

SIDA Evaluation Report, Forest Industry, Bangladesh

1987/7

**PAPER, TIMBER AND
MINORITIES**

An Evaluation of Sweden's Support to Forest Industry in Bangladesh



By Karlis Goppers, Hans Nordin, Jan Valdelin



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An Evaluation of Sweden's Support
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by

Karlis Goppers
Hans Nordin
Jan Valdelin

This report is the result of an evaluation mission to Bangladesh in April 1987 by Hans Nordin, Jan Valdelin and Karlis Goppers. The latter, having been previously associated with the projects, took part as a "resource person" in the mission and therefore does not formally share responsibility for conclusions and recommendations.

The mission was assisted during its field visits by the consultant M.A. Baten. A pre-evaluation desk study was carried out by Nelson de Macedo.

Cover photo: Karlis Goppers/SIDA Photo Archives

BANGLADESH



Paper, Timber and Minorities

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CHAPTER 1

Executive summary

This evaluation looks at Sweden's support to three forest industry projects in Bangladesh: The Paper and Pulp Mill, KPM in Chandragona, the paper mill in Khulna, KNM and the Road Development and Bamboo Extraction Programme (RD&BE) in the Chittagong Hill Tracts. Sweden's total financial support to these projects has been 133 MSEK.

The evaluation was carried out by a mission consisting of two consultants, Hans Nordin and Jan Valdelin; and Karlis Goppers from SIDA's Planning Secretariat.

The Bangladeshi pulp and paper industry has bleak prospects for the future. It is producing at a cost level above world market prices, except in the case of newsprint. But even in the case of newsprint domestic sales are at a loss due to government price regulations.

The projects supported by Sweden were geared primarily towards the rehabilitation of installed capacity. The objectives were phrased mainly in technical and physical terms at micro level. Some (partly implicit) social objectives may be identified with respect to women and minority employment opportunities.

FINDINGS

Generally it may be concluded that the projects have been instrumental in slowing down a process of deterioration of capacity utilization and of productivity. The technical performance of the projects has been found to be of a high standard. Technical and physical objectives have been fulfilled. The exception is RD&BE, where the security situation has caused all plans to be outdated. It may be claimed that this could have been foreseen at an earlier stage of planning, which would have avoided some costly investments.

The financial and economic result of the RD&BE project being seen as an investment is highly negative. For the other two projects the financial returns are also negative at the present price level on the domestic market. For KNM the economic returns over five years could possibly be enough to justify the investment.

The economic returns of the investments at KPM are negative, given the assumptions used in the estimation.

A major reason for these results is the short time period of estimated sustainability. Without further training and investments in equipment the mission has estimated that the gains achieved by the programmes can be sustained for five years only.

KPM

The BMR (Balancing, Modernization and Rehabilitation) work at KPM was notorious for delays in implementation as well as for constant changes of scope, plans and budgets. The final investment and the time lapse were increased by 1.5 times the original budget and time schedule. The mission holds that the major reason for this delay is lack of resources for project management on the part of both the foreign consultant Celpap and BCIC/KPM.

We estimate that at least 20% of the consultant fees could have been saved by timely implementation, and that 10% to 15% of the total foreign exchange costs of MSEK 70.8 was caused by delays.

The objectives of increasing production capacity and to reduce production cost per ton were successfully reached.

KNM

At Khulna News Print Mill (KNM) the BMR also performed well in terms of its technical objectives and the implementation of the project was handled professionally.

RD&BE

The bamboo extraction part of the project has failed to reach its objectives. The volume of actual delivered fibrous raw materials (FRM) has decreased and the actual costs are far above budget.

The security situation in the CHT has put constraints on all operations. Most of the bamboo now being treated at the chipping station in Kaptai originates from private suppliers outside the project area. The Chandragona chipping station for wood is now also being used for bamboo.

It must be concluded that both the location of the project and its technical solutions today are not suitable for its purpose.

FORMAT OF COOPERATION

When it comes to the *format of cooperation* between Sweden and Bangladesh, it is not possible to establish unambiguously whether the "direct contract" model

(where the recipient country itself enters into a contract with the implementing consultancy firm) has proved to be more efficient than the "indirect model" (where the donor SIDA signs a contract with the consultancy firm). To a large extent, the choice between the two was decided on the basis of development principles rather than actual implementation arguments.

SIDA considered it important that the agency in the recipient country should assume direct responsibility itself for all the work including negotiating and signing the contract; This, in SIDA's opinion could only be achieved by a direct contract between that agency and the foreign consultancy firm.

The consultant on the other hand always maintained that a number of inefficiencies, standstills and delays occurred in the project precisely because of what was perceived as "SIDA's unwillingness to involve itself".



Rehabilitated Paper Machine in KPM. Photo by Karlis Goppers/SIDA Photo Archives.

The evaluation mission is not able to judge who was responsible for the inefficiencies and misunderstandings that arose. Many of the problems had to do with non-availability of funds which were already envisaged and in practice approved for the BMR programme.

SIDA seems in many instances to have been too passive in its responsibility to inform and cooperate with the consultant, although we can understand and sympathise with SIDA's chosen principle of neutrality and non-intervention. It

seems to us reasonable though, that SIDA should have assumed a certain amount of responsibility in securing finance and should have been somewhat firmer in its relations with the Bangladesh authorities.

Overall we are not able to state that the direct contract model was unsuccessful, or that it was successful. It was both, in different ways and in different time perspectives. Although we can see some practical disadvantages with the direct model in short term implementation, we can also see general beneficial effects of this type of contract, especially in the long-run.

The case of Khulna is different. There the direct model contract was clearly successful.

Data availability has been a big problem. Partly due to the aid being given in the form of import support, the financial follow-up was very limited. This in turn, created a situation where problems grew very large before they caused any reaction. Some data has only been available at the BCIC and therefore the mission had no way of double-checking the reliability of information.

EFFECT ON WOMEN

There is no evidence that *integration of women* was ever perceived as a goal of either the BMR programmes or the RD&BE project. This goes for both the Bangladeshi and the Swedish side. Nevertheless, in Bangladesh today it is implicit that the integration of women is a desirable side objective of any development project. The performance of KPM with respect to including women in the labour force is indeed modest. The Khulna Mill seems to be slightly better off in medical and other facilities they offer for women.

Comparing the projects evaluated here with other current SIDA-supported projects in Bangladesh, we may note that SIDA has recently put a very strong emphasis on the women aspect in virtually all of its projects.

TRIBAL MINORITIES

The *tribal minorities* living in the CHT were explicitly and clearly defined as perhaps the most important target group of the RD&BE project, but never mentioned with respect to BMR at KPM. But Sweden's objective regarding the creation of employment for local minorities was never transmitted to the Bangladeshi government in any formal way and we can therefore not rule out that the Bangladeshi authorities never really realized the seriousness of this objective posed by Sweden. This in itself may have contributed to the lack of success in attaining this objective. On this point SIDA therefore merits blame for inadequate project planning.

In the RD&BE operation, less than half of the employees have come from tribal minorities. The total lack of objectives is striking in the paper and pulp mill and in the rayon mill, where just less than two and three percent respectively of the employment has been accorded to the tribal minority. There is some indication that Sweden's curtailment of the support to the forestry programme in 1980 may have decreased the chances for the remaining project components to attain the goal of benefiting the tribal minorities.



Timber Yard at KPM. There is a shortage of timber due to the security situation in the logging areas. Photo by Karlis Goppers/SIDA Photo Archives.

SECURITY SITUATION

The *security problem* in the Chittagong Hill Tracts dates back to the 1960s, following the inundation of Chakma Land when the Kaptai dam was built. Ensuing migration by lowland Bengalis aggravated the situation, as the tribal people felt that the government was trying to force them out of the area by settling outsiders on their ancestral grounds. Since 1975, there has been guerrilla activity as well as regular reprisals by the Bangladeshi army.

From 1986 there has been an upsurge in hostilities. The tribal population in the CHT has consistently decreased in relation to the lowland (muslim) majority Bangladeshis. Comparing the situation in 1987 with that of around 1980, there are now more than twice as many military troops in the CHT, while development

funds for socio-economic programmes benefitting the minorities do not seem to have increased at all in real terms.

The team concludes that the security situation is today as threatening as ever and that no solution seems to be in sight. For the RD&BE and KPM projects, this has clear implications, namely the difficulty of securing trees for pulp production from the plantations and from the outlying forestry areas. The increasing failure to secure local raw material is an important economic problem which forces KPM to import increasing amounts of expensive pulp from abroad. This considerably weakens the profitability of the project.

It is noteworthy that some of the pulp wood plantation areas financed by Sweden in the 1970s are situated in remote areas where, for security reasons, the project has been prevented from extracting logs and bamboo. This could be seen as faulty planning on part of SIDA with respect to the location of these areas, since the security problem was well known already at that time.

CHAPTER 2

General introduction

In this chapter of the report a general introduction is presented of the supported programmes, of the industry in Bangladesh and of the evaluation itself. A full review of the objectives and motives behind Sweden's cooperation in the paper industry follows in chapter 3.

Chapter 4 describes the evolution of the cooperation from one of import support to regular project support while chapter 5 discusses the question of various, possible formats, or types of agreement that were chosen; and tries to analyse what were the effects of that choice.

Chapters 6 to 8 contain the empirical analysis and findings from the evaluation for each programme, respectively. The focus in those chapters is on the technical, financial and economic evaluation of the projects.

In chapter 9 Project Management and other related topics are discussed, while chapters 10, 11 and 12 deal in turn with women, the *tribal minorities* of the CHT and the security situation.

THE PROJECTS/PROGRAMMES

The three programmes to be evaluated are all in the paper industry. The largest one is the Swedish support to the "Balancing, Modernization and Rehabilitation" (BMR) of the Kamaphuli Paper Mill (KPM) at Chandragona. KPM is part of Kamaphuli Paper and Rayon Complex (KPRC), including also the Kamaphuli Rayon and Chemicals Industries Ltd. (KRC), the Kamaphuli Shipping Line (KSL) as well as the Road Development and Bamboo Extraction Project (RD&BE) for the KPM.

This latter unit, RD&BE, is the second programme to be evaluated here. Implemented under the auspices of KPRC, the programme was intended to safeguard and increase the supply of fibrous raw materials (FRM) to KPM and KRC.

The third programme analysed in this report is the Swedish support to the BMR at Khulna Newsprint Mill (KNM). The BMR project at KNM was to its largest extent

financed by the Canadian International Development Agency (CIDA), but the Swedish International Development Authority (SIDA) also participated.

The KPM/BMR was supported by grants totalling approximately 73 MSEK, while the RD&BE programme has received around 41¹ MSEK. While the total cost of the KNM/BMR is much larger, the Swedish contribution to the programme was roughly 19 MSEK.

Consequently, this evaluation may be said to embrace Swedish support to the paper industry in Bangladesh amounting to 133 MSEK (which is approximately equal to 21 MUSD), all programmes having been terminated at the end of the fiscal year 1985/86.

It will therefore be useful to present a short review of the paper industry in Bangladesh, thereby outlining the context of the supported programmes, before the report goes on to present the evaluation design.

THE PAPER INDUSTRY

The Bangladeshi paper industry is dominated by state-owned enterprises under the Bangladesh Chemical Industries Corporation (BCIC). This organization was founded in 1976, but all units presently under its ownership existed before that date.

Three paper mills were erected in the 1950's and one in 1970:

TABLE 1: Paper Mills in Bangladesh

UNIT	YEAR OF ERECTION
KPM	1953
KNM	1959
Sylhet Pulp and Paper Mills (SPPM)	1955
North Bengali Paper Mill (NBPM)	1970

There is also one unit for hardboard production, Khulna Hardboard Mill (1966) as well as one for package materials, Eagle Box & Carton Manufacturing Co. (EBCM, 1960).

According to a recent study the "attainable capacity" of the BCIC units are:²

TABLE 2: Attainable Paper Mill Capacities

UNIT	PRODUCT	ATTAINABLE CAPACITY/YEAR
KPM	white paper, kraft paper	30.000 tons
KNM	newsprint	50.000 tons
SPPM	bleached and unbleached pulp	24.000 tons
NBPM	writing and printing paper	10.000 tons
KHBM	hardboard	21.500 sq.ft
EBCM	package materials	n.a.

Actual production in 1985-86 may differ from the above estimates of attainable production, i.e. the highest possible production with existing equipment after modifications or rehabilitation.

Presently, there are two private mills producing paper of various qualities. The Sonali Paper Mill is producing around 12,000 tons annually, while Hussein Paper Mill produces 3,000 to 4,000 tons each year. Private production of paper in Bangladesh is restricted to printing paper.

The annual domestic production of paper (excluding hardboard and package materials) is consequently around 55,000 tons, while the production of newsprint is around 50,000 tons.

Imports are severely restricted. Only a small amount of specialized paper, e.g. photo-copying and photographic papers, is presently being imported.

The supply of paper in 1986/87 may thus be summarized as follows:

TABLE 3: Annual Paper Supply

QUALITY	ANNUAL SUPPLY (tons)
Printing & writing paper	35-40,000
Industrial grades	10-15,000
Newsprint	50,000
Miscellaneous	5,000

The present demand for paper in the country is estimated at 0.5 kg/inhabitant/year excluding newsprint, and at 0.75 kg/inhabitant/year, newsprint included.

All paper except newsprint is therefore consumed within the country. As regards newsprint, exports serve as a regulator between supply and demand.

Presently, around 30,000 tons newsprint are demanded within the country, whereas the remaining 20,000 tons are exported to India, Sri Lanka, Burma and to Unicef for foreign usage.

Since five years back the demand for paper and newsprint has grown steadily. It has been estimated that the total demand for paper by the end of the current five-year plan, i.e. in 1990, will have reached 1 kg/inhabitant/year. This implies an increase of 33% per inhabitant and a total demand of, say, 150,000 tons annually.

Presently, BCIC is not very anxious to export paper. One obvious reason for this is the high level of domestic demand. Added to this, international prices are presently down, due to low prices of pulp. The exception to this price fall is newsprint, where exports of the surplus supply are being made. If domestic capacity of newsprint production does not increase, it may be concluded that there will soon be no surplus to export, due to the rising domestic demand for newsprint.

Domestic paper prices are regulated by the government. As regards newsprint, regulations are very strict in order to support the economics of the press. The daily newspapers are owned both by the government and by private interests.

According to some estimates, a 15% price increase of newsprint would not, at this point, decrease the demand. Still, the latest permitted price increase was made in 1982. Newspapers are sold at the price of 2 taka per copy.



View of the Karnaphuli River at Chandragona. Photo by Karliz Goppers/SIDA Photo Archives.

It is well-known that newsprint is also used by students for writing purposes and that, consequently, the mass media price regulation also benefits education.

The government also extends a subsidy to newsprint production to compensate for the regulated price. The subsidy is presently 3,000 taka/ton, with a reduction to 2,500 Taka/ton (to units where gas is available).

The government's budget for education has been decreasing, which gives again another reason for not allowing paper prices to rise. After an increase in 1982 there was, however, another price increase for paper of approximately 10% in June 1986. Between those two occasions price increases requested by the producers were turned down, considering cost reductions gained by conversion to gas as source of energy. Such a conversion is estimated to imply a 10% price benefit to consumers. In June 1985, the government ordered wages to be doubled, mostly for lower income ranks.

For future prices of writing and printing paper qualities the government has announced a less strict policy than for newsprint, allowing a 10% price increase per year. For such paper, demand is nevertheless expected to increase by 10-11% annually. It has been estimated that energy costs for the mills will increase by 20% per year, while the costs of FRM are expected to increase by 30% per year.

The cost structure of the Bangladesh paper industry is such that existing prices do not allow for financial surpluses high enough to ensure future investments. Furthermore, the quantities presently exported are sold at prices below total cost, i.e. they are sold without coverage of fixed costs. Also compared to import prices, the total cost of domestically produced paper is higher.

It should be noted, however, that some quantities of newsprint have been sold at a profit to India and that the foreign exchange balance of paper sold below total cost, is still positive.

Notwithstanding the latter two points, the question remains: should the future demand for paper be met by domestic production at costs higher than import prices? If so, how are the necessary investments then to be financed? As the production of paper consumes agro-products being short in supply, the problem of the paper industry is rather serious.

The programmes to be evaluated here were, however, geared towards the re-establishment of design capacity of the two mills, i.e. towards reaching those levels of production cited in table 2 above. In producing those amounts the paper industry employed (as of december 1986) the following number of people (state sector only):

TABLE 4: Paper Industry Employment

UNIT	TOTAL MANPOWER
KPM	3,259
KNM	2,653
SPPM	1,042
NBPM	1,105
EBCM	332
KHBM	258
TOTAL	8,649

A total number of employees approaching nine thousand constitutes a minor contribution to a total industrial employment in the country of 9% of the total labour force, i.e. around 2.5 million. According to official statistics the employment of industrial workers in the paper industry was at index 102 (1976/77=100) in 1985/86, descending from a peak at 112 1983/84. Meanwhile, productivity index (1976/77=100) reached an all-time high in 1985/86 at 159 (1982/83=97).

