progress reporting**: Of acceptable quality in general.
- **Knowledge transfer and training**: The quality of training is rated satisfactory; however, some of the initial training provided by SFT lacked the required understanding of the Chinese context.
- **Norwegian performance**: Has been good, however, questions can be raised if SFT has used the most appropriate personnel since there is no mechanism for neither the Embassy nor the Chinese Project partners to approve the use of specific staff members.
- **Chinese performance**: Noting that Chinese staff members have not been paid by the Project, the performance has been good and continuity has been remarkable.
- **Socio-cultural communication**: Has been good. Significant cooperation and mutual understanding has been created at all levels. Language is a key barrier and lack of continuity in translation and interpretation has reduced the effectiveness of the Project.
- **Gender aspects**: No particular focus on gender during implementation, however, on both sides women have had key positions during project implementation.
- **Anti-corruption**: No particular focus on anti-corruption during implementation. There has been instances related to procurement of goods and services where the procurement process has been sub-standard (as identified by auditors).
- **The Bangfu component**: The result of this component is still unclear to the Team. The final

report should include experiences made and lessons learned of the trips to Dalian.

- **The CP component:** Although the CP component has been delayed, good results seem to be achieved. This will be a key contribution to environmental improvements in the area. A challenge will be to scale up the CP activities to include other enterprises.
- **The pilot project component:** The project has not become a pilot at the national level, mainly due to the relatively small size of the Project and the lack of active involvement of SEPA. It should however, be noted that the environmental and pollution control policies in China have been significantly changed during the implementation of the Project.
- **Ownership to the Project:** High in Zunyi and the provincial level.
- **Project partners' own evaluation:** All involved parties expressed their positive impressions. The Project has had significant impacts at the local level (Zunyi), some impacts at the provincial level (Guizhou) and hardly any at the national level.

Most deliverables will be met by the Project, however, the Team sees the following potential for improvements in the remaining few months:

- Develop an exit strategy for the Project in the remaining months. The Team questions the long-term sustainability of the Project, mainly due to the few numbers of inspectors trained. Even though the new inspection procedure has been approved by the GEPB issues related to provision of enough training with a basis in the 'train the trainers' concept has not been undertaken to adequately ensure that the required capacity is in place locally. With the remaining funds SFT and ZEPB should consider identifying resources within the ZEPB and GEPB that take on a role in coordinating and providing training;
- ZEPB should initiate their own internal training of inspectors that have not yet benefited from the Project. There should be an adequate number of inspectors that can act as trainers internally. Also, all material prepared by SFT will be translated and can be used by ZEPB as a future sourcebook. Initiate ZEPB-led training of other EPBs on the new inspection procedure;
- Verify that the inspection procedures and reporting structure has been integrated within ZEPB;
- Ensure that the CP component is completed and reported according to plans;
- Report on observations and lessons learned from the cooperation with Dalian (Bangfu). So far the reporting on this issue has been very weak. Travel reports exist in Chinese. The key lessons learned need to be included in the final report;
- Continue to enhance communication between SEPA(MEP) and local and provincial EPBs;
- Prepare a final Project report; and
- Remaining contingency fund and any other unspent/unallocated funds should be considered used for the preparation of an exit strategy.

4.2 **Lessons Learned**

A number of lessons have been identified, which are, in the Team's opinion, relevant to other institutional cooperation programs:

- **Need to develop a comprehensive baseline.** In this Project, as well as in most other development cooperation projects, the baseline is inadequate to use as a basis for assessing performance and achievements. Furthermore, there is a need to develop a baseline to consider the counterfactual situation, i.e. what would have happened without the Project.
- **Update PD.** The PD should be updated to reflect changes suggested by the appraisal, the AD and the Agreement and possible changes in the overall setting the Project will be implemented in. This Project is based on a PD which was almost three years old when implementation commenced. The PD should also include staffing requirements/criteria.
- **LFA-type of exercise considered useful.** Project participants have confirmed the importance and usefulness of having a consistent project formulation approach (using LFA defining objectives, outputs and activities). Overall, the Chinese side welcomed the LFA planning process.
- **Develop an exit strategy.** Most development cooperation programs do not prepare an exit strategy. In this Project there is an expectation among the partners that the Project will enter

into a Phase II. All development programs should have a clear exit strategy addressing the issue of how to achieve long-term sustainability. An exit strategy could be based on the “train the trainers” concept.