THE EVALUATION

None of the three projects dealt with here has previously been evaluated, at least not in a comprehensive fashion. The RD&BE project, which was earlier one of four components of the forestry programme supported by Sweden until 1980, was, however, included in an "internal" evaluation carried out by the implementing consultancy firm in 1981³. The BMR programme at KPM has been subjected to various follow-up and review missions,⁴ while the Swedish support to the KNM never has been analysed by SIDA, either in the form of evaluation or review.

According to SIDA rules, a project shall, after completion, be subjected to a final evaluation. Such an evaluation should normally be of a comprehensive nature, *id est* all aspects of the project (planning, initiation, implementation, effects and impact as well as termination) should be evaluated from a technical, economic, social and organizational point of view. The project's contribution to the country's social and economic development in general and in relation to Sweden's four overall development goals should be at the centre of the analyses. The present evaluation is carried out with those objectives in mind, although the scope is more limited, partly by the terms of reference and partly by the available resources.

The evaluation was carried out by a mission consisting of Hans Nordin, Boliden Contech AB, Senior Project Engineer, Dr. Jan Valdelin, ICS Interconsult Sweden AB, economist, and Karlis Goppers, SIDA's Evaluation Chapter, who—having been previously associated with the projects—participated as a "resource person" and therefore does not formally share responsibility for conclusions and recommendations. The mission visited the paper mills and project sites during two weeks in April 1987.

During the visit to Bangladesh the mission had the opportunity to engage Mr. M.A. Baten to assist in the generation of data from existing documents in the projects. A pre-evaluation desk study was carried out by Nelson de Macedo.

TERMS OF REFERENCE: SCOPE, FOCUS AND METHODOLOGY

The scope and focus of the evaluation of Swedish support to KPM, RD&BE and KNM are guided by the Terms of reference (ToR, cf. Annex 1) for the mission. In this case the evaluation constitutes a final evaluation of completed SIDA projects.

Priorities

In the light of information gathered during the field work in Bangladesh the necessary ranking of potential issues in order of interest became possible. In this chapter those priorities are presented.

First of all, it must be understood that, most of the time, the effects of partial improvements or investments in process industries may be isolated from the impact of other improvements or investments only at the cost of accuracy. In this evaluation, therefore, the effects of the projects are isolated only whenever deemed feasible—i.e. when the introduction of uncertainty does not exceed limits acceptable to the mission.

This will mean, for example, that consequences of a given BMR programme will be defined and interpreted in the context of the overall improvement of the mill, which may have been achieved as a combination of the BMR measures and other measures, outside the scope of the BMR programme.



The paper plant at KPM: The share of imported pulp has a high influence on paper quality. Photo by Karlis Goppers/SIDA Photo Archives.

Secondly, it has become clear during the study that market demand for paper in Bangladesh reaches such levels that, at no point of time, the market has been the bottle-neck for the financial returns of the mill. No in-depth market analysis would, therefore, justify its cost at this point.

Furthermore, prices of the paper produce from the mills investigated here are set by the government. It is generally felt that the administered prices are below the level at which the total output could be sold domestically. The evaluation will, therefore, only consider market analysis for paper when it becomes necessary for other issues than the financial analysis of the mills' production.

Thirdly, the field study has confirmed expectations as to the obstacles to information about regional and national externalities of the projects. In trying to assess the impact of the BMR programme at KPM on the minorities of the region, for example, we do not only have to face the problem of isolating the impact of the BMR from other KPM activities, but the one of security restrictions on information as well. Obstacles of a similar nature apply also to issues like impact on environment and women. The mission has tried to estimate economic externalities where such estimates are at least reasonably well based on information at hand—other costs and benefits are not quantified in the analysis.

Methodology

Some methodological points were raised in the previous chapter. One such item is related to the method of technical evaluation of investments which are part of a larger, complex, technical system. In this report the technical status of installed machinery and equipment is evaluated to the greatest extent possible in terms of their durability. Every installation has been scrutinized in order to assess whether its beneficial effects will be sustained in the future. In most instances this matter will be related to effectiveness and utilization of software, such as maintenance instructions, manuals, training and maintenance systems, as well as to the availability of hardware, such as spare parts and consumables. The lifespan of investments in financial and economic calculations has been determined with this sustainability in mind.

Another point related to the previous chapter is the matter of trade-off between data gaps and uncertainty. The bias of this report tends to be such that data gaps are preferred to the introduction of uncertainty in derived conclusions.

Data generation

In order to generate the necessary data for the evaluation a number of standard techniques have been used.

As sources we have used documents from SIDA, BCIC and the respective production units, as well as a few other documents. In the list of references (Annex 2) the major sources are given.

Beside the study of documents, physical investigation of the sites of the project was carried out as well as a number of interviews with people who work or have worked in the projects. In the list of persons met (Annex 3) the major interviewees are listed, thereby also indicating the places visited during the study.

¹ Cf. further details in Table 12: The total cost depends on the estimate of the cost of equipment, that has not been properly recorded.

² E. Arreen & Associates, 1986

³ Swedforest, Teknikus 1987

⁴ Follow-up Mission to the BMR-project and the RD&BE-project at Karnaphuli Pulp and Paper Mill, Chandragona, Bangladesh, Hans Nordin, Boliden Costech, SIDA 1984; KPM, RE&BE, KNM - A pre-evaluation desk study prepared by Nelson de Macedo, SIDA 1986

CHAPTER 3

Sweden's objectives

GENERAL

All of Sweden's development cooperation shall be in accordance with the following four broad development objectives:

1. promote economic growth
2. contribute to social equality
3. contribute to the development of political democracy
4. contribute economic and political independence

In practice, however, although not in theory Sweden's overall objectives with its development cooperation depend on what type of funding is used, i.e. whether the support is given as regular project support or in the form of import support.

When it comes to import support (which is the type of aid which was initially used for the BMR programme at KPM), these overall development objectives have not been applied in practice.

The realistic objective regarding disbursement of funds under Swedish import support is, and always has been, that deliveries should, in general terms, be used for "development purposes". The term "development purposes" has never been operationally defined by SIDA. Sweden has, however, stated two criteria for purchases which do not qualify as "development purposes", namely "luxury goods" and military applications.

In the past, when purchases under import support became very large or complex (referring generally to the purchases of non-bulk goods), SIDA would make a judgement on an ad hoc basis as to whether there was a need for special support preparation, and to what extent. Today, there are formal written rules, as to when and under what circumstances purchases under import support are to be subjected to a given degree of project preparation, i.e. in what cases would SIDA formally and practically assume responsibility for the delivery.

When disbursements under the BMR programme at KPM, which started as import support in the late 1970's, became larger and then increasingly assumed the character of a long-run regular development cooperation, SIDA felt the need to "tighten its grip" on those disbursements. At that time, however, there were no formal rules on how this should be done and there was a period of relative uncertainty and of ad hoc decisions.

An interesting aspect in this context is that the choice of format of cooperation (meaning what type of contract is signed and between what parties—recipient country/donor/consultant) is to a large extent influenced by the type of support category used (import support or project support).

In the case of Sweden's support to the BMR programme at KPM, the question of who signed a contract with whom became of paramount importance and was subject to a long and somewhat controversial debate.

In this chapter, we will:

- describe and briefly discuss the objectives that governed the three support activities covered by this report.

OBJECTIVES

BMR programme at KPM

Given that the Swedish support to KPM was in the form of import support, no analysis was ever made (at least not beforehand) of the project's viability and desirability, or of Sweden's objectives with respect to the support.

The objectives that were set up were largely confined to economic and technical aspects and were mainly identical to those presented by the Government of Bangladesh in its initial request for Sweden's support.

For the initial phases I through IV—plus the so-called Extension of Phase IV—the discernable project objectives were the following:

- short run improvement of production methods
- to carry out a study to assess the feasibility and the cost level of an investment programme aimed at
 - improvement of product quality
 - decrease of unit production cost
 - better equipment maintenance

For the subsequent BMR programme, the following items were given as project objectives:

- modernization of the mill in order to guarantee optimal capacity utilization during the coming ten years
- improvement of product quality
- diversification of products
- reduction of production cost by increased productivity



Inside KPM pulp plant. Photo by Karlis Goppers/SIDA Photo Archives.

When the BMR phase was about to start, the evolution of Sweden's involvement from import support towards regular project support had already begun. It was therefore felt to be natural that the main long run objectives should also be defined. These were the following:

- increase economic growth through increased production and employment within and outside the sector
- enhanced economic independence through increased self-sufficiency in pulp and paper production. In the longer run, this increased self-sufficiency could have positive effects on the balance of payments through a decrease of paper imports as well as, maybe, an increase of exports.

RD&BE project

According to the plan of operations in 1975, the overall goal for the RD&BE project was to secure the supply of raw material to KPM. More specifically, the long-term objectives were presented as follows:

- to ensure full supply of bamboo raw material (about 100,000 tons/year) to the Kamaphuli complex (paper and rayon mills)
- to develop an efficient and well-equipped organization for extraction of bamboo from the leased forests of CHT¹

Beside the above-mentioned objectives, there were others which seem to have influenced SIDA's involvement in the sector. These objectives, discussed during project preparation phase, were explicitly included in the "Support Memorandum" (Insats-PM), as appears below:

- the local tribal population should be given priority for employment
- the opportunities of improving the conditions of women would be enhanced by the project
- environmental aspects should be considered

These objectives, which should be seen as SIDA's own goals, were not, however, included nor mentioned in the Plan of Operations in 1975.

BMR programme at KNM

Sweden's involvement in the BMR programme at Khulna Newsprint mill was, as has already been mentioned above (cf. 2.1), limited. Not only was the support given in the form of import support funds, but even given this limitation, it was a support in which SIDA and DCO for various reasons chose to restrict their involvement.

It was a situation where Sweden simply accepted that a major BMR programme was on the way, financed mainly by CIDA, and decided to extend partial financing to the project since the activity was well in line with Sweden's already ongoing support to the forestry sector and industry.

For the purpose of this report, we can simply establish that Sweden's objectives coincided with those stated in the documents prepared by the Government of Bangladesh. And just as in the case of KPM, these objectives were confined to technical and economic ones. They were the following:

- modernization of the mill to reach higher and steady capacity utilization
- improvement of product quality
- reduction of unit production cost

DISCUSSION

When defining the targets and objectives pertaining to Sweden's support to the BMR programme at KPM, it is important to note that, by implication, the objectives of the support to the four forestry projects (of which the surviving RD&BE was one) may have also been carried over to the BMR programme at KPM. For, as is evident from documents, SIDA's willingness to lend financial support (albeit in the form of import support) to the KPM was very much contingent upon the Swedish support already given to the forestry programme. This is quite logical, since one of the main purposes of the forestry programme was to provide better economic surroundings in terms of trained personnel, raw material supply, etc., for KPM.

In a letter from SIDA/DCO to BCIC in 1977, the various activities are seen as an "integrated entity":

"Considering this SIDA is with great interest following the development of the Karnaphuli Complex and the utilization of the raw material provided through the forestry projects mentioned above.

From the report by Celpap and the discussions between the consultants and the technical staff of KPM and BCIC, it seems that an early decision would be needed on rehabilitation and improvement of KPM as early as possible in order not to permit the production facilities to deteriorate further and to curb the great economic losses presently incurred by using a worn-down factory.

From SIDA's point of view, the whole process of developing the raw material supply through production in the mills is part of an integrated entity where the parts influence each other. We would therefore appreciate it if you inform us on the progress made towards the formation of a rehabilitation programme for KPM. As mentioned to you earlier, Swedish commodity aid, tied and untied, can be utilized for goods and services for such a programme provided the Ministry of Planning, External Resources Division, makes a formal request to our office. We, on our part, would find it natural to extend our support to forestry and forest industries by including also grants provided under commodity aid for goods and services."

Looked upon in this way, where SIDA's support to the KPM becomes but one component of Sweden's general support to the development of the country's forestry industry sector, the BMR programme is a continuation of earlier projects. We may conclude therefore that it would not be entirely correct to completely separate the motives and objectives with respect to the BMR programme from those of the RD&BE.

There is clearly an implicit carry-over between the two, although it is not possible to pin-point exactly how this mutual influence works with respect to objectives.

One implication to be deduced from this reasoning is the following: if the security situation had not forced Sweden to pull out of the other three forestry projects in 1980, the chances for the BMR programme at KPM of turning out successful may have been greater. KPM would then have had a forestry training institute from which draw expert personnel, and it would also have had more pulpwood plantations to add to its raw material base.

Looking at the outcome of the BMR programme in this light, one may (at least in theory) make the claim that the BMR investments were really initiated in anticipation of the various forestry projects, when successfully implemented, contributing to KPM's economic environment. When these benefits were not provided, we may therefore assume that KPM's own chances of success were reduced to some extent.

This is not a position taken by this evaluation mission, as we do not have enough basis to determine to what extent this argument has merit. We simply note that it would seem to be a logically valid argument which in a general sense needs to be taken account of in analysing and evaluating the success of KPM.

SWEDISH COMMERCIAL INTERESTS

A point to discuss with respect to Sweden's objectives in its support to the forestry sector, is to what extent Sweden's own export motives might have consciously or subconsciously guided decisions. We are thinking here especially of Sweden's exports of pulp to KPM under the import support programme. Currently, these exports amount to the substantial sum of 30 MSEK a year, which constitutes almost 1/3 of all of Sweden's import support to Bangladesh. The reason for this export is of course Bangladesh's failure, as will be pointed out below in chapter IV, to develop and secure its own raw material base. It must be also mentioned, however, that some pulp must always be imported from abroad due to quality requirements of long fiber pulp.

In the agreed minutes from a meeting between Sweden and Bangladesh on the BMR programme, it was noted that: "From the observations during completion of RD&BE project the supply is not sufficient to produce the target of BMR program,

i.e. 30,000 tons per year of paper. This situation has also been noted by SIDA and a decision has already been taken by SIDA/ERD to finance the import of substantial quantities of pulp from Sweden.¹

From Bangladesh's development point of view, this state of affairs would seem to be clearly unsatisfactory. One cannot refrain from speculating whether SIDA's commitment to develop the raw material base may have been influenced by the knowledge that if this domestic raw material base were not developed, then the corresponding quantity of pulp would be imported from Sweden -- thus benefitting Sweden's export objectives. There is no evidence that this has been the case. But we nevertheless want to mention this point to make ourselves aware that, at least theoretically, such influences could be at work on a subconscious level.

¹ The Chittagong Hill Tracts

CHAPTER 4

From import support to project support

In this chapter we will describe and briefly discuss the transition of the Swedish support to the BMR work at KPM from being mere disbursements under import support to becoming one of regular project support.

BACKGROUND

Since the beginning of Sweden's development cooperation with Bangladesh in the early 1970s, over 1,000 MSEK has been disbursed in the form of import support, constituting approximately 65% of Sweden's total aid to Bangladesh.

About half of the amount has been tied to purchases of Swedish goods and services. The deliveries have been both staple goods and more complicated equipment. In the 1980s, examples of the latter are signalling systems for railways, telephone exchanges and spare parts for the telephone system, machinery, equipment and consultancy services for the modernization of the paper industry (KPM and KNM).

Since the end of the 1970s, there has been an explicit ambition from the Swedish side to drastically decrease the share of import support in favour of more project support. The motive has been to increase the share of the cooperation directed to poverty-oriented activities, as opposed to growth-oriented activities which are usually associated with import support.

The progress of this transition has, however, been slow. It is only in the last few years that the proportion of import support to the total funds has come down from about 2/3 to less than half.

Most of the import support purchases have been carried out by the Government of Bangladesh itself. The government is known to possess considerable know-how and experience in international tendering and purchasing. One drawback, however, is considered to be allegedly wide-spread corruptive practices in Bangladesh.

THE BMR PROGRAMME AT KPM

The disbursements under import support to the BMR programme at KPM constitute, by far, the biggest single item in Sweden's import support to Bangladesh.

What we refer to in this report as "the BMR programme at KPM" has formerly always been simply disbursements under import support and nothing else. No formal, written agreement between Sweden and Bangladesh on the implementation of the BMR programme at KPM has ever existed.

However, as we shall elaborate on below, the KPM disbursements were later subjected to a more stringent type of support preparation which was introduced in the early 1980s.

The Swedish support to KNM, which was also always made under the import support title, did not undergo any such change in character with respect to the degree of support preparation.

As early as in December 1976, the question was raised as to what would be the appropriate type of funding to use for the disbursements to KPM. The Industrial Division, which was the SIDA department potentially concerned when it came to industrial development cooperation, wrote in a letter to DCO dated May 2nd, 1977:

"The Industrial Division considers that the consultancy support (to KPM) has reached such proportions that it now becomes necessary to ask directions from SIDA's Executive Director on how to administer this support in the future."

NEW GUIDELINES FOR IMPORT SUPPORT

In 1979, and later elaborated in 1981, new rules and guidelines for Sweden's import support were introduced. The reforms were brought forward with considerable urgency against the background of several large, very controversial, purchases under commodity aid. The most well-known was the financing of the Power Supply Dam i Kotmale in Sri Lanka. Another was a proposed large order of fishing vessels to Bangladesh, amounting to a total of some 140 MSEK. In both cases, SIDA as a donor was being dragged "through the back door" into deliveries of very large and complex equipment which would also continue for a considerable period of time.

It was therefore felt to be highly unsatisfactory that SIDA became financially heavily involved in a long-term cooperation without having any chance of scrutinizing the relevance and the development orientation of such a large delivery, which it would automatically have to do in the case of project support.

It was decided that deliveries under the import support programme would henceforth, to a varying degree, be subjected to scrutiny and support preparation similar to that which was used for project support. The objectives of the new guidelines were stated as:

- to give a more defined form to all Sweden's active development cooperation
- to prevent large, long-term and complex purchases, mainly of a project nature, to be financed through Swedish funds without a previous thorough scrutiny
- to preserve, at the same time, the flexibility of the import support type of funds to the largest extent possible
- to find forms for the above, which are realistic with respect to SIDA's administrative capacity

It was explicitly decided that each item henceforth proposed to be financed under the import support funds would be judged on its own merits and it would then be decided in each individual case which degree of support preparation and SIDA involvement was desirable, necessary and feasible. The SIDA field offices were given the overall responsibility for this work.

In the case of Bangladesh and KPM, the new guidelines were introduced during 1979-1981 and later confirmed in subsequent agreements with Bangladesh. In the mid-term review of the development cooperation between Sweden and Bangladesh in May 1984, it was said that:

"Sida noted that the current list of allocations for Commodity Aid was very extensive and that several procurements were more of a project nature. In order to secure timely and proper implementation and to avoid delays and cost escalations, the two parties agreed that project-like procurements from 1984/85 would be processed as projects under a new heading: 'Infrastructural and Industrial Projects' (see below).

The two parties further agreed that Commodity Aid should be used only for procurements of raw material, intermediate goods, spare parts and services through competitive bidding, when practicable. Procurements of recurrent items over several years would be given priority as far as practicable."

SCRUTINY OF PURCHASES

For the BMR programme at KPM, this meant that the deliveries still going on under the import support heading would henceforth, at least in principle, be

subjected to SIDA's scrutiny and judgement with respect to development policy, relevance, etc.. SIDA's Industrial Division was henceforth, not only practically but also formally, involved with a programme officer assigned as responsible for the KPM activities.

The introduction of the new guidelines did not always pass without problems. For SIDA and DCO, it was often difficult to decide on the exact level of ambition and involvement which would be seen as relevant, desirable or feasible in each case. On the Bangladeshi side various cases of irritation have been reported when the authorities were not certain of the exact conditions governing the purchase of different items under the import support programme. There seems to have been some difficulty on the Swedish side to clearly explain this to the Government of Bangladesh. This may be understandable as the appropriate degree of SIDA involvement was by design supposed to vary from one import support item to the other.

The current development with respect to Swedish import support funds to Bangladesh is that SIDA has decided that no large scale industrial projects shall be given any support in the future. This decision is directly related to Sweden's wish to focus its cooperation with Bangladesh more directly on the poorer segments of the population.

RD&BE PROJECT

The road development and bamboo extraction project was, as has been described in the introduction, one of four forestry projects, initiated in 1976 as a regular project support. In 1981, the other three projects were terminated for security and political reasons. Given RD&BE's very direct and operational relation to KPM's raw material supply, it was decided that the project would continue. A debate then arose on whether to continue financing RD&BE under regular project support, or to transfer to import support in order to put it on an equal footing with the BMR financing at KPM.

The DCO argued, in a letter dated 1980-07-01:

"In our opinion the most natural form would be a project agreement, which would allow a certain amount of SIDA intervention, if it should be needed, e.g. in order to speed up implementation of the project, in the later stages of the project."

Judging from this statement, it would seem that the new guidelines for import support had at that time not yet become operational, at least not on DCO level, since the DCO letter assumes that the project type of cooperation would be crucial if

SIDA wanted to have any influence. One real difference, however, (pointed out in the same letter), is that under import support financing, SIDA would have no say on the total amount allocated to the project, since this would remain the responsibility of the recipient government. There could thus arise a risk that the RD&BE project would not, according to SIDA's view, receive enough financing, if it were put under the import support programme.

When the decision was taken, DCO's recommendations were not followed and the RD&BE activities were financed under import support funds from 1981 through 1985.

CHAPTER 5

Format of cooperation

In this chapter we will discuss the format of cooperation, i.e. which were the contracting parties that were chosen for the BMR programmes, and how this format might have influenced the success of the programmes.

By format of cooperation in this evaluation, we mean the type of formal agreement by which SIDA's and the implementing consultant's involvement in the projects were defined. We refer explicitly to what type of contract was signed and, in particular, to who were the parties signing the contract.

In the BMR work at KPM, the question whether the Swedish implementing consultant, Celpap, should sign a contract with SIDA or with BCIC became a hotly debated issue. We may state already from the outset that Celpap in this question became a pawn in a debate regarding not only practical matters of implementation, but even more of support philosophy and general principles for development cooperation.

The format of cooperation chosen—first there was a contract between SIDA and Celpap, then, after 1981, directly between Celpap and BCIC—has been said on numerous occasions and by the various parties involved over the years been said to be an almost all-important, sometimes decisive factor, deciding success or failure in the projects.

In this chapter, we will do the following:

Firstly, we will describe the various contracts signed for the BMR programmes as well as for the RD&BE project and state the main motives behind them.

Secondly, we will refer to some experiences regarding the practical outcomes and briefly discuss the pros and cons of the contract types.

BMR PROGRAMME AT KPM

For Celpap's preparatory consultancy work in the KPM, called Phases I through IV, four different contracts were signed between SIDA and Celpap:

- 9 February 1977

- 9 May 1977
- 20 June 1977 and
- 26 July 1977.

These contracts were signed by the Industrial Division of SIDA on behalf of SIDA, only after BCIC's approval of the contract proposals had been obtained. The preparatory phases, as was mentioned above, formed the basis for the subsequent BMR work.

During the preparatory phases, there were many implementation problems which SIDA identified as being directly caused by a relative lack of direct contact and understanding between BCIC/KPM on the one hand and the consultant Celpap on the other.

SIDA/DCO often found itself playing the role of a non-expert intermediary between BCIC and Celpap. And, although SIDA/DCO generally lacked all knowledge they were nevertheless expected by the other parties to constantly intervene and to be prepared to take decisions in cases where there was no agreement between KPM and Celpap. Apart from the lack of expert knowledge on the subject matter, DCO also felt that communication between KPM and Celpap, in the form of letters, telexes and even telephone conversations, mostly went via DCO, instead of going directly between the parties concerned. It was often this indirect channel in itself which would cause a misunderstanding or simply a delay, even in cases where perhaps no disagreement really existed between BCIC and Celpap.

Celpap, on its part, regarded it as more secure to have SIDA as a contract partner, because it could then always be readily understood. Presumably, Celpap that way also felt assured of receiving timely payments.

Already in May 1977, SIDA's Industrial Division, in the above mentioned letter (to DCO, 2nd May 1977) wrote:

"In order to facilitate our planning and processing of this matter, it is important to hear from the Government of Bangladesh on how it regards the following possible form for contracting of consultancy services:

Alt 1 BCIC contracts the consultancy services without any assistance or intervention on the part of SIDA

Alt 2 BCIC asks SIDA to sign a contract with a consulting firm.

Alt 3 BCIC asks SIDA to enter into a so-called 'ramavtal', (i.e. a broad agreement regulating the scope of the services.)

In a telex in January 1978 from DCO to the Industrial Division, it is agreed that:

"The dealings regarding KPM has from the outset been characterized by misunderstandings, unclear communications, disappeared letters etc, between the six parties ERD¹, BCIC, KPM, Celpap, DCO and SIDA's Industrial Division. A large part of the problems we believe are directly due to the fact that the contract has been made between Celpap and SIDA. A direct agreement between BCIC and Celpap would probably lead to a much simpler handling of communications."

In a letter from DCO to ERD in March 31, 1978, a similar point was made:

"It must be noted that the handling of this matter has generally been characterized by many misunderstandings and lack of official communication of all the parties involved at one stage or other - namely BCIC, KPM, DCO, Celpap, the SIDA office in Stockholm and ERD. It would seem that none can entirely disclaim responsibility for those formal mistakes that have occurred. The important thing at this stage seems to be that the work performed has been satisfactory and that KPM is benefitting from further consultancy work by Celpap. For the future, it is our opinion that the consultancy contracts should be signed directly between the consulting firm Celpap and BCIC. This, we believe, will greatly facilitate the administrative work and should avoid many of the problems that have arisen so far."

On the Bangladesh side, it seems that all the parties involved, ERD as well as BCIC and KPM, immediately accepted the idea of a direct contract.

Nevertheless, even though, already from the start, both SIDA and the Government of Bangladesh were in favour of a direct contract, this intention was not effectively communicated to Celpap and perhaps not even to BCIC. Celpap's recollection of SIDA's intervention is namely the following²:

"A draft contract was almost ready for signature, when SIDA suddenly changed its attitude of directly participating in the project, and instead recommended BCIC and Celpap to negotiate a contract on their own."

This evaluation mission is not in a position to establish clearly whether SIDA's and ERD's agreement to opt for a direct contract was effectively communicated to BCIC and Celpap or not. Nor does it seem important to do so. We will merely state as a fact that SIDA and ERD wished to have a direct contract, whereas Celpap clearly did not. As for the position of KPM and BCIC, it is evident from documents that they both, at least officially, accepted the idea at an early stage. But it may be possible that BCIC through 1978, due to lack of effective communication from ERD or for some other reason, continued to act upon the assumption that the contract was being signed between SIDA and Celpap.

It may further be noted that also SIDA's Industrial Division immediately, without any (at least not written) protest, accepted the idea of a direct contract. The proposal for a direct contract was discussed in a meeting at SIDA between the Industrial Division, DCO and Celpap on March 9, 1980.

Today, in 1987, BCIC's position on the contract is quite clear and categorical³:

"We wanted very much that the contract should be between us and the consultant. The government should cover protocol and make sure that the funds are available. We insisted on it, because it is much better that the two respective agencies sign the contract of cooperation directly. /.../ In all BCIC dealings with donors, we have direct contracts. The only exception is the RD&BE projects where Swedforest had a contract with SIDA (and not with us). /.../ In RD&BE, we could not keep track of how the money was spent and how much was spent. And we did not know whether the disbursements were connected with progress of the project..."

The direct contract for the BMR programme was finally signed on a commercial basis directly between BCIC and Celpap on January 4, 1979. The contract was derived from a model "cost-plus-supply-and-erect" contract presented at a UNIDO conference in 1978. The contract was subsequently converted into a fixed fee contract for engineering only.

RD&BE PROJECT

The four projects forming Sweden's support to the forestry development programme in the Chittagong Hill Tracts were originally signed in April 24, 1976, and renewed for the last time on May 4, 1979.

In 1981, all projects except RD&BE were terminated for political and security reasons. After 1981, RD&BE was now allowed to continue to be financed out of import support funds.

It is not possible to establish today why one did not opt for a direct contract solution (i.e. between the Bangladeshi agency on the one hand and the foreign implementing consultant on the other) in the case of RD&BE as was done in the case of BMR. It may have been related to Sweden's wish to keep its continued involvement in RD&BE on a low key. Sweden therefore wanted to avoid a situation of a possible prolonged and somewhat controversial contract negotiation between BCIC and Swedforest, as had already been the case between BCIC and Celpap for the BMR programme at KPM a few years before.

In any case, it is clear that the motives behind a direct contract harboured by SIDA/DCO were present in the forestry projects just as they were in the BMR programme. In an internal DCO memo dated December 27, 1977, it is argued:

"The contract between Swedforest and SIDA should be terminated. A new agreement should be signed directly between Bangladesh and SIDA (and ordinary experts instead of consultants should be recruited for the job) or between Bangladesh and Swedforest. Motive: There is an unclear role distribution when SIDA sits in the middle. Swedforest may be interpreted as an official agency in its own right, with a right to take initiatives and make decisions, when its personnel should in actual fact be subordinated to each respective Bangladesh Agency..."

KNM

On April 7, 1983, a direct contract was signed between KMW (Karlstads Mekaniska Werkstad) and BCIC for the rebuilding of paper machine no. 2 in the Khulna Newsprint Mill. The contract was on turn-key basis.

There is no evidence of any discussion preceding this contract regarding SIDA's involvement in any contract signing. Apparently, it was by then well established that a contract in a case like this had to be signed directly between the Bangladeshi responsible agency (BCIC) and the foreign delivering consultancy firm (KMW).

DISCUSSION

It is not possible to establish unambiguously whether the direct contract model has proved to be more efficient than the "indirect model". To a large extent, the

issue has been decided on basis of development principles rather than actual implementation arguments.

SIDA found it to be important that the recipient country agency itself formally (as well, as of course, practically) assume direct responsibility for all the work, and this, in SIDA's opinion, could only be achieved by a direct contract between that agency and the foreign consultancy firm.

On the other hand, the consultant always maintained that a number of inefficiencies, standstills and delays occurred in the project precisely because of what was perceived as "SIDA's unwillingness to involve itself". In its final project report, the consultant states:

"When Celpap entered into the contract, we shared with BCIC the erroneous view that SIDA would exercise a key role in the project's direction. But already at the outset SIDA made it clear to us that no interference from them (= SIDA) in the contract or in the project's implementation could be expected. SIDA's responsibility stopped with the transfer of funds to the bank. /.../ In spite of SIDA's lack of interest we kept SIDA well informed about the situation. /.../ Only at the end of 1982 SIDA realized that something must be done if the project was to be carried out at all."

This quote from Celpap would indeed seem to sum up the attitude of the different actors involved, except that the motive behind SIDA's "disinterest" was not really lack of interest but rather an administrative philosophy. This philosophy claimed that it was not SIDA's role to intervene in a contract which was signed between BCIC and Celpap.

At the end of 1982, however, SIDA apparently came to the view that the implementation of the project had progressed too slowly. SIDA therefore proposed that a supervisory board be formed in order to enhance the management and efficiency of the BMR programme. The members of the committee were to be: BCIC, ERD, KPM, Celpap, Ministry of Industries and SIDA/DCO.

Celpap thought this was a step in the right direction, but too little and too late. And Celpap complained that the board had not been given authority of decision within the Ministry of Industries, only a consultative authority vis-à-vis BCIC.

Judging from many documents and letters where critique is voiced regarding the various problems in the implementation work, one gets the impression that SIDA in actual practice did not refrain from intervening in the work. Every time a problem arose, it seems that DCO got dragged into it somehow or other. On these occasions,

DCO would usually reiterate its neutral position, but usually did not manage to stay out of the problem. Nor was it expected by the other parties involved (BCIC, ERD, KPM, Celpap) to stay out. In fact, these other parties often saw no other alternative than DCO acting as an intermediary or mediator in disputes that arose.

We will give some illustrations:

- In a letter from DCO to SIDA's Industrial Division, dated September 30, 1980, where DCO comments the fact that it has been asked to help in securing additional funds for the project:

"In a relationship of the type that exists between Bangladesh authorities and Celpap—where BCIC buys the services of Celpap—we would think it improper to intervene on the Celpap side. We can bring the situation to the attention of the authorities involved, but it is not for us to impose on them what is basically Celpap's view of how the matter should be settled. The parties will have to work out a solution between them, a solution that is adapted to the availability of resources and to the degree of commitment by the government to the KPM-BMR project."

- On a different occasion, DCO was supportive of a request forwarded to ERD from KPM-BCIC:

"From DCO's point of view such a request is supported as long as it relates to the already approved BMR scheme..."

- In a quarterly review meeting in October 1983, DCO intervened on behalf of Celpap and stated that:

"SIDA is very concerned about BCIC's delays in payments to the manufacturers of goods to the programme."

- On December 29, 1983, in a letter to ERD, DCO intervened on behalf of Celpap for lack of payment as well as for a deadlock in negotiations for a renewal of the contract that had expired:

"... I am very concerned about the fact that the negotiations have hardly yet started and seem already to have come to a deadlock. /.../ SIDA expects the programme to be completed by the end of

the current fiscal year and cannot agree to allocate further funds next year. /.../ I have to point out that Celpap must be given adequate remuneration in order to cover its expenditures..."

- On other occasions, DCO offered its mediator capabilities:

"If no agreement between BCIC/Celpap can be reached on the question of the actual number of man-months carried out, I guess DCO/SIDA will have to act as a judge/mediator."⁴

On other occasions however, SIDA took a very tough stand and stayed by its principles of non-involvement, the very same principles that had motivated its pressure for a direct contract.