- **Ensure continuity in provision of translation and interpretation services.** ZEPB is responsible for ensuring translation services and interpreters. This component has proved to be important and this should preferably have been included in the foreign, e.g. SFT, component. However, the Norwegian partner should also consider to hire Chinese-speaking staff.
- **Allow for sufficient time to build trust.** Successful institutional cooperation depends to a large extent on the initial efforts to build relations. Initially, it could be useful to post advisers for longer periods, thereby ensuring a quicker building of trust and enhanced understanding of local conditions. Furthermore, a time horizon of four years for a capacity building program is too short. It also takes a long time for foreign staff to develop the necessary understanding of the local conditions.
- **Individual training does not necessarily lead to institutional development.** Training of individuals alone is not enough to ensure institutional development. The trained staff may eventually leave the organization and thus leave it vulnerable to loss of institutional memory. Other factors such as an established ongoing internal training program, mainstreamed decision-making processes, management approaches, well-defined compliance strategies and tools, etc. must complement individual training in order to achieve successful institutional development.

4.3 **Recommendations for Project Closure**

As indicated above the Project needs to develop a focused exit strategy. The Embassy should carefully revisit the recommendations above and initiate a dialogue with ZEPB and SFT how to address the issues mentioned.

Even though the Team questions the Project’s status as “*a national pilot project*” it will be important to ensure that relevant lessons and experiences are transferred and disseminated to other cities’ EPBs through the final Project workshop. At the workshop, scheduled for 25. September 2008, SFT and ZEPB should present the key outputs, indications of outcomes achieved, lessons learned and best practices, including from the cooperation with Dalian (Bangfu city). A key focus should be on documenting environmental improvements during the period of the implementation, even though it will be difficult to attribute improvements due to interventions to the Project. ZEPB should present how their approach to inspections have changed and the benefits associated with changing the approach. At the workshop representatives from Dalian should also be invited, as well as representatives from other relevant projects (e.g. the SIDA-financed projects).

There is an ongoing initiative to establish an environmental training school, in cooperation with FECO. ZEPB has for a period raised the issue of a Phase II, regarding a school for monitoring training to be located in Guiyang. The Team did not engage in discussions on a possible follow-up. In the Team’s opinion this Project has not achieved its pilot project objectives, therefore there is a need to carefully consider any follow-up to this Project to ensure a greater outreach than this Project has managed to achieve.

ANNEX I

Terms of Reference (TOR)

**Midterm review – 5-9 May 2008 of
*Capacity Building on Environmental Protection Bureau (EPB)
In Guizhou Province 2004-2008
(kortnavn "Zunyi EPB")***

PTA: CHN-2152 (02/011)(formerly CHN-2069)

Project description

This Project has a long history from it was first suggested by Chinese authorities during a visit to Guizhou Province from Norad in 2001, and up to the signing of the bilateral agreement 17th January 2005.

Zunyi City in Guizhou Province was one of the most polluted cities at the time of initiating this Project (ranked as no. 50, according to information at that time). The Environmental Protection Bureaus (EPB) lacked systematic skills and systems to follow up the Chinese laws and regulations on emissions and waste in inspection, control and guidance to the industries. This is a crucial problem relevant for most cities in China, and the focus area for the institutional cooperation between Zunyi EPB and SFT. The scope of the Project as stated in the Agreement, in Annex 1, will be the core issues at stake of the review:

- | | |
|-------------|--|
| Goal: | To reduce industrial pollution in Zunyi Municipality by building capacity in the EPB in the period 2004-2008. |
| Objectives: | Improved quantitative and qualitative performance of Zunyi EPB, especially the staff dealing with monitoring inspection and information management. |
| Outputs: | <ul style="list-style-type: none">• <i>Output 1:</i> Monitoring and inspection staff will be able to verify compliance with discharge permits.• <i>Output 2:</i> The level of knowledge with EPB staff on appropriate environmental management procedures and cleaner production in industries is substantially raised.• <i>Output 3:</i> Zunyi EPB's reporting system and reports are substantially improved, (and public information provided as well as the dialog with the public.)• <i>Output 4:</i> Environmental awareness raised in selected key pollution enterprises. |

Midterm Review:

According to Article IX in the agreement signed 17th January 2005, a midterm review should be made. In the annual consultations in November 2007 it was suggested to make this an internal review with experts from the Norwegian Embassy and Norad, and to do this in the spring of 2008. This was agreed by MOFCOM and Zunyi EPB, and stated in the minutes from the consultation. As stated in the agreement of 2005, all costs for the midterm review will be covered over and above the grant.

The budget for 2008 has allocated NOK 265 720 for a review. By making the review internal, it was agreed that this amount can be reallocated into the Project for other activities, based on request to MOFCOM/the Embassy.

Team composition and leadership

- Mr. Hans Olav Ibrek, project director, Norad, team leader.

- Mr. Trond I. Løvdal, senior adviser, Norad, will be the secretary of the team.
- Ms. Line Kofoed, 1st Secretary, Norwegian Embassy

Purpose, context and intended use

Other stakeholders: A separate meeting with MOFCOM and SEPA will be held in Beijing. If possible, the Province EPB (GEPB) will be consulted, if they will be available during the team's visit to Zunyi.

Scope of work

The review will focus on:

- 1) Assessment of the Project performance and status. Assess if adjustments are needed, and which, to reach the planned outputs. The review should be based on the standard elements: effectiveness, efficiency, relevance, impact and sustainability.
- 2) It has been suggested by SFT and Zunyi EPB to make a final conference. The Embassy has suggested that this conference may replace an end review, as stated in the agreement. The review should include the Teams recommendations of focus for an end conference, in addition to lessons learned, including participation from Norwegian and Chinese side.
- 3) Other issues to be questioned by the Team:
 - a) Relevance and value added with the *bangfu* city (Dalian);
 - b) Language/communication issue and initiatives taken to improve on this, including Guizhou EPB's investment in ensuring the quality of the translators throughout the rest of the Project period, as stated in the minutes of the annual consultations in 2007;
 - c) The audit states that when there is a purchase of equipment, a contract should always be signed first. Local regulations for purchases of relevance for the project, including a question regarding the "laptop issue";
 - d) The CP-consultant and status of this;
 - e) There is an initiative ongoing to make a training program, in cooperation with FECO. Guizhou EPB has for a period raised the issue of a Phase II, regarding a school for monitoring training to be located in Guiyang. This issue can be discussed with SFT and FECO;
 - f) Sustainability and efficiency of the management of this cooperation;
 - g) The impact of the Project in Zunyi EPB;
 - h) Relevance of the trainings; and
 - i) Anti-corruption measures.

Reporting

A draft of the report in English will be finished by the end of May. The report will not be longer than 15 pages, plus annexes if needed.

There should be a section on lessons learned and recommendations.

ANNEX II

Key Project Data

Goal and Purpose

In both the bilateral Agreement and the Contract, the goal is formulated as: “*Industrial pollution in Zunyi Municipality is reduced*”.

The indicators to measure the success of the Project in the long-term are:

- Reduced amount of industrial emissions giving reduced amounts of selected pollutants in ambient air (SO₂, NO_x, TSP) in the municipality, verified from air monitoring measurements.
- Reduced amount of industrial discharges of wastewater giving a better water quality, verified from water monitoring measurements.
- Reduced number of people suffering from respiratory problems, verified through hospital and health station statistics.
- Reduced number of reported and observed incidents of damage to cultural monuments and buildings due to sulphur dioxide and acid rain.
- Reduced damage to forests and natural ecological systems within and in the immediate vicinity of Zunyi urban area, registered through field inspection and/or satellite imageries and/or aerial photos.

The following purpose has been formulated for the Project: “*Improved quantitative and qualitative performance of Zunyi EPB, especially the staff dealing with monitoring, inspection and information management*”.

The indicators to measure the success of the Project in the short-term are:

- Improved compliance to national, provincial and local standards, verified by inspections.
- Increased contact (joint meetings, seminars and workshops) between Guizhou EPB and Zunyi EPB, and between Zunyi EPB and the county EPBs, to exchange experience and co-ordinate the common effort to prevent and reduce industrial emissions/discharges.
- Increased dialogue between Zunyi EPB and industry with aim to reduce industrial emissions verified in increased number of coordinated visits/meetings, letters, telephone calls etc.
- Increased transfer of knowledge and raised awareness on environmental challenges to industry, through increased number of joint meetings, seminars and workshops.
- Increased awareness and knowledge in Zunyi EPB regarding appropriate urban environmental management principles and practices, verified through interviews with key officers and improved internal written practices and procedures.
- Increased focus in Zunyi EPB to develop, use and implement environmental legislation (enforcement) to abate pollution
- Improved methods and procedures with ZEPB and selected district/county EPBs in the monitoring of industrial enterprises.
- Tangible effects of reduced pollution and cost savings in the CP enterprises in Zunyi Municipality resulting from first generation low-cost CP measures

The Agreement lists the following expected outputs from the Project:

- Output 1: Monitoring and inspection staff will be able to verify compliance with discharge permits;
- Output 2: The level of knowledge with EPB staff on appropriate environmental management procedures is substantially raised;
- Output 3: Zunyi EPB’s reporting system and reports are substantially improved; and
- Output 4: Environmental awareness raised in selected key pollution enterprises.