In a letter to Celpap regarding unpaid bills, the Industrial Division stated:

"It is KPM /.../, who is the buyer of the material and that is in accordance with the principles of how purchases of /.../ should be handled. In consequence also payment of bills should be made by the factory (KPM). /.../ We have therefore said no to a request of payment of..."

Celpap's response to this and other letters was, however, in the form of an urgent request by telex stating that the situation was becoming intolerable, that it might have to consider withdrawing its personnel and that the only possibility it saw of continuing the project was that SIDA would assume the responsibility for payment of bills. Several years before that Celpap had at one time offered deliveries at prices which were valid only on conditions that SIDA would be the contracting party. This was not the only time that Celpap was considering withdrawing from the project.

CONCLUDING REMARKS

The evaluation mission is not able to deliver a final judgement on "who was right and who was wrong" in the cases of inefficiency and misunderstanding that arose. Many of them are of course normal problems that occur in any development project.

In this chapter, we are concerned with the question: to what extent did the format of cooperation—i.e. the type of contract that was signed and between which parties—in itself create these problems.

On balance, it would seem to us that Celpap has at least some basis for many of its complaints. Many of the problems had to do with non-availability of funds which were already envisaged and in practice approved for the BMR programme. Celpap

cannot be expected to know exactly how Swedish support funds are allocated by ERD. It entered into a contract confident that the external financing and proper time-keeping would be looked after and guaranteed by other competent parties, such as ERD and SIDA. And this was a reasonable attitude on their part. As it turned out, Celpap may have suffered commercially due to circumstances which were in practice—although perhaps not always in a strict formal sense—outside Celpap's control.

It would seem to us that SIDA in many instances has been too passive in its responsibility to inform and cooperate with Celpap. Nevertheless, we fully understand and sympathize with SIDA's chosen position of neutrality and non-intervention.

When it comes to securing finance as well as keeping the planned time schedule for the project, it is reasonable that SIDA should assume a certain responsibility. In this particular case, it would have seemed wise for SIDA to be firmer in their relations with the Bangladesh authorities. SIDA should have demanded a definite answer "one way or the other" regarding ERD's decisions on financing and timing, and not let matters drag on for months with no decision. As it turned out, both Celpap and BCIC/KPM remained uncertain for a long time.

We are not suggesting that SIDA/DCO committed any formal mistake in not pressing for a decision. But it must be remembered that it was only SIDA that was really in a position to extract a decision from ERD, and this is more than one can say for either BCIC/KPM or Celpap. One conclusion is, therefore, that SIDA could have made a constructive contribution to the project's progress had it, in 1979/80, pushed harder for a decision on financing from ERD, and thereby assisted BCIC and Celpap to a speedier contract. But in stating this, we also want to point out that it cannot have been an easy matter for SIDA to intervene here, given its policy decision to leave the contract to Bangladesh and Celpap alone.

We are thus not able to state neither that the direct contract model was unsuccessful, nor that it was successful. We think it was both but in different ways and in different time perspectives. For although we can see some practical disadvantages with the direct model in the short-run implementation, we can also see general beneficial effects of this type of contract, especially in the long run.

In an analysis of specific case studies of SIDA's cooperation with Swedish Industry,⁵ it was stated in reference to the direct contract model that:

"What was once a positive component in the development cooperation, has over the years been increasingly seen as a problem when SIDA intervenes to save a project and when the contracting parties are not agreeing as to what has gone wrong and on what needs to be done."

- ¹ External Resources Division, Ministry of Finance
- ² Final Report on BMR at KPM, date 15/15/1985
- ³ Interview with BCIC Chairman, 4 April 1987
- ⁴ Internal memo DCO July 1978.
- ⁵ SIDA och näringslivet – sex fall, Jan Valdelin & Kjell Österö, 1982

CHAPTER 6

Karnaphuli pulp and paper mill: The BMR project

PRE-PROJECT SITUATION

The public enterprises of the pulp and paper industry (KPM, NBPM, SPPM and KNM) were at one point placed under the management of Paper and Board Corporation (P&BC), but later abolished.

KPM was built in the early 1950s. It is situated in Chandragona in the Chittagong Hill Tracts. It was financed by the World Bank. The fibrous raw material is mainly bamboo and hardwood. The mill was started in 1953 and operated for 20 years virtually without reinvestments. The annual production had then decreased to 20,000 tons of paper, compared to the nominal capacity of more than 30,000 tons.

The newsprint mill at Khulna was constructed in 1959, with a rated capacity of 40,000 tons of newsprint per year, to which 10,000 tons per year of mechanical printing paper was added in 1965. The mill, planned and designed by Canadian experts, was financed by Canadian credit and its equipment is mainly of Canadian origin. Khulna is the country's only newsprint mill.

The paper industry's output never reached more than 50% of its capacity, mainly due to poor operating conditions of the mills in the 1970s. The physical conditions of the older mills at Karnaphuli and Khulna had deteriorated to such a point that considerable expenditures were necessary to rehabilitate them in such a way that they could reach their designed capacity. Furthermore, the paper industry experienced great difficulties in marketing its products, partly due to poor quality.

The above circumstances pushed Bangladesh into considering some kind of rehabilitation programme for its mills, mainly KPM and KNM. In March, 1976, the Government of Bangladesh requested two consultants from SIDA. Their main task would be to find ways and means of improving the paper quality and the processing system. Following these prerequisites, SIDA started to look for experts fitted for the job.

In June 1976, Bangladesh announced a reorganization of its corporations. As mentioned above, P&BC was merged into a then newly established corporation, Bangladesh Chemical Industries Corporation. At the same time, many managers at all levels were replaced. Unexpectedly, BCIC decided that priority should be given to the rehabilitation of KPM. The Khulna programme was then postponed.

THE BMR PROGRAMME AT KPM

In April/May, 1976, Swedish consulting companies were invited to tender for the KPM rehabilitation. After evaluation of the received offers, Celpap Engineering was selected. SIDA had a positive experience of Celpap's work within the Bai Bang project in Vietnam and other assignments in developing countries. The cost for the assignment was to be charged to the import support funds for Bangladesh.

A consulting agreement was signed by SIDA and Celpap after approval by BCIC (cf. chapter 5). The assignment (Phase I) was carried out during two weeks in August 1976. The report analysed the main problem areas and proposed an action plan.

BCIC accepted and approved of the action plan and in December 1976 requested that SIDA extend Celpap's assignment to cover a detailed plan for rehabilitation of some key equipment combined with purchase specifications for the most urgent spares (Phase II).

In February 1977, this job was further extended to include tests and analyses of raw material, as well as produced pulp and paper. Advice on compiling investment calculations and an investment budget was also included (Phase III).

In May 1977, the final report covering the three phases was presented.

The report contained a proposed comprehensive investment programme aimed at Balancing, Modernization and Rehabilitation of the Karnaphuli plants. This programme was subject to a thorough review by BCIC and the mill management. In the meantime, a further extension of the assignment was requested by BCIC in order to implement an emergency repair scheme. This Phase IV was finalized in April 1978.

During 1978, further discussions about the BMR project had taken place between KPM/BCIC and Celpap/SIDA. The original plan was extended in several steps and the finally approved plan could not be accommodated within the originally budgeted amount.

In November 1979, an agreement was signed without tendering between BCIC and Celpap on strictly commercial terms. This was in line with SIDA's policy as discussed earlier (cf. chapter 5). The time schedule was originally 2 years, but it was revised a number of times to accommodate delays. The project was finalized on the 30th of June, 1985.

The pre-study phase

It has been mentioned that the BMR programme at KPM consisted of two main parts. First, a feasibility study combined with a crash programme for technical rehabilitation of some high priority production equipment. Based on the feasibility study a comprehensive rehabilitation programme, the BMR, was initiated and implemented as a second part.

During the first phase, the input from Swedish import support funds consisted primarily of consulting services through Celpap. Some spare parts were also purchased in connection with repair of items of high priority.

The utilization of Swedish funds for this phase of the programme is presented below:

TABLE 5: KPM: Fund Utilization—Pre-Study
Fund utilization (SEK 1000; 1977 prices)

Consultant's fee	1,315
Spare parts	114
Contractor's fee	630
TOTAL	2,059

The extent of the input from BCIC/KPM during this period cannot be established from available sources. It is a fair assumption that personnel from BCIC and KPM seconded to the project team spent about the same amount of working hours as the foreign consultant, approximately 20 working months.

The main outcome of this part of the project was a comprehensive feasibility study, the conclusions and recommendations of which may be condensed as follows:

- Without investment in technical rehabilitation the mill's decline in productivity will continue and accelerate.
- A restoration of the mill's production capacity to the originally designed level was possible by:
 - restoring and/or replacing bottle-neck units in the chain of production
 - replacement of some outdated equipment with modern one giving smaller losses and higher utilization of raw materials
- As a result of higher productivity and smaller losses additional benefits would be noted, such as a lower unit cost of production, higher quality and less environmental pollution.

THE BMR PROJECT

The feasibility study constituted the base for the design of a detailed rehabilitation programme. After various discussions a revised programme was decided upon. A contract signed between Celpap and BCIC defined the scope of the project and the allocation of responsibility for the various inputs to the project.

Software

The responsibility for the service functions of the project was distributed as follows:

CELPAP

- Collect and prepare basic data
- Supply all needed technical know-how
- Prepare basic and final design
- Prepare general and detailed project plan
- Engineering
- Equipment specification
- Recommendation of suppliers
- Delivery testing and transportation control
- Erection planning
- Arranging of training in Sweden and by special instructors at KPM

CELPAP/KPM

- Building layout
- Control of rebuilding work
- Checking of restored equipment
- Arranging of stores for arriving equipment
- Start-up—test running

KPM

- General project management
- Procurement
- Transportation—insurance
- Erection of all equipment
- On-the-job training and personnel development

For the implementation of the project an organization was developed. Overall responsibility was held by the General Manager of KPM. Beside him, a project manager was appointed with a small supporting staff for planning and accounting. The project manager was authorized to request to withdraw resources from KPM's permanent organization to supervise and execute the various tasks of the project.

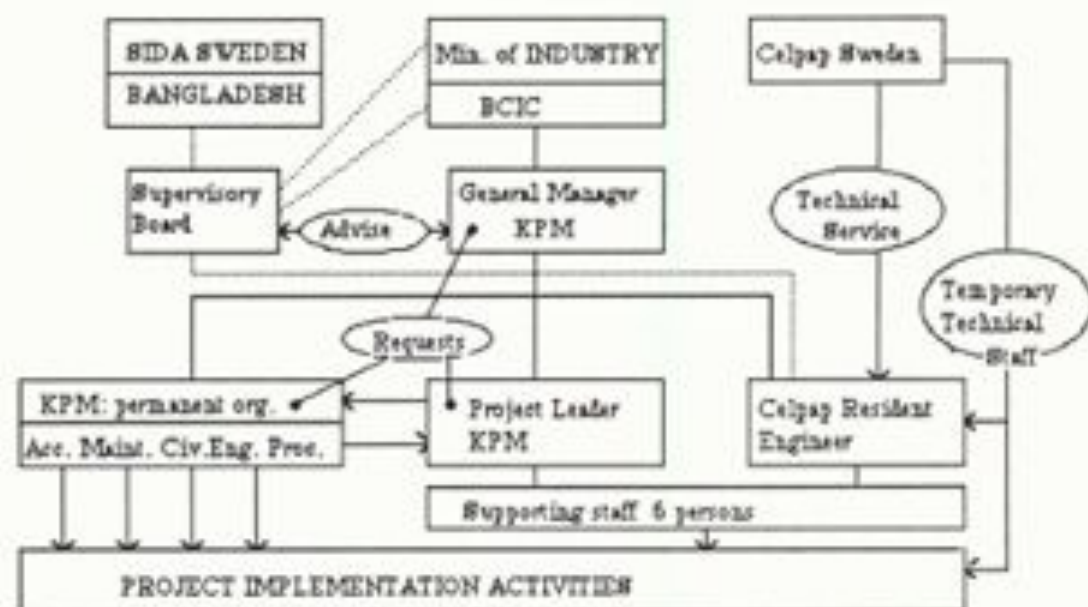
Celpap appointed a resident manager who was working at KPM during most of the project period. He was supported by a small local staff and by technical experts on short term assignments from Sweden. The main technical work, such as planning, design, engineering and equipment specification, was handled by Celpap's Swedish organization and to some extent by other consultants.

In 1982, the organization was supplemented by a supervisory board with representatives from SIDA, KPM, BCIC, Celpap and the Ministry of Industry.

The board was following up the project's progress in meetings every 3 to 4 months. The board's views and recommendations were noted in minutes from board meetings and served as instructions to the project management.

The following chart represents the main structure of the project organization:

CHART 1: PROJECT ORGANIZATION



Hardware

The input of hardware to the project consisted primarily of standard replacement parts, such as steel sheets, pipes and rods, of consumables such as electrodes, of spare parts to existing equipment and of new equipment to replace the obsolete ones.

In condensed presentation the rehabilitation project may be split into the following sub-projects:

- Raw fiber intake and handling:
 - New chipper and wood handling system
 - New system for chip-handling and screening
 - Rebuilding of feed-out from chip silos

- Digester system:
Minor replacement of valves and piping
- Pulp washing plant:
Installation of a new washing plant incl. building and equipment
- Bleaching and screening:
Major rebuilding and replacements in connection with a system redesign
- Recovery system for chemicals:
Overhaul of causticizing plant and recovery boiler, major reconditioning and modification of evaporator system
Installation of a new precipitator
- Paper machine No 2:
Modification of stock preparation and broke handling
Reconditioning of wire part
Installation of size press with surface size preparation
Installation of a new drive system
- Paper machine No 1:
Parts replacement of the main drive
- Finishing system:
Minor overhaul of one paper cutter

Costs

Due to changes in the project's scope and to repeated delays in the implementation (discussed in other parts of this report), frequent changes of the approved budget for the total Swedish contribution were taking place.

TABLE 6: KPM: Changes of total Project Budget

Total project budget	MSEK
1979	33
1980	49
1983	62
1983	66.5
1984	69.8

The final amount for the Swedish contribution to the BMR project is 70.8 MSEK, i.e. a budget overrun of 1.0 MSEK compared to the final project budget.

Including the preparatory phases the total contribution to the rehabilitation programme is 72.9 MSEK against a budgeted amount of 71.4 MSEK.

The estimated cost for the total Swedish input in the BMR project is distributed as follows:

TABLE 7: KPM: Total Project Cost

ITEMS	MSEK	%
Consultant fees	10.1	14.4
Training	3.3	4.6
Machinery and spare parts	55.8	78.8
Miscellaneous	1.6	2.2
TOTAL	70.8	100

The contribution from Bangladesh (BCIC/KPM) is recorded as Lac Taka 750 (75 M) during the period 1978-84. It can be assumed that approximately an amount of Lac Taka 250 was contributed to activities connected to the BMR project during 1985-86. The total contribution thus reaches about Lac Taka 1,000 (MSEK 30).

PROJECT OBJECTIVES

Background

The general objectives for the initiation of the BMR project and the feasibility study can be found in the conclusion made by BCIC that an investment programme was urgently needed to arrest the accelerating deterioration of the production capacity and the economic results of the Karnaphuli Pulp and Paper Mill.

The preparatory phase

The scope of the feasibility study was extended in several steps and came in its final form to cover a comprehensive study of the mill's whole production process including, pre-design of a new pulp washing plant. The objective of the study was to propose a detailed rehabilitation programme with cost assessment and time schedule. Apart from the main objective, also some additional requests were added, mainly concerning on-the-spot advice for repair of broken-down critical machinery.

The BMR project

The scope and objectives for the BMR project were defined in great detail in the contract signed between BCIC and Celpap in January 1979. It may be noted that the contract covered a wider scope than what was recommended in the feasibility study. After further changes a revised project plan was finally approved in the second half of 1980. Due to the various changes of the project the objectives as described in the

contract became partly obsolete. However, no redefinition of objectives took place during the course of the project. Before the handing over of the project to KPM test runs were specified in the contract.

Due to constraints outside the control of KPM, mainly lack of raw material, the test runs were shortened. The targets set for the test and the achieved results approved by both Celpap and BCIC are consequently to be regarded as the revised objectives and targets (in those cases where they differ from the ones set in the contract).



Paper Rolls at the KPM in Chandragona. Photo by Sture Lidén/SIDA Photo Archives.

The general objective was defined as a restoration of the mill's production capacity to 30,000 tons of paper annually combined with a reduction in unit cost of

production by 2,000 Tk per ton of paper based on the 1977 cost level. Complementary to this main objective a group of subtargets was identified, the most notable being that the paper quality based on standard tests was to be improved by 10% from 1977 year's production and that the brightness of the paper should reach 83% GE without ClO₂ bleaching.