Within each output area specific activities have been identified, as presented in the Project’s LFA.

Project Organization

According to the Agreement, MOFCOM has the *overall responsibility* for the Project. MOFCOM in cooperation with Guizhou Provincial Department of Commerce (DOFCOM) will supervise the implementation of the Project in close cooperation with Guizhou Environmental Protection Bureau (GEPB) and Zunyi Environmental Protection Bureau (ZEPB). The Chinese State Environmental Protection Administration (SEPA) will have the overall policy responsibility for the Project and be in regular contact with GEPB and ZEPB. SEPA will also be responsible for dissemination of results to other ministries and provinces.

The Norwegian Pollution Control Authority (SFT) will be the main executing body on the Norwegian side, and Zunyi EPB (ZEPB), in line under Guizhou provincial EPB (GEPB) and SEPA, will be the main executing body on the Chinese side. SFT and ZEPB/GEPB will secure the professional content of the Project at the required level. The institutional cooperation will be directly between SFT and ZEPB.

The Project coordination is described in the PD. A Project Coordination Office will be set up in Zunyi EPB. A Project Coordinator will be appointed to coordinate the activities on Chinese side. A Project Coordinator will also be appointed in SFT to liaison and coordinate the SFT support.

The Guizhou Province EPB will give overall guidance and advice to Zunyi EPB on the implementation approach and strategy of the project, and ensuring that this is in line with provincial priorities and policies. A part time Project Coordinator will according to the plan be appointed in Guizhou Province EPB.

The Project Coordinators in SFT, ZEPB, GEPB and DOFTEC will form a Project Implementation Committee (PIC). The main task of the PIC will be: to ensure the proper joint Project Annual Report, Work Plans and Budgets prior to Annual Meetings; and make proposals for re-allocations of funds and new activities in the Project as such needs materialize, and provide input to relevant policy documents at local and provincial level.

It is planned a Project Leading Group (PLG) at municipal level, chaired by the General Director of GEPB. A representative from DOFTEC and the Municipal Vice-Mayor in Zunyi will also participate in the PLG. This arrangement will secure the proper dedication to the Project from all the parties at the municipal level.

Budget

Main Cost Item	Norwegian Costs	Zunyi EPB' costs	Guizhou EPB's costs	SUM
Personnel (fees, subsistence)	4,487	666	76	5,229
Transport	717	35	19	771
Training/workshops/seminars	534	64	0	598
Equipment	428	0	0	428
CP programme	137	15	0	152
Misc. (office, translation, reporting, etc)	48	162	0	210
TOTAL	6,350	942	96	7,388
+ 10 % contingency	635	94	9	739
GRAND TOTAL	6,985	1,036	105	8,127

ANNEX III

Assessment of “Project Outcome and Benefits”, as formulated in the Project Document

Table 1: The formulated “Outputs”

Outputs as formulated in the PD	Review Team’s assessment of fulfilment/expected fulfilment
Ouput 1: Monitoring and inspection staff will be able to verify compliance with discharge permits.	
1. Selected EPB staff is trained in theoretical, methodological and practical industrial pollution monitoring methods/procedures.	<p>Three seminars have been held.</p> <p>General seminar on monitoring and inspection principles, attended by GEPB, ZEPB (city and district) and county EPBs.</p> <p>A more focused seminar on monitoring and inspection, attended by GEPB, ZEPB (city and district) and county EPBs.</p> <p>Workshop on enforcement systems, attended by GEPB, ZEPB (city and district) and county EPBs.</p> <p>Elaboration of procedures, see below.</p> <p>The theoretical training has been supplemented with six on-site training sessions (joint inspections) on the identified pilot plants.</p> <p>Back-to-back with each joint inspection, a discussion workshop has been held to discuss lessons learned with the aim to improve the routines/procedures.</p>
2. Selected staff from relevant sections in ZEPB and GEPB have been to Norway to study and learn from monitoring and inspection procedures there.	<p>Study trip September 2006:</p> <p>Presentations / discussions with SFT on planning and procedures for monitoring and inspection work.</p> <p>Site-visits to SAS’s electroplating and maintenance centre and Hydro Polymers, Rafnes to go through inspection approaches and communication with the industry.</p>
3. Appropriate monitoring equipment is purchased, installed and is operating satisfactorily within 2007	<p>The following equipment have been purchased:</p> <p>pH meters for ZEPB and county EPBs</p> <p>Handheld gas monitoring equipment</p> <p>Basic protective gear including uniforms with logo to increase visibility of the inspectors.</p> <p>All the equipment is in daily use.</p>
4. New improved procedures for monitoring and inspections are established by 2007	<p>The discussions on an outline for new procedures in March 2006.</p> <p>This resulted in draft key procedures June 2006. An Inspection Procedure for ZEPB (trial version) was finalized January 2008.</p> <p>These procedures have now been adopted on a trial based, and will be assessed, reviewed and revised in September 2008.</p>
5. 20% reduction in discharges and emissions from the three pilot companies by 2007	<p>PVC- factory: New desulphurisation plan is installed, and expected to reduce pollution significantly.</p> <p>Titan- factory: new waste water treatment plant installed with increased capacity, plans for improved waste gas treatment.</p> <p>Long March Electroplating factory: The factory has now moved outside Zunyi city. During operation in Zunyi, storage of hazardous waste was improved to exclude drainage of hazardous components from the storage area.</p> <p>ZEPB has reported that the ambient air quality has been improved during the project period. However, it is difficult to assess whether this is a result of the project, the reporting procedures and quality assurance of data, changes in industry, or a combination of the above.</p>

b) Output II: The level of knowledge with EPB staff on appropriate environmental management procedures is substantially raised.	
1. Selected EPB staff is trained in theoretical, methodological environmental management strategies and procedures with a view of improved EPB performance.	<p>The following training has been provided:</p> <ul style="list-style-type: none"> • Industrial production processes • End of pipe treatment • Cause and effect • Emergency response • Hazardous waste • Distribution of pollution quotas • CDM • Environmental management and environmental planning • Analysis techniques and sampling procedures • Chinese Environmental legislation and relevant policies • Awareness raising, incl. Campaigns, how visual information best might be presented and communication with the media • EIA • Risk Assessment • Setting of environmental requirements for the industry (permits/regulations) • GIS • Quality control of data
2. Selected staff from relevant sections in ZEPB and GEPB has been to Norway to study and learn from environmental management strategies and procedures used there.	Study trip September 2007, including presentations/discussions with SFT, visit to the Ministry of the Environment, the County Governor in Bergen and site- visits to a waste treatment plant in Bergen and to Norsk Hydro Yara and Eramet at Herøya, Porsgrunn.
3. Increased knowledge and capability with key staff concerning institutional and environmental management in Zunyi EPB by 2007, verified by interviews of staff	See 1 above.
4. 5 EPB staff have participated in "advanced" English training, and 15 have participated in basic English training by 2007	English training started from day one. According to information given to SFT, 30- 40 students have been taken part in the training.
5. Increased standard of Zunyi EPB planning procedures and documents by 2007, verified by inspection.	<ul style="list-style-type: none"> • Risk based approach to inspections - a system for identifying the worst non-compliers and allocation of more time on these factories has been elaborated. • Procedure for quality assurance of data. • Procedure for conducting inspections. • Procedure for regular meetings between the Monitoring Centre and Inspection Section. • Procedure for internal meetings between the inspectors. • Filing system.
c) Output III: Zunyi EPB's reporting system and reports are substantially improved	
1. Selected staff from relevant sections in ZEPB have been to Norway to study and learn from reporting procedures and formats used there	Study trip August 2005 with a special emphasis on reporting. The delegation met with SFT, NIVA, NILU and the Ministry of the Environment.
2. Appropriate computer hard- and software is purchased, installed and in satisfactory operation within 2005	This part of the project was taken out as a result of the appraisal.
3. A list of all required reports within EPB and to outside target groups in place the first year of the project, verified by inspection	A review of reporting system was undertaken in October 2005, c.f. travel report no.4.
4. Improved, standardised reporting formats for internal and external reporting in place in Zunyi EPB by	The focus of the project document was improved reporting format. However, when work related to this issue was about to be started, the management level of ZEPB decided to change the focus to