Furthermore, paper machine No 2 should produce 40 tons a day of a relatively thin paper (48 gram/m²) and the capacity of the pulp mill and chemical recovery plant should be equivalent to a paper production of 100 tons per day. It may be noted that no proportion of imported pulp in the production mix is stipulated. The amount of imported pulp used has a high influence on the runability of the paper machines and thus of the achieved production quality. A proportion of imported pulp is regularly used in the production mix of paper machine No 2.

As has been stated in chapter 3, social objectives such as impact on the employment situation in the area or on the personnel development policies of the mill are only implicitly expressed in the background information of this project. The project's objectives with regard to minorities and to women are discussed in chapter 7 below.

PERFORMANCE

The development of some key inputs are presented in the table below. The table indicates the consumption of different raw materials and other inputs per ton produced paper.

One basic assumption for the comparison is that the quantity relation between different types of paper produced is fairly constant and that most of the produced pulp is being bleached during the compared periods of time. A control of company statistics indicates that such is the case. The figures for 1977 are those presented by KPM to Celpap as the basic level from which the improvements should be calculated.

TABLE 8: KPM Inputs Per Ton of Paper

INPUT RATIO: TONS PER TON PRODUCED PAPER

TEST RUN

Inputs

	Jan. -85	1977	Present production
Fiber raw material:			
a) bamboo + wood			
b) local prod. pulp			
c) imported pulp			
d) broke			
total of above items a-d:	2.25	2.68	2.37
e) filler material	0.04	0.03	0.085
Chemicals:			
caustic soda	0.089	0.136	0.066
salt/soda ash	0.065	0.097	0.098
chlorine	0.035	0.039	0.043
Power kWh/ton	1.101	1.268	1.312

The general objective of 30,000/ton of paper produced annually shall be compared to the actual production:

- July 84-June 85: 28,800 tons, out of which paper machine 2 produced 47%
- July 85-June 86: 31,129 tons, out of which paper machine 2 produced 50%

During the test runs a separate calculation of production costs was made based on the price level of 1977 in order to check if the general objective of a reduction in the production cost of Taka 2,000 per ton of paper had been met. Only those costs which were affected by the BMR programme were considered.

The resulting cost estimate is presented in the table below.

TABLE 9: KPM Test Run Production Costs
 (Taka per Ton; "Difference" means deviation from test run; plus sign indicates savings)

ITEMS	TEST RUN 1977 COSTS		Difference (II-I)	Guarantee IV	Difference (IV-I)
	I	II			
Unbleached bamboo pulp:					
• fiber raw material	1,510	1,519	+109	1,440	-70
• chemicals	904	1,391	+487	816	-88
• steam + energy	92	731	+609	525	+437
• others	255	190	-65	140	-115
Saving (total in Taka/ton)	—	—	+1,140	—	+164
Bleached pulp:					
• unbleached bamboo pulp	2,761	3,001	+1,140	2,921	+160
• hardwood pulp	96	234	+138	174	+78
• chemicals	968	1,090	+122	970	+2
• steam + energy	134	145	+11	100	-34
Saving	—	—	+1,141	—	+206
Bleached paper:					
• pulp	3,654	5,370	+1,716	3,844	+190
• filler material	48	36	-12	36	-12
• chemicals	314	383	+69	383	+69
• steam + energy	701	821	+120	661	-40
• others	99	202	+103	134	+35
Saving	—	—	+1,996	—	+242

Compared to the objective of a saving of 2,000 Taka per ton of bleached paper, the test run reached 1,996 Taka. That is well inside the margin for errors in the physical measurement of the inputs. The test run was consequently accepted as proof that the cost of production had decreased as guaranteed. A set of cost figures was also calculated based on the performance guarantees in the original contract. When comparing the result of the test run to these figures, a saving of about Taka 240 per ton paper was indicated.

Extracted from the mill's accounts the total variable costs for the two recent years are:

— July 84-June 85: 20,640 Taka per ton paper

— July 85-June 86: 17,964 Taka per ton paper

The cost reduction is mostly due to conversion from oil to gas for power and steam generation. Other costs have only marginally been reduced (about 400 Taka per ton).

Technical status of the units installed during the BMR project

The mission made an inspection of the plant at Chandragona in order to study how the BMR equipment was functioning and maintained. The mission also made a point of studying the general technical status of the mill's production equipment in order to assess the chances for the mill to sustain the present productivity and rate of production.

Concerning the equipment installed during the BMR project the general impression was positive. Most units were running satisfactorily and seemed to be in an acceptable technical condition. In some cases modifications had been carried out after completion of the BMR programme. The modifications mostly served to support production capacity at the expense of quality. During the inspection the precipitator, the recovery boiler and the evaporators were down for maintenance, that seemed to be competently performed.

The main part of the mill's production equipment is now more than 20 years old, and evidence of deterioration caused by insufficient maintenance and upkeep is everywhere. The problem of keeping up the availability of the old equipment will no doubt, be of major concern during the coming five years.

During the BMR a maintenance programme was introduced and training courses in preventive maintenance, planning and implementation were held. A very limited preventive maintenance is carried out on some of the new equipment.

The BMR project included a substantial training package. The training was partly on-the-job instructions on the operation and maintenance of the new equipment. Another part of the programme consisted of skills improvement training for technicians, such as electricians, instrument-mechanics and machine operators. KPM officers, engineers and senior foremen acted as assisting instructors in order to be able to continue the training scheme when the expatriate instructors had left. This type of courses are administered by KPM's own training organization and held at the mill's training center. During the three years 1984-86 the training center had held an average of 6 courses a year, with 20 participants in each course. About half of the courses covered subjects related to technical skills. The plans for 1987 contained several courses in mechanical maintenance.

ANALYSIS AND CONCLUSION

The preparatory part of the project was extended in several steps. It seems as if the scope gradually developed into a feasibility study for a substantial rehabilitation project, parallel to the planning and implementation of actual rehabilitation work on existing machinery. During this stage, delays occurred in deliveries of repair material, which caused budget overruns and disputes between Celpap, BCIC and SIDA. (This early experience seems not to have been sufficiently considered, as in

the contract for and the organization of the BMR project, insufficient resources were allocated to the handling of procurement and financing routines.)

The objectives of the preparatory part were not explicitly formulated. It can be assumed, however, that the general objective of this part was met through the feasibility study approved by BCIC. In the consultant's reports from this phase it is also stated that the actual repair work which was carried out improved the productivity of the production process. This statement cannot, however, be verified.

The BMR project phase was from the beginning hampered by delays. On SIDA's initiative a contract was signed between Celpap and BCIC without SIDA being a part of the contract. This contract was signed in November 1979. At the request by BCIC/KPM the scope of this contract became different and broader than what the feasibility study had recommended. This scope would extend the project cost considerably over the budgeted amount of MSEK 33. A long process of alteration of scope, misunderstandings about available finance, delayed allocation of money and unnecessary negotiations with possible equipment suppliers led up to a totally revised project plan. This was approved by the Bangladesh government in late 1980, with a revised budget increased to MSEK 49. The project's time schedule of 27 months from 1979-04-01 was at this time already about 7 months delayed. When the project was finalized in June 1985, the costs had been 70.8 MSEK and the duration 74 months, i.e. an overrun of funds of 115% and time schedule of about 175%.

If based on only these two criteria, the project implementation must be regarded as very unsatisfactory. It is the mission's opinion that the main reason for this is that too little resources were allocated to the administration of the project, from both Celpap and BCIC/KPM. The contract was not clearly formulated and Celpap had no previous experience of project financing via import support from SIDA. The management of KPM had limited experience of running a project of this type. The project had too low status in the mill's organization. Inexperienced personnel was allocated to handle complicated purchase and transport arrangements. The fact that this project was financed by import support and consequently not closely monitored by the local SIDA office did not in any way improve the situation. The most damaging of the actual causes for delay were:

- Frequent alteration of project scope
- Unclear custom clearance procedures and rate application
- Breakdown in coordination of letters of credit, suppliers and delivery schedule.

The coordination of the project was further disturbed by the fact that Celpap changed the project coordinator in the home office and also recalled the resident engineer during a period towards the end of the project. BCIC changed management

at KPM four times during the project period, which also may have had a disturbing effect on the implementation of the project.

The considerably delayed project implementation has for obvious reasons caused a notable additional consulting cost. Celpap had to supply a resident engineer and home office services for a much longer period than originally budgeted. At a conservative estimate, about 20% of the consultant's fees of 10 MSEK would have been saved, had the project been implemented without abnormal delays. Price increases on equipment and charges for interest costs from suppliers would also have been avoided. When the scope of the project was finally established in the late 1980's, the approved budget of MSEK 49 must be regarded as rather optimistic for a project in a developing country. However, out of the final cost of MSEK 70.8 in foreign exchange, an estimated 10-15% may be regarded as unnecessary cost escalation due to delays in the project implementation.

The unsatisfactory implementation of the BMR project has fortunately not affected its possibilities to meet technical and economic objectives. The two main objectives have been met according to test runs and analyses signed by both parties:

- a production capacity of 30.000 tons paper annually
- a saving in production costs of Taka 2.000 per ton (1977 cost level)

During the year of July 1985-June 1986 the mill produced 31.129 tons of paper and during the 7 months of July 1986-January 1987 18.700 tons of paper were produced. It may be debated to what extent the BMR project is the only source of this improvement, as the mill's raw material supply also considerably improved during this period, allowing for a more regular flow of production compared to earlier periods.

It is, however, the mission's opinion that without the rehabilitation work carried out through the BMR project, the mill's technical status and productivity would have been too low to take advantage of an improved raw material situation. Thus we believe that the technical objective and the objective of production economics of the project have been met.



Pulp production at KPM. Photo by Karlis Goppers/SIDA Photo Archives.

Quite a different matter is the retrospective application of investment analysis on the whole project. As is shown in Annex 6 to this report the investment in BMR at KPM cannot be justified in financial or economic terms. But this was not part of the objectives of the programme.

An implicit technical objective of the BMR project was to achieve an improvement of the maintenance function through the introduction of systems for preventive maintenance. During the mission's visit to Karnaphuli Paper and Pulp Mill, discussions were held with senior staff within the maintenance departments. Inspection of the maintenance shops was undertaken and a general assessment was made of how the production equipment was kept and maintained.

A slight improvement in the general technical status could be noted compared to a previous study (1983). A more professional attitude to maintenance among service staff could be noted as a result of the maintenance training and practice during the BMR. However, as a general statement it must be concluded that considerably more management, skill and equipment must be allocated to the maintenance function if the expected and necessary improvements are to be achieved.

When comparing the average monthly figures for total salary within the maintenance and production departments, the maintenance organization seems to be of the same size as the production organization. This indicates that the number of

maintenance personnel ought to be sufficient, but that training, supervision and skill are lacking.

The objectives of the BMR training programme was partly to improve the operation and maintenance personnel's skill, especially in handling the new equipment, partly to introduce a personnel development plan based on the existing training centre.

A study of the training centre's operation plans, combined with interviews with senior staff, gave the impression that an increase in the activities of the centre had been noted after the BMR, particularly when related to technical subjects.

CHAPTER 7

RD&BE project

PROJECT OBJECTIVES

As mentioned in chapter 3, the general objective of the RC&BE Project was to secure Fibrous Raw Material (hereafter referred to as FRM) to the Karnaphuli Complex.

The "long-term" objectives were presented as follows:

- to ensure full supply of bamboo FRM (about 100.000 tons/year) to the Karnaphuli Complex
- to develop a well equipped and efficient organization for extraction of bamboo from leased forests.

The major Swedish support project to the forestry sector was discontinued in 1981. The objectives of the remaining project may, however, be described in the same technical terms, with the exception that the expected output had been reduced to 42.000 tons/year.

This project may be divided into two parts:

- forestry
- handling of FRM

FORESTRY

Due to security reasons the mission had no opportunity to visit the forestry project. From available data¹ it must be concluded that very limited activity is taking place in the areas leased and developed by the RD&BE project. The security situation makes it necessary to transport workers to and from the cutting areas during daylight. This situation accounts for a considerably reduced period of active work, compared to what was planned. Daily erection and dismantling of ropeways and moving of equipment from the working areas due to risk of sabotage are also reducing the time for productive work.

In its early planning stages the expectations on the areas' production capacity were quite high. During the feasibility study and the project planning, a gradual decrease of the projected production capacity took place. In the final revised plan from 1978, the extraction capacity for 1981 was targeted to 42,000 tons of bamboo.

The production from the leased forests before the project started, and before security became a problem, was 10,000 to 15,000 tons.

A study of the actual production after the implementation of the project gives the following result:

TABLE 10: RD&BE Project: Actual production

PERIOD	TONS OF BAMBOO
1983-84	14,115
1984-85	15,854
1985-86	9,994
1986-87 (8 months)	3,929

The supply of bamboo purchased from private sources in the same area has from 1987 gradually increased and is now about 20,000 tons annually.

Due to the low capacity of the RD&BE project the unit cost is 4,800 Tk/ton compared to 1,900 Tk/ton for purchased bamboo.

According to Swedforest's follow-up report from 1984, the available bamboo stock in the area is well allowing for an annual cut of 42,000 tons. There is consequently no lack of bamboo that could account for the bad production results.

The Kamaphuli Complex' projected 1987-88 consumption of FRM is about 95,000 tons. They are distributed as follows:

TABLE 11: Kamaphuli Paper Complex: FRM Consumption 1987-88

SOURCE	TONS
Imported pulp	15,000
Locally purchased pulp	15,000
Wood	17,000
Bamboo from private sources	40,000
Bamboo from leased forest (RD&BE)	8,000

Contrary to the expected result of the RD&BE project, 40,000 tons of bamboo must now be purchased from private sources.

HANDLING OF FIBROUS RAW MATERIAL.

This part of the project was designed and implemented by Swedforest Consulting AB, basically during the period 1980-85. It consisted of the following main activities:

- Design and construction of a chipping station for bamboo in Kaptai. The station consists of a floating conveyor for bamboo rafts, a chipper and a chips storing and loading station.
- Design and construction of a chipping station for wood (and bamboo) in Chandragona. The station consists of feed-in conveyors, a chipper and a system of chips conveyors, feeders and loading ramps.
- Procurement of four Scania trucks for transport of chips from Kaptai to Chandragona.
- Procurement of three Volvo BM loaders for loading of chips.
- Rehabilitation of an old ropeway as stand-by for lifting of bamboo rafts over the Kaptai Dam.



The chipping station at Kaptai is functioning well, but used only at half capacity due to shortage of timber. Photo by Karlis Goppers/SIDA Photo Archives.

The contract was in this case directly between SIDA and Swedforest. The implementation was supervised by a resident engineer from Swedforest. BCIC/KPM had no direct project management role and no special project organization was established besides the one supervised by Swedforest. As the resident engineer worked from the office of the KPM forestry division, a functioning, informal co-ordination could be established. Engineering and equipment specification were handled by Teknikus Engineering AB in Sweden, a subsidiary of Swedforest.

The project suffered from delays, partly due to slow custom clearance, cumbersome tendering routines and late deliveries. It seems that the delays were not causing production losses, as KPM was not able to receive the chips, due to delays in the BMR project.

The handling systems were started up in the beginning of 1985, and have been in production since July 1985. The present technical status of the equipment was assessed by the mission. The plant in Kaptai was kept in good condition and seemed to be competently maintained. It must be noted, however, that the system has been running on half of its rated capacity, and consequently ought to be in good condition after only two years of service.

The plant in Chandragona gave a more worn-down impression, and needed more maintenance than it had received. During the mission's visit some parts were closed down for modification and rebuilding, aimed at strengthening structures and improving the flow of production.

Both plants had been operating satisfactorily according to statements from managers and supervisors. The quality of the chips had improved as expected, and the availability of the equipment had been acceptable.

ANALYSIS AND CONCLUSION

The primary objective of the project was to supply KPM with fibrous raw material from leased forests in a quantity up to 42,000 tons a year. The cost should be comparable to the cost of bamboo on the private market.

It must be concluded that the bamboo extraction project has totally failed to meet its objective. Not only has a decreasing tonnage been delivered, but the costs are also much in excess of what was expected. The production is now about 20% of designed capacity and the costs are twice the costs for bamboo on the private market.

The bamboo extraction part of this project has at no time been operated as planned. The reason for the failure is that the security situation in the hill tracts puts heavy restrictions on the operation time and on the methods that can be used for bamboo extraction. The actual situation also makes it difficult to find competent supervisors and skilled workers for handling and repair of tractors, ropeways and other mechanical equipment.