2007, verified by inspection	Quality assurance of data. A “Procedure for quality check and management of quarterly reports form industry” was subsequently drafted in March 2006. The procedure has later been amended according to experiences gained and will be reviewed and, if necessary, revised in September 2008.
5. 10 key staff in ZEPB trained in using a computer and relevant software by the end of 2005, verified by inspection.	This part of the project was taken out as a result of the appraisal.
d) Output IV: Environmental awareness raised in selected key pollution enterprises	
1. 22 key pollution enterprises have participated in one awareness-raising seminar with at least 2 participants from each enterprise.	Two awareness seminars were held in Zunyi September 2006. All the key-polluter industries were invited to the seminars.
2. Between 5 and 10 key pollution enterprises in the municipality have participated in a mini CP training programme, and implemented low-cost environmental improvement measures during the project period. The effectiveness of the measures will be documented through studies in the enterprises before and after implementation.	The start up of the CP activity was delayed due to difficulties with identifying a skilled CP consultant. A CP consultant from Shanghai has been engaged to undertake the programme, which is still in progress. A draft report is expected by the end of April 2008.

Table 2: The formulated short-term “Project Indicators”

“Indicators” as formulated in the PD	Review Team’s assessment of fulfilment/expected fulfilment
1. Improved compliance to national, provincial and local standards, verified by inspections.	According to ZEPB, the new inspection approach makes it easier to verify non-compliance.
2. Increased contact (joint meetings, seminars and workshops) between Guizhou EPB and Zunyi EPB, and between Zunyi EPB and the county EPBs, to exchange experience and co-ordinate the common effort to prevent and reduce industrial emissions/discharges.	A new procedure that ensures regular meetings between inspectors at ZEPB, district EPBs and county EPBs has been introduced (ref. “Regular meeting system for Zunyi Environment inspection work”, draft June 2006).
3. Increased dialogue between Zunyi EPB and industry with aim to reduce industrial emissions verified in increased number of coordinated visits/meetings, letters, telephone calls etc.	<p>The frequency on inspections of worst city key polluters has been intensified, thus contributed to increased dialogue. How to achieve, and maintain a good dialogue has also been a central part of the project in various seminars and the study trips. At every inspection the inspectors have introduced both start-up meetings and communicated the findings to the companies to ensure a good communication.</p> <p>The awareness raising seminar has also contributed to a better dialogue between the authorities and the industry.</p> <p>The industry has also been invited to give training to EPB officials in order to provide a better understanding of industrial processes.</p>
4. Increased transfer of knowledge and raised awareness on environmental challenges to industry, through increased number of joint meetings, seminars and workshops.	<p>This indicator is not very well formulated. It is unclear whether it relates to increased knowledge in the industry or in the authorities.</p> <p>In relation to knowledge transfer to the authorities a number of activities have been undertaken (see above), while the knowledge transfer to the industry has mainly been achieved through the</p>

	awareness raising seminars and communication in relation to the inspections.
5. Increased awareness and knowledge in Zunyi EPB regarding appropriate urban environmental management principles and practices, verified through interviews with key officers and improved internal written practices and procedures.	Ref. output II, 1.
6. Increased focus in Zunyi EPB to develop, use and implement environmental legislation (enforcement) to abate pollution	This has been facilitated by a combination of all the activities that has been undertaken, as described above.
7. Improved methods and procedures with ZEPB and selected district/county EPBs in the monitoring of industrial enterprises.	This has been achieved through improved methods/procedures for planning of inspections, improved inspection approach, improved communication between monitoring staff and inspectors and the filing system for monitoring and inspection reports.
8. Tangible effects of reduced pollution and cost savings in the CP enterprises in Zunyi Municipality resulting from first generation low-cost CP measures	Work in progress.

ANNEX IV

List of People the Team met

Norwegian side:

- Rune Vistad, SFT
- Anne Marie Mo Ravik, SFT

Norwegian Embassy Beijing:

- Monika Thowsen
- Per Schive

Chinese side:

- Chen Ruhua, First Secreatry, MOFCOM
- Cai Yu Jie, Programme Officer, DOFCOM
- Huang Mingjie, Director, GEPB
- Li Daiqiong, Director General ZEPB
- Wang Ting Lang, Vice Director, ZEPB
- Bai Yanhui, Project Coordinator, ZEPB

The leaders of each of the four Output Areas also attended the two-day meetings.

The Team also met representatives for Zunyi Alkali Factory and Zunyi Titanium Plant during the factory visits.