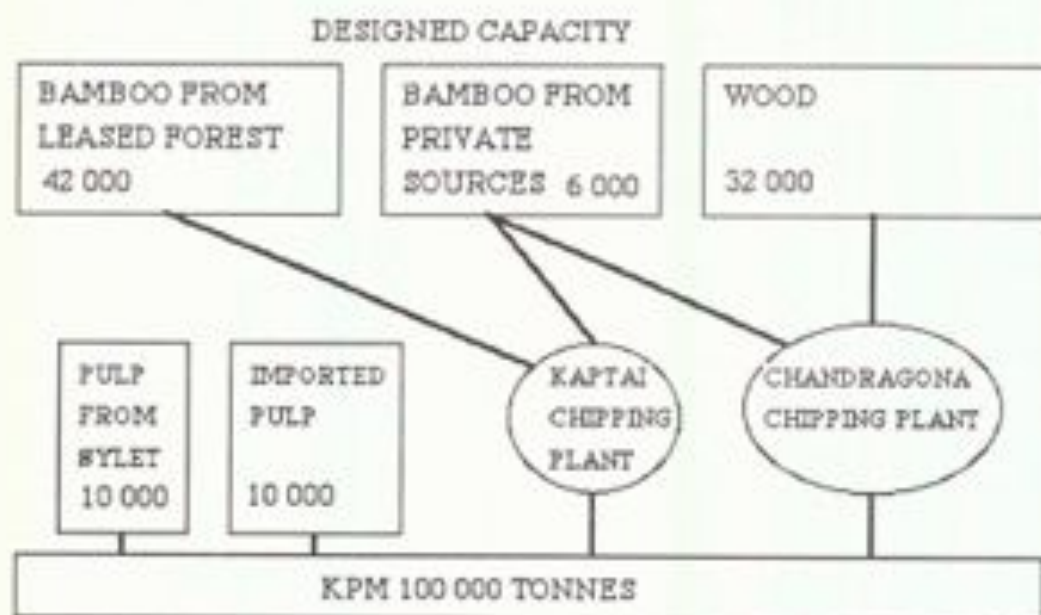
As a consequence of this situation, the chipping station in Kaptai is operating at 50% capacity due to lack of raw material. The unfortunate fact is that even this production rate is made possible only by purchasing increasing quantities of bamboo from private sources outside the RD&BE project area. Consequently, private bamboo extraction contractors can still operate in the Hill Tract area, where KPM is facing increasing difficulties. A plausible explanation is that private contractors use

only tribal workers and/or pay "protection money". It should also be noted that the lowest permitted water level in the Kaptai lake has been lowered, which creates additional production problems for the chipping station.

As the Kaptai area is not able to produce the required amount of bamboo, KPM is also purchasing from other areas, from which the bamboo is delivered to the wood yard at KPM in Chandragona. Thus bamboo has to be chipped also at the Chandragona chipping station, which was originally designed for chipping of wood. This gives capacity reductions and quality problems as a consequence.

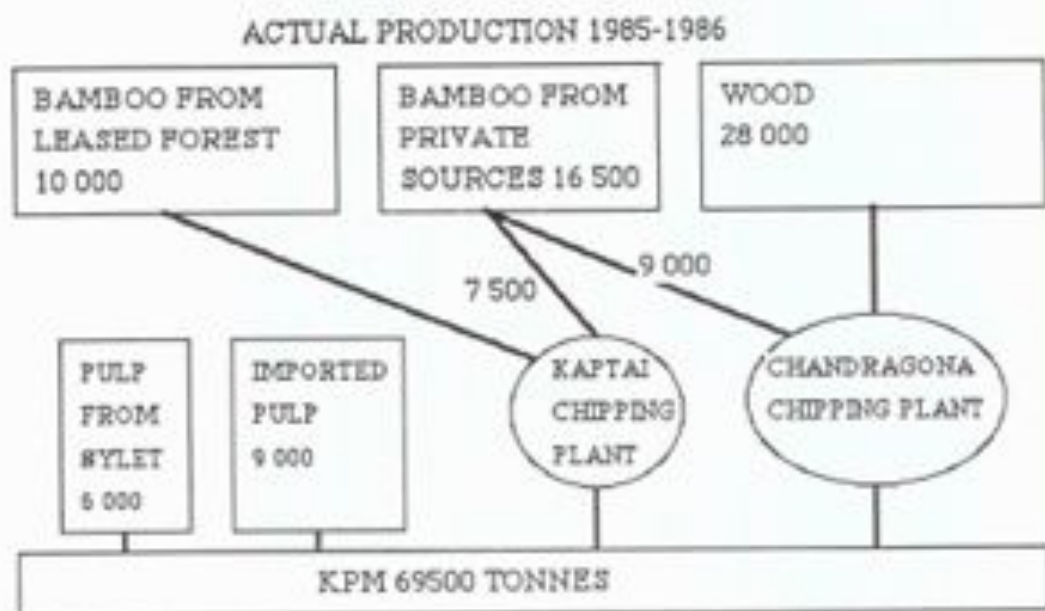
The originally designed flow of raw material compared to the present situation is shown below. First, the designed capacity is illustrated:

CHART 2: RD & BD: RAW MATERIAL FLOW



The above design should be compared to the actual situation over the last reported year, which is illustrated in the following figure:

CHART 3: RD&BE: ACTUAL RAW MATERIAL FLOW

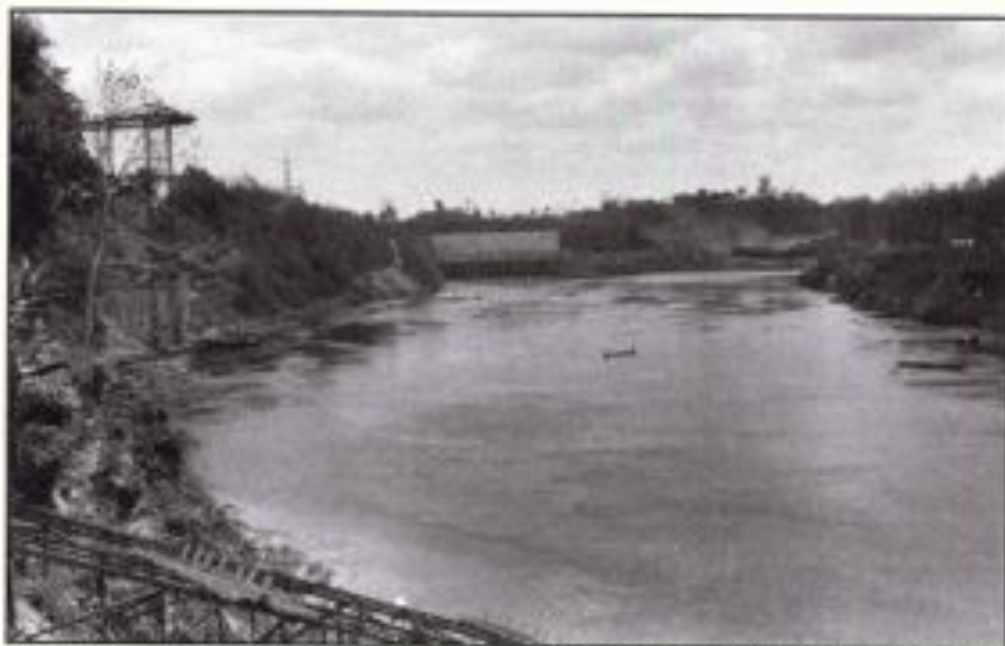


In the period from the review mission in 1977 to SIDA's withdrawal from the forestry project in 1981, it became clear that the security situation in the hill tracts would create considerable problems in the Kaptai area. At that time it was still possible to reconsider the technical solutions and the locations of the chipping stations. It is easy to be wise after the event, but doubtful investments may have been avoided, had consideration been given to the situation in due time, instead of continuing to implement the RD&BE projects as if no security problems had existed.

Consequently, when analysing the chipping and wood handling part of the project, it must be concluded that the location and technical solutions are not the best, considering the present bamboo extraction problems.

When only evaluating the technical function and the operation of the chipping and wood handling stations, the Kaptai station is functioning well, the Chandragona station acceptably. The loading and transport vehicles are showing sufficient availability.

It must be noted that it is unlikely that the present availability will be sustained, unless the maintenance functions are improved and more time and resources allocated to service and preventive maintenance.



The Kaptai hydroelectric dam. On the left is an old rope lift used as stand-by for lifting bamboo rafts over the dam. Photo by Karlis Goppers/SIDA Photo Archives.

EXPENDITURE

It has been impossible to assess the reliability of the presented figures. This fact is due to several reasons, as follows:

- 1) As part of the forestry sector support, the RD&BE project has surely had many costs shared with the other projects in the sector. Such common costs are not specified.
- 2) Follow-up lists prepared by SIDA's Accounting Division do not cover the whole implementation period; the RD&BE project's costs are only partially shown.
- 3) For the time after June, 1981, import support funds were made available for financing the RD&BE project. This makes it very difficult to identify the costs.

The table below is based on Swedforest AB's own accounts for the implementation period up to June, 1981. For the time beyond that date, the table is based upon invoices paid by SIDA's Agriculture Division to Swedforest AB, under import support funds.

It has not been possible to establish which amount has been provided by BCIC/KPM to this project.

TABLE 12: RO&BE: Estimated Project Cost

	MSEK	YEAR
Consultancy fees	16	1976-81
Consultancy fees	5	1981-85
Equipment	47 ²	1976-85

Even without the estimate of the Bangladeshi input it is obvious that the present situation makes any financial or economic justification of the investment impossible (cf. Annex 6)

¹ Discussions with officers within the forestry department of KPM and the delivery statistics for FRM

² The figure of 47 MSEK probably includes costs for forestry projects which were later abandoned. The team has been working with an estimate of 20 MSEK for the RD & BE Project only. This is the figure used in section 2.1 of the report.

CHAPTER 8

Khulna Newsprint mill: The BMR project

Background

In 1982, the Khulna Newsprint Mill case was again brought up, after some period of no Swedish involvement since the first discussions. Bangladesh asked SIDA if there was any possibility of allocating funds for a rehabilitation programme for the mill. This rehabilitation programme, decided on in 1978 but not launched until 1980, was mainly financed by Canada, with some funds being raised from the Federal Republic of Germany and the United Kingdom. The Swedish contribution was meant to cover a minor part of the rehabilitation programme.

The total programme is reported to have cost 4490 Lac Taka (449 MTK) of which the foreign exchange part was 2760 Lac Taka. The Swedish contribution amounted to 640 Lac Taka, or 23% of the total foreign contribution.

PROJECT INPUT

The BMR project at KNM is based on a study by F.L.C Reeds and Associates, financed by Canadian support. This study was carried out in close cooperation with the mill's technical staff and with experts from BCIC.

The study identified machinery in need of renovation and defined bottle-necks in the production process, where investments would allow for a more balanced and efficient flow of production. BCIC and KNM further developed the findings and compiled a project plan for a comprehensive rehabilitation, the BMR project.

The general objective of the project was to increase the production level from 30,000 tons of paper annually to the designed capacity of 48,000 tons and to ensure that such production level could be sustained. Another principal objective was to achieve quality improvements and reduction of production costs.

In the project plan, these objectives were formulated as follow:

- a) To restore the production level of the mill to 48,000 tons/year

- b) To improve operational efficiency of equipment and machinery
- c) To sustain a higher production level without any major replacement for another 15 years
- d) To reduce the cost of production by:
 - reducing import of costly long fibre chemical pulp
 - energy savings
- e) To save foreign exchange by lesser use of imported pulp
- f) To raise quality (basis wt., strength and runability) to international standard.

Project management and implementation was handled by the KNM staff and BCIC's implementation division. The project was managed without any foreign main contractor/consultant. However, several of the suppliers of equipment were requested to assist as subcontractors, both at the design and at the erection stage.

The main part of the BMR activities were aimed at increasing the productivity of the paper machines and the production stability of the steam and power plant.

The major works carried out in the project were:

- Renovation of boiler 1 and 2
- Overhaul of turbines 2 and 3
- Restoration of turbine 1
- Installation of a new electric sub-station
- Rebuilding of drive at paper machines 1 and 3
- Modernization of paper machine 2
- Renovation of paper machines 1 and 3
- Installation of 5 additional autoclaves with auxiliary systems for treatment of wood
- Installation of a new roll grinding machine

Costs

According to a project follow-up report compiled at Khulna, the total project costs were distributed as follows:

TABLE 13: KNM Project Costs

Taka million	LOCAL CURRENCY	FOREIGN EXCHANGE
Construction work:		
• buildings	3,2	-
• machine foundations	2,8	-
• water intake channel	2,2	-
• others	3,8	-
Machinery		
• local	20,3	-
• imported	-	273,1
• duty, tax, transportation	46,0	-
Other costs		
• installation and training	22,6	2,9
• interest	71,7	-
• contingency	0,4	-
Sub total	173	276
TOTAL	449	

THE SWEDISH CONTRIBUTION

Modernization of paper machine no. 2 was the principal work financed by SIDA funds. Some Swedish funds were also used for renovation of paper machine no. 1.

The paper machine no. 2 was designed with an old fashioned wet end, with gravity type head box and open draws. For this reason, the machine could not produce newsprint at the designed speed of 1,200 feet/min. Even at the actual running speed of 800 feet/min., the frequency of paper breaks was high and the productivity consequently low.

For this reason, a modernization of the wet end of paper machine no. 2 was expected to achieve a considerable improvement of the annual output.

In the beginning of 1982, ERD requested financing from SIDA, aimed at modernization of paper machine no. 2 in Khulna. The request was approved and a tender for the rebuilding of the wet end floated. BCIC received bids from two Swedish suppliers. At this stage, some misunderstandings occurred over the scope of the tender and over the routines for tender evaluation. This resulted in a re-tender. As KMW was the only firm to bid in this second tender, that firm was contracted to carry out the assignment. The contract was signed in March 1983.

The contract covered the following designs, deliveries and erections:

1. Installation of a new pressurized head-box
2. Closing the draw by installation of a suction pick-up system
3. Rearranging and modernizing the press part
4. Rearranging a chapter of the drier part
5. Replacing auxiliary equipment such as pumps, felt cleaners etc.

6. Modernizing of the electrical drive system.

The rebuilding was handled as a sub-project within the BMR project and was carried out during a period of 14 weeks, during which the paper machine was closed down for 11 weeks. During this period, KMW had an erection engineer at site. For shorter periods, he was assisted by other specialists from KMW.

Apart from this modernization project, Swedish project funds had also been used to purchase replacement parts, mostly pumps and rolls for paper machines no. 1 and no. 2.



Khulna Newsprint Mill. Most barking is done by hand. Photo by Karlis Goppers/SIDA Photo Archives.

Costs

It is appropriate to mention that the documentation in SIDA's files of this project is very scarce. The reason being that the allocation was made under import support, which implies that a very limited project analysis and no project accounting was required.

The cost figures presented below are extracted from a project follow-up report compiled by the BMR project leader in Khulna. It has not been possible to have these figures confirmed through SIDA's accounts.

TABLE 14: KNM Procurement under SIDA Grant

Item	Taka
Rebuilding of wet-end paper machine 2	40,074,565
Replacement of centrifugal pumps	2,500,937
Replacement of rolls paper machine 1-2	14,912,569
Replacement of calander stacks 1-2	6,501,177
TOTAL	63,989,248

During the period 1980-1983, the amount of 64 MTK was equivalent to about 19 MSEK.

PROJECT OBJECTIVES

As the Swedish documentation regarding this project is scarce, it is not possible to find any explicitly formulated goals for the Swedish contribution.

Considering that there was an ongoing BMR programme funded mainly by CIDA, it seems fair to affirm that the Swedish objectives were implicit. In this case, the main reason for support would have been to improve indirectly the economic situation in the country, as output and export were expected to increase through the modernization of KNM, promoting economic growth in the long run.

Evidence supporting that assumption derives from a memorandum written by the SIDA office in Dhaka, which is probably the final document concerning the Swedish commitments to KNM. This memorandum not only certifies that KNM has been exporting its products to India and some neighbouring countries since 1984, but also that the output of good quality newsprint has been increased. Accordingly, there seems to be some evidence to assume that the above-mentioned implicit goal has been achieved.

PERFORMANCE

As the Swedish contribution must be regarded as a part of the BMR project, an analysis of the achieved results of the whole project will serve also as an indication of the outcome of the Swedish contribution.

From test runs and from the mill's production reports the following results may be reported.

Production capacity

In the year of 1984-1985, the actual production was 50,851 tons of paper. In the year of 1985-1986, the production amounted to 51,100 tons.

Cost reduction

After implementation of the BMR, the share of imported pulp in the FRM has decreased from 18-25% to 10-13%. This represents a considerable cost reduction.

Due to a higher productivity, the total power consumption per ton of paper has decreased with about 500 kWh.

Quality improvement

Expansion of the plant for chemical pretreatment of the wood, by adding five autoclaves, has contributed to improving the average quality of the ground wood pulp. Both breaking length and burst factor (paper's strength) has improved and the mill can now run a newsprint paper of international standard.



Khalna Newsprint Mill: Renovation of boilers was part of the rehabilitation program. Photo by Karlis Goppers/SIDA Photo Archives.

ANALYSIS AND CONCLUSION

From the mill's production results described above, we must conclude that the BMR project has achieved its technical objectives well. In discussions with the mill's management and with senior staff within BCIC, the mission noted statements of unreserved satisfaction over the result of the project.

However, a major qualification was expressed concerning the mill's economic result. This result is very unsatisfactory, due to the domestic price of newsprint. The mill is beginning to improve on this unsatisfactory price structure by exporting newsprint of international standard to a higher price than what can be charged domestically.

From a table showing annual production and financial result, we may conclude that the capital costs of the BMR project had a heavy negative impact on the financial returns.

TABLE 15: KNM Production and Result

Year	PRODUCTION ton/year	PROFIT/LOSS MTK
1978-1979	37,222	- 9,67
1979-1980	41,270	- 21,20
1980-1981	34,164	- 13,60
1981-1982	44,004	+ 6,40
1982-1983	31,202	+ 4,07
1983-1984	37,764	+ 11,68
1985-1986	55,100	- 56,00

The year of 1985-1986 was the first year when the capital costs for the BMR was charged. A considerable increase in wages and salaries was also introduced that year.

The financial and economic justification of this project was worked out at KNM. As is shown in Annex 6 the project may be justified both financially and economically (in a limited sense) when the production increase is assumed to be sustained for more than five years. Under the assumption of a sustainability of five years only, the justification becomes more questionable. The mission concludes that the project may be just barely economically justifiable, while the financial returns may be negative.

The implementation of the Swedish part of the project was delayed by a dispute about the scope of KMW's contract. However, the dispute was solved in an amicable way before the delay had caused serious problems. Apart from this delay, the rebuilding of the wet end of paper machine no. 2 went according to plan and budget.

It must be concluded that the Swedish deliveries were handled in a professional way and that erection and commissioning were in general satisfactorily performed.

CHAPTER 9

Project management, Accounting, Sustainability, Environmental aspects and Future prospects for the paper industry in Bangladesh

As a result of the funding from import support the BMR at KPM was subject to very little follow-up from the local SIDA office during the first three years of implementation. As has been noted in chapter 4 this was an explicit policy on the part of SIDA. The project was for policy reasons to be the sole responsibility of BCIC.

As a consequence of this, several indications that the project was running badly were not noted or acted upon. Complaints from the Swedish consultant were ignored.

A similar management deficiency was that no accounting system, that allowed for budget follow-ups was operated. Not even the actual size of disbursements could be sufficiently checked by SIDA.

The above and other effects of the import support system of the 1970's have been observed by SIDA also in other projects. This is part of general SIDA history by now, as SIDA has made major changes of its policy in this respect.

CONTRACT

The Celpap/BCIC contract was voluminous and difficult to interpret, which caused different interpretations and consequently strained relations between the contracting parties.

Very detailed technical and economic objectives were specified for the project. When the scope of the project was changed, no subsequent changes were made in those specifications. This caused an unclear situation, especially when test-runs should have been evaluated.

The contract gave little advice as to how the implementation process should be monitored, as to the format of progress reporting as well as to the organization of a project principal. Not until 1982, on SIDA's initiative, a supervisory board was formed to be the project principal.

It may be that the use of a general model contract, without sufficient adjustment to the actual situation, in combination with lack of experience are the major reasons for the problems caused by the contract itself.

LOCAL ADMINISTRATIVE ROUTINES

Centralized decision routines and a strict category split-up between the different types of jobs made coordination and managing of the project's activities very complicated.

The purchasing procedure for government-owned industrial operations was extremely slow and cumbersome. It seems as if the project has suffered considerable problems and costs due to, not only the slow procedures, but also the lack of routines for co-ordination between the project management and the purchasing organization.

ERD is allocating the international support funds. It seems that the KPM management and the project manager had very little knowledge and no influence on the routines and schedules for allocation of funds. This caused repeated discrepancies between available and needed funding, with delays, price escalations and additional financial costs as a result.

The creation, in 1984, of an emergency account in Sweden for purchases of spares and minor equipment was a substantial improvement in combating delays.

The custom clearance procedures were complex and rigid. The project ran into problems regarding how tariffs and classifications of imported equipment should be applied. This caused exceptional delays in the clearance procedure, that lasted an average six months. This problem can only be attributed to lack of competence of the offices responsible for clearance routines.

PROJECT ORGANIZATION

The KPM project organization was kept at a small scale. The idea behind this was that necessary personnel and other resources should be allocated when needed from KPM's permanent organization.

As the production management was reluctant to release skilled personnel, matters of this type were referred to the general manager and his own priority assessments. The mill had a succession of four general managers during the project period. The project manager did not have a sufficiently senior position in the organization to compete with the production management for scarce resources.

With the split-up of tasks and responsibilities between Celpap and KPM, a strong co-ordination and reporting function became necessary. However, the two project organizations had separate reporting routines and weak co-ordination routines. Only from 1982 an improvement of this function took place, as the supervisory board was established. On instruction from this board, a considerable reinforcement of the co-ordination activities between Celpap and KPM took place.



In KPM a certain reduction of pollution has been achieved, but environmental protection is still far from satisfactory. Photo by Karlis Goppers/SIDA Photo Archives.

PROJECT ACCOUNTING AND REPORTING

As has already been noted the project accounts and progress reports within the SIDA organization do not contain enough information. This goes not only for physical progress of the projects or financial results, but also for such basic donor information as its own disbursements.

The possible explanations for this have also been indicated. Under the use of the former import support routines no project progress reporting was necessary. Even specific reporting of disbursements was not made on a "project" basis. This accounts for the difficulties in estimating the project costs from SIDA sources. As far as RD&BD is concerned, another difficulty arises: the lack of strict separation between accounts for the former forestry projects and the continued support to RD&BD.

Fortunately, the accounting at BCIC has been a lot better. The estimates in this report are most of the time based on scanty SIDA data and then double-checked by BCIC data. Furthermore, the accounts at firm level have been of a high standard, thus providing another way of estimation. Progress reporting in technical and physical terms has also been well done at firm level. In some cases even financial and economic analyses of the projects have been carried out (cf. Annex 3).

SUSTAINABILITY

It is a problem in developing countries to achieve a lasting effect of industrial investments or rehabilitations. There is always a pressure towards allocating available funds to investments in production capacity or extended infrastructure. The share being allocated to maintenance and parts supply as well as to training is often far from adequate.

When rehabilitation investments such as BMR's are implemented, it is of great value if the problem of sustainability is addressed right from the beginning as one of the major parts of the rehabilitation programme. In such a way the balance in the resource allocation would be improved. Unfortunately, it often seems to be more interesting for all parties, (owner, consultant and equipment suppliers) to concentrate on equipment and production, at the expense of sustainability.

Also in cases studied in this report such functions as training, preventive maintenance, spare parts availability, spare parts rehabilitation, condition monitoring and fault analyzing routines were given a comparatively light touch. The management both at KPM and KNM expressed confidence when interviewed about their assessment of the mill's possibilities to retain the achieved improvements for the coming five years. The mission feels less confident in this respect, unless further action is taken and resources allocated.

ENVIRONMENTAL ASPECTS

No specific investments were undertaken in order to reduce emissions harmful to the environment. However, by several of the improvements undertaken in the KPM, savings were achieved by reducing losses to air and water of chemicals and fibres. In this way, a certain reduction of the mill's pollution load on the environment has been achieved. No actual tests or measurement of the mill's discharges to the river and the air are available. From visual inspection of the effluent, it may be concluded that the situation still is very far from satisfactory in this respect.

As no data exist, it is not possible to verify the improvement achieved by the BMR at KPM.

A "guestimate" based on the consumption figures before and after the BMR would give:

- fibre losses have improved about 700 ton/year
- sulphur losses have improved about 200 ton/year

Concerning the RD&BE project, no information is available for evaluating the impact, if any, of the new semi-mechanical methods for bamboo extraction and transport on the environment.

The BMR at KNM did not include investments to cut fibre losses. The reason being, according to the mill management, that by re-circulation within the mill's water system the fibre losses were well under control. According to information, an independent consultant a few years ago checked the mill's effluent and reported that it contained a low degree of pollution, "close to European standard". The mission had the opportunity to check the effluent being pumped into the river. In our opinion, a European pollution control inspector should have quite a few objections, was he to be confronted with a similar effluent.

FUTURE PROSPECTS OF THE PULP AND PAPER INDUSTRY

It has been concluded that the industry in 1986 was operating at a cost level above the international price level, with the exception of newsprint, which was sold at a profit to neighbouring countries. Simultaneously, the government price regulations make it practically impossible to sell at a reasonable level of profit.

In fact, from 1969/70 to 1985/86 KPM has sold its paper at a price above total cost only on two occasions: in 1969/70 and in 1985/86. The government does not only regulate prices of the final products, but may also intervene in setting salaries and wages of employees, as was seen in 1985.

The pulp and paper industry is, in sum, producing under the protection of a ban on imports of paper at costs which are not internationally competitive. Due to political decisions to support education and mass media by keeping domestic prices down, the protected industry is still not making profits.

It seems probable that the government, by lifting the import ban, would be able to reduce the costs of education and the costs for mass media, while at the same time exposing the paper industry to an international competition that it would probably not survive. Approximately 10,000 people would in that case lose their jobs and an important part of the regional development of CHT would be lost.

It would seem that foreign aid given in support of the pulp and paper industry during the 1980s has in fact been a support to mass media, education and regional employment policies.

The above comments seem to suggest a certain lack of coordination between education policy, mass media policy, employment policy, on the one hand, and allocation of foreign grants and credits, on the other hand.

The high degree of political regulation of the conditions for the pulp and paper industry, in turn, implies that those same conditions may change drastically—or remain the same—during the 1990s.

Given that the conditions remain the same in the coming decade—i.e. no imports of paper and administered domestic prices as well as wages are being used to subsidize education, mass media and the employees of the pulp and paper industry—we are facing a situation where no financial means for investments are generated by the industry itself. Practically no foreign exchange will be generated either.

It is foreseeable that the industry will need to invest considerable amounts of foreign exchange during the coming ten years only to keep up its present level of production and productivity.

The single largest issue of a very complex nature to consider when it comes to future costs of production is the availability of FRM. This resource is becoming more and more scarce. Most of the FRM has alternative uses, but is being procured by the mills at production cost. A major externality of the industry is its impact on the availability of, for example, bamboo and firewood, being used for construction purposes and as energy sources. The opportunity cost of FRM is ultimately the prospect of a general scarcity of those materials for other purposes. Whatever values society should assign to each ton of FRM, it is safe to assume that the pulp and paper industry will face rising prices for its raw material, much more so than what may be expected for the international price of pulp.

The foreign exchange presently earned by the industry (by export of newsprint) will no longer be forthcoming—at present capacity—when domestic demand has increased so as to require the total output in order to be met. At present forecasts this will occur in around five years time from now.

Assuming that no major changes will take place in the present condition, it looks, therefore, as if the possible future for the pulp and paper industry in Bangladesh will be to try to sustain what has been achieved in production capacity, productivity and know-how. This must be done by gradual and coordinated replacement investments, continuous training and improved maintenance.

CHAPTER 10

Impact on women

According to existing documents, there is no evidence that integration of women was ever perceived as a goal of either the BMR programmes or the RD&BE project. This goes for both the Bangladeshi and the Swedish side. In the case of the forestry project, it was nevertheless stated that:

"jobs suitable for women will through the proposed forestry programme be created primarily in the plantations and nurseries. Due to the situation of women in muslim countries, it is however doubtful if women will be in a position to avail themselves of job opportunities that will be provided".

We may note in this instance that the Chittagong Hill Tracts are populated by Buddhist minorities, where women traditionally enjoy a freer position than women do in other parts of muslim Bangladesh. Women are already widely employed in various types of forestry and plantation work in the CHT.

Nevertheless, it seems, especially over the last few years, as if the women issue has more and more been implicitly taken as a desirable side objective of any development project. This implicit goal would naturally be stronger for projects in other sectors, such as education and health, but, at least in the case of Swedish aid to Bangladesh, it is also present in sectors such as industry. This is natural, since the awareness of integrating women into the country's development has strongly increased over the last few years.

WOMEN LABOUR IN KPM

The performance of KPM with respect to including women in the labour force is indeed modest. For 1985-1987, we have the following picture:

TABLE 16: KPM: Participation of women in work force
(Total work force is about 3,000 people)

	Paper Mill		RD & BD		Rayon Complex		TOTAL	
	1985	1987	1985	1987	1985	1987	1985	1987
Officers	1	1	2	?	0	0	3	4
General staff	48	54	0	2	3	3	51	59
Workers	0	0	0	0	95	100	95	100
TOTAL	49	55	2	5	98	103	149	163

So KPM still has a long way to go in order to reach the target set by the government in 1976, by which 10% of all jobs should be reserved for women. Nor has KPM anything to offer regarding special facilities created for women in order to enable them to enter the work force, except that one toilet is kept separate for women. There is no separate canteen for women.

WOMEN LABOUR IN KNM

In KNM, the picture is not better than in KPM

TABLE 17: KNM: Participation of women in work force

	1985	1987	TOTAL WORK FORCE 1987
Officers	0	12	165
General staff	0	16	587
Workers	0	0	1,539
TOTAL	0	28	2,291

KNM seems to be slightly better off in that it offers separate doctors as well as a maternity ward in the company hospital. KNM also maintains a separate chapter for girls in the company financed secondary school, provides special transport facilities for women, has a ladies' recreation club as well as a "training production centre" for the benefit of women employees and grown-up daughters of employees. In addition to these material facilities, women are also benefitting from 12 weeks of leave with full pay for maternity and childbirth. This benefit is valid for a maximum of two children.

The evaluation mission was not in a position to verify on its own to what extent the above-mentioned facilities were operational and to what extent they were actively used by women employees.

CONCLUSIONS

The picture that emerges is indeed very negative, but we may note the following explanations:

1. In this type of industry, we cannot, not even in countries far more developed than Bangladesh, expect a rapid increase of women's employment. KPM's general manager told the mission that the company simply does not receive enough applications from women. Even if the company wanted to, it could not attain the 10% employment target for women. Others have claimed that any woman applying for a job with KPM will be hired. We have no way of judging whether this is a realistic statement.

2. As was mentioned above, impact on women was never stated as an objective of the project.

3. We may realize the difficulties of integrating women into the project in considering the general, cultural, religious and economic characteristics of Bangladesh. It has been aptly described, in a document by DCO-Dhaka:¹

"Women, although they constitute almost half of the population of Bangladesh, have hardly been considered as active contributors towards the growth and development of the country... Social customs and traditions, illiteracy, limited facilities of technical and vocational training and lack of employment opportunities have hampered the total integration of women in the mainstream of development activities... The majority of women are rural based and outside the development mainstream. They play a major role in traditional household activities but their contribution has mostly remained unaccounted for. Their incomes are only "additional incomes". Women are never considered "the family bread winners". They are the invisible labour force relegated primarily to play the role of docile daughter, a compliant wife and a dependent mother. All these roles are inscribed in the strong cultural, mythological and religious believes upheld in the country."

WOMEN IN OTHER SIDA-SUPPORTED PROJECTS

Comparing the projects evaluated here with other current SIDA-supported projects in Bangladesh, we may note that SIDA has recently put a very strong emphasis on the women aspect in virtually all of its projects:

- the Intensive Rural Works Programme (IRWP) has a great potential of employing women in road maintenance work and had by 1984-1985 already provided 57.000 women with direct employment
- the Grameen Bank Loan Scheme has women as its specific target and has so far extend loans to 112.000 landless women
- the Early Implementation Project (EIP) which deals inter alia with dam constructions for disaster prevention, is not considered to offer much potential for women participation, but women have been identified as a target group needing special attention
- in the four different health projects currently funded by SIDA the participation of and the effect on women is considerable
- finally, in the educational sector, Sweden supports a vocational training programme as well as a primary education programme; in both, the potential for benefitting women is considered good, although progress has not been very rapid so far.

From this survey, we may conclude that the very choice of projects included in the development cooperation between Sweden and Bangladesh is today such as to be more conducive to benefit women than was the case, say, ten years ago.

WOMEN EMPLOYMENT IN BANGLADESHI INDUSTRY

If we finally observe the change in women employment and emancipation in general in Bangladesh, we can conclude that some substantial progress has been made over the past ten years. Industrial employment for women has gone up in the last few years, especially in the textile industry during the 1980s. The textile industry today employs exclusively women workers and this has lead observers to conclude that in the final analysis, it is not only religious or cultural motives that prevent Bangladeshi women to join the labour force. Judging from the complete readiness showed by industrial entrepreneurs to hire women and by the women's willingness to respond in large numbers, we would have to conclude that the long-term problem of integrating and emancipating Bangladeshi women into the industrial and economic sphere is also economic, not only religious.

The change in women and men employment for various economic sectors from 1974 to 1984 can be seen in the table below:



Housing and other facilities for workers are well developed at KPM, but few benefits go to women. Photo by Karlis Goppers/SIDA Photo Archives.

TABLE 18: Bangladesh: Total employment (Thousands)

	WOMEN		MEN	
	1974	1984	1974	1984
Agriculture	610	213	15,213	16,017
Mining	-	-	2	45
Manufacturing	36	684	910	1,765
Electricity, gas, water	-	-	7	67
Construction	-	9	32	476
Wholesale trade	9	133	762	3,019
Transport, storage	2	10	318	1,073
Finance	1	2	55	133
Social service	182	213	1,878	2,060
NEL	n.a.	1,123	n.a.	533
TOTAL	840	2,392	19,177	29,269

The figures show that women employment has increased almost threefold (= 300%), while the employment figure for men has gone up by about 25%.

¹ Shirin Perveen, SIDA-DCO, DACCA, Memorandum, 1987-02-08

CHAPTER 11

Impact on Tribal minorities

The tribal minorities living in the CHT were explicitly and clearly defined as perhaps the most important target group of the RD&BE project, but not at all mentioned with respect to BMR at KPM.

THE TRIBAL PEOPLE

The CHT being the least densely populated district in Bangladesh, it counts 114 inhabitants/square mile. The district's total population of 580,000 people represents only 0,6% of the national population of approximately 90 million people. The CHT is inhabited by people who are ethnically different from the rest of the Bangladeshi population. The hill people are made up of several tribes, of which the largest groups are the Chakmas, the Marmas and the Mrus. The Chakmas are the most numerous, counting around 200,000 people. Most of the tribespeople are Buddhists.

The great majority of the people in the hill tracts depend on subsistence agriculture. They are involved in shifting cultivation, locally called "jhuming". This has been practiced for centuries with little effect on soil fertility. About half of the Chakmas developed a mainly settled way of life based upon agriculture in the Kamaphuli Valley.

In the early 1960s, a dam was built across the Kamaphuli river, near the village of Kaptai, well into the tribal territory of the hill tracts. Little thought was given to how the original inhabitants of the area would be affected.

When the dam (created by an USAID-funded hydro-electric project) was completed and commissioned, a lake of 253 square miles was formed, which inundated 50,000 acres of settled and arable land. More than 10,000 families or about 77,000 persons were displaced, of whom 90% were Chakmas. This displacement disturbed the cyclical equilibrium needed for shifting cultivation. As a result, it began to be practiced also inside the reserves. Furthermore, heavy population pressure in recent years, due to a great extent to migration, contributed to shorten the cycling of cultivation, also affecting the balance in the system.

The hill tracts have for centuries been remote and isolated from daily contact with the outside world. Under British rule the whole region was administered as a protected area and the tribes as protected people. This protection disappeared gradually and was totally abolished after the independence of Bangladesh in 1971.

The factors presented above help to explain the growing hostility between the tribal people and the new settlers. Guerrilla activities blazed up in the 1970's, involving mainly the Chakmas. These issues proved to be of crucial importance for the whole sector, as discussed below.

SWEDEN'S OBJECTIVES WITH RESPECT TO TRIBAL MINORITIES IN THE RD&BE PROJECT

The support memorandum (1974) states that "the local tribal population should be given priority to employment". It is noteworthy that the question of the tribal minorities is not even mentioned in the first project document, the one preceding the support memorandum, and called idea memorandum.

The support memorandum shows that SIDA was aware that the objective of benefitting the tribal people with employment opportunities may not be an altogether easy task. It states that:

"A condition for the tribal groups living in the Chittagong Hill Tracts to be benefitted by the project is obviously that workers will not be recruited from other parts of the country. A tendency of discrimination of minority groups has been evident on earlier occasions when there was competition for job opportunities... Therefore an agreement for the support to these forestry projects should perhaps contain a clause with respect to preference for the local population for jobs and for training... Furthermore, an evaluation of the project's socio-economic effect for the local population should perhaps be prescribed by the agreement. Before the agreement is signed one should perhaps also ascertain that the entire programme has been approved by the Bangladeshi National Economic Council (NEC)."

OUTCOME

However, this intention was never fully pursued by SIDA and no special clause regarding employment opportunities for the Chakmas was ever included in any written agreement between Sweden and Bangladesh. The point was only transmitted orally to the Bangladeshi side. Studying the documents today, this seems somewhat surprising in light of the fact that SIDA/DCO in Dhaka¹ reported to SIDA

headquarters that it had discussed the minority employment question with the Bangladeshi authorities and that the latter had approved the idea of including a clause about employment as well as a clause about an evaluation of the project's socio-economic impact. The latter clause was, however, included in the project agreement.



Map of KPM's logging district in the Chittagong Hill Tracts: Logging operations are often in conflict with the interests of the buddhist minorities that live there. Photo by Karlis Goppers/SIDA Photo Archives.

After a few years, when it became apparent that the employment target for the Buddhist minority was not being achieved, the implementing consulting firm, Swedforest² argued against the continuation of the forestry programme in its original form. Instead, the consultant proposed the introduction of community forestry type projects, which would involve more directly the local minority groups in the development process.

Given that Sweden's important objective regarding employment creation for local minorities was apparently never transmitted to the Bangladeshi government in any formal way, we can therefore not rule out that the Bangladeshi authorities never really realized the seriousness of this objective posed by Sweden. This in itself may have contributed to the lack of success in attaining the objective. This is a point regarding which SIDA, in the view of the evaluation mission, merits blame for careless or inadequate project planning.

The lack of success in attaining the employment target for the local minorities is quite evident from the following data regarding employment in the three forestry activities.

TABLE 19: Employment of Tribal Minorities in SIDA-supported Projects

	KPM		RD&BE		KRC	
	1985	1987	1985	1987	1985	1987
Officers	1	1	-	-	1	1
Other staff	48	42	24	28	6	6
Workers	17	19	*2,015	*2,041	70	75
Total minorities	66	62	2,039	2,069	77	82
Total employment	3,500		**4,786		3,000	

* Seasonal employment; ** out of which 3,986 is seasonal employment

We can thus conclude that only in the RD&BE operation, which refers mostly to employment in the forestry area, has there been any substantial employment of minority groups. But even there, less than half of the employees have been from tribal minorities. Striking is also the total lack of performance in the paper and pulp mill and in the rayon mill, where only less than two per cent and less than three per cent, respectively, of the employment has been accorded to the tribal minority.

It is thus obvious beyond any doubt that the jobs have gone to the lowland Bangladeshis. Whether these were brought in from outside of the Chittagong Hill Tracts or whether they were recruited locally on the spot, the Evaluation Mission has no way of determining.

SWEDEN'S PULL-OUT FROM CHITTAGONG HILL TRACTS IN 1980

In this context, it is interesting to raise the question whether the fact that, in 1980 Sweden discontinued its support to three out of the four components of the forestry programme, had any influence on the results obtained in the remaining component - i.e. the RD&BE programme, as well as in the KPM rehabilitation programme. In other words, did the withdrawal of Sweden's support, and thereby also most of the Swedish presence in terms of personnel in the CHT, negatively influence the attainment of the objective of employment creation for the Chakmas?

It would be beyond the scope of the present evaluation to try to fully deal with this question. We may however note that the DCO at the time strongly opposed a Swedish pull-out on the grounds that it would further jeopardize the situation of the minorities, and thereby make it even more difficult to attain the Swedish objective of creating as much employment opportunities as possible for the Buddhist minority. DCO argued that:³

"The Bangladeshi government shows signs of an increased positive attitude to the development of the tribal minorities. And as we have argued on numerous earlier occasions, we are of the opinion that the presence of foreigners in the Chittagong Hill Tracts in itself can be seen as a guarantee that the interests of the tribal minorities cannot, at least totally, be disregarded by the central government. Given the dialogue and influences currently carried out by some bilateral donors (Sweden, Australia) and by UNDP and the Asian development Bank, it is our view that the government is in fact ready to actively support a development which would benefit the tribal minorities, and without which the minorities would most likely gradually be pushed away and in a near future disappear as an ethnic group."

In another document⁴ it was stated that:

"Discussions during 1977 and 1978 between the DCO and the head of UNDP Office in a definite way contributed to UNDP actively acquiring an interest in the development programme in the Chittagong Hill Tracts. The UNDP chief, who together with the chief of the World Bank Office, has a great strength and influence vis-a-vis the Bangladeshi government, later demanded, and also succeeded in bringing about, that the Chittagong Hill Tracts development boards was given a substantial responsibility in the development work."

This document argues also that

"... Sweden's presence at that time in the Chittagong Hill Tracts clearly influenced also the Asian Development Bank, which was then preparing several development programmes in the Chittagong Hill Tracts, to design their projects in a much more minority-oriented fashion than would otherwise have been the case."

The document concludes by saying that:

"This influence over the development in the CHT Sweden has today for natural reasons been lost given the decision to discontinue the forestry development cooperation with Bangladesh."

Without entering into further analyses on this issue, the evaluation mission is of the opinion that there is some evidence to support the conclusion that Sweden's curtailment of its support to the forestry programme in 1980 may have decreased the chances for the remaining project components of attaining the goal of benefitting the local tribal minorities.

¹ Letter dated 1975-10-21

² Report dated 1978-04-08

³ In a letter dated 1979-11-09 to SIDA's general Director

⁴ Dated 1980-06-27

CHAPTER 12

The security situation in the Chittagong Hill Tracts

HISTORY

The security problem in the CHT dates back to the 1960's, following the inundation of Chakma Land when the Kaptai dam was built. Ensuing migration by lowland Bengalis aggravated the situation, as the tribal people felt that the government was trying to eliminate them from the area by settling outsiders on their ancestral grounds. The process of migration into the CHT has been actively encouraged by the government. It has facilitated the migration by removing the special status and local autonomy previously enjoyed by the tribal people of CHT.

The demands raised by the tribal groups towards the Government of Bangladesh have mainly been the following:

1. the return of a special status to the CHT, which would lead to autonomy for the region.
2. removal of the Bangladeshi army
3. expulsion of the many lowland Bangladeshi settlers who were now threatening the livelihoods of the minorities.

In the beginning of the 1970s, the tribal people founded their own political party and, in 1972, an armed fraction, the Shanti Bahini, was formed. Since 1975, there is a continuing guerrilla activity as well as ensuing reprisals regularly undertaken by the Bangladeshi army.

The military reprisals are often directed towards the civilian population which the government suspects of harbouring the Shanti Bahini.

In a speech to parliament in July 1986, President Ershad declared that during the last ten years, about 1,000 civilians, including non-tribals as well as members of the armed opposition, had been killed in the conflict. In addition, 230 members of the Bangladeshi security forces have been killed. This data may be compared to a figure of approximately 6,500,

which has widely been reported to be the total casualty figure in the CHT over the past decade.

In 1983, an offer of general amnesty was issued to all who were willing to lay down arms. Up to April 1985, about 3,000 Shanti Bahini are said to have availed themselves of this amnesty. At the end of 1985 negotiations between the government and local representatives were terminated without any agreement being reached. In the spring of 1986 the government intensified its attempts to move the local tribal people into collective villages, the motive being to prevent their contacts with the Shanti Bahini guerrilla.

INTENSIFIED HOSTILITIES

In April 1986, there was an intensive upsurge in hostilities when the guerrillas attacked inter alia the army, which afterwards responded with reprisals against the civilian population. At that time, about 27,000 tribal Bangladeshis were reported to have fled into India. The Indian government reports in the spring of 1987 that, over the past 9 months, altogether 45,000 tribals have joined refugee camps in India.

Amnesty International has in several reports studied the situation in the CHT and in a report published in September 1986 stated that:

"Amnesty International believes that the security forces of Bangladesh have systematically engaged in practices in the CHT which violate fundamental human rights, including the right to life, the right to security of person and the right to freedom from arbitrary arrest and detention".

It further states that:

"The context in which human rights violations of concern to Amnesty International occur in other parts of Bangladesh clearly differs from the situation in the CHT, w.r.t the nature and intensity of such violations" and "The organization believes that successive Bangladeshi governments have failed to take adequate measures to combat torture... On no occasion has the Bangladeshi government established an inquiry into complaints of the unlawful and arbitrary killings of unarmed tribal people in the CHT."

In its repression, the Bangladeshi security forces have also used paramilitary and civilian groups. Amnesty International states that:

"The actions of some of the non-tribal people in the CHT have been undertaken at the instigation of, or have been condoned by, the responsible law enforcement personnel".



The Mukti Bahini guerrillas. Since 1975 there is continuing guerilla activity as well as reprisals regularly undertaken by the Bangladeshi army. Photo by Lars Åström/SIDA Photo Archives.

GOVERNMENT POLICIES

The number of tribal population in the CHT has consistently decreased in relation to the lowland Bangladeshis. After the independence of Pakistan, the proportion was reported as 91% tribals and 9% bengalis. In 1984, the proportion had changed to 66% versus 34% and today some observers estimate that the proportion may be 50-50.

All through the years, the official policy of the government has been to have a balance between "carrot and stick" in its attempts to combat the guerrillas. As "carrot", the government's intention was to institute development programmes benefitting the local population. By creating jobs and socio-economic development for the tribals, the government hoped to decrease the support for, and isolate, the guerrillas who could then be eliminated by the army through military means (i.e the "stick"). In actual praxis however, the development seems to have been that there has always been much more stick than carrot.

Only limited funds have been raised for development programmes, while at the same time the government has heavily increased its military presence in the CHT. Comparing the situation in 1987 with that of around 1980, there are more than twice as many military troops in the CHT, while the development funds for socio-economic programmes benefitting the minorities do not seem to have increased at all in real terms.

The CHT development board which was said to have been upgraded several times in the past still seems quite weak. It is symptomatic that the board is chaired by the same Army General who is also the supreme commander of the CHT security forces. Also the vice chairman of the board is a low-land bengali.

Several people spoken to by the team confirmed that the conditions today are much worse than five or ten years ago. Beatings, rapes and arbitrary killings by the security forces are today almost daily occurrences. They also reported that there is no visible increase in development activity on part of the government which would benefit the tribal population.

CONCLUSIONS

Based on the above facts, the team concludes that the security situation is today as threatening as ever and that no solution seems to be in sight. For the RD&BE and KPM projects, this has of course clear implications, namely that the difficulty of securing trees for pulp production from the plantations and from the outlying forestry areas will remain unchanged. As was reported above the increasing failure to secure local raw material is today an important economic problem which forces KPM to import increasing amounts of expensive pulp from abroad. This considerably weakens the profitability of the project.

It is noteworthy that some of the pulp wood plantation areas financed by Sweden in the 1970s are situated in remote areas where, for security reasons, the project is now prevented from extracting logs and bamboo. This could be seen as faulty planning on part of SIDA with respect to the location of these areas, since the security problem was well known at that time.

A possible solution in the long-run to overcome the raw material scarcity—but which the government may hesitate to implement for psychological and political reasons—is to let private contractors supply the wood instead of having RD&BE do it themselves. The reason that private contractors could accomplish what the government agencies fail to do today is that they are willing to—and do today—pay the taxes demanded by the guerilla for all economic and commercial activities in the CHT. This willingness is described as the very reason for success in securing raw material.

ANNEX 1

Terms of reference

TERMS OF REFERENCE FOR THE EVALUATION OF

- (1) the Balancing, Modernization and Rehabilitation Program (BMR) of Karnaphuli Paper Mill (KPM) and
- (2) the Road Development and Bamboo Extraction Project (RD & BE) at Chandragona and Kaptai, and
- (3) the SIDA-supported Rehabilitation Programme of the Khulna Newsprint Mill (KNM).

BACKGROUND

Sweden development cooperation with Bangladesh in the paper industry started in the mid 70s and was terminated in 1985. The following amounts have been disbursed:

BMR at KPM	approx 75 million SEK
RD&BE at KPM	approx 23 million SEK
Rehabilitation of KNM	approx 10 million SEK

THE BMR PROJECT AT KPM

The Karnaphuli Paper Mill (KPM) was established in the early 1950s and financed by loans from the World Bank. The mill is an integrated unit with a designed capacity of 30,000 tons annually of printing, writing and packing paper made from sulphate pulp. The pulp is predominantly produced from bamboo, but wood also constitutes a significant part of the fibre intake.

From about 1973 onwards, the production capacity of the plant gradually declined because of frequent breakdowns of production units and their accessories. In this situation, the board and management of KPM initiated a feasibility study of a

rehabilitation programme. In 1976 an additional study to formulate a crash programme for the immediate repair and/or replacement of high priority items was carried out.

On the basis of the above-mentioned studies, and with financing through SIDA's commodity aid programme, a contract for a Balancing, Modernization and Rehabilitation Program (BMR) was awarded to Celpap by Bangladesh Chemical Industries Corporation (BCIC).

The original project budget of April 1979, was Tk 141,400,000 (= SEK 47 million), of which SEK 31 million was covered by the SIDA grant. The costs were based on a study carried out in 1976-77, and insufficient allowance was made for cost escalation. The project was scheduled to be completed in two years time. It soon became evident, however, that the original project plan could not be adhered to. Additional activities had also been added to the original scope of work.

In September 1980, a major review of the contract was initiated. The budget was increased to Tk 242,700,000 (= SEK 80 million), of which SEK 54 million was covered by the SIDA grant. The project schedule was prolonged by 15 months and the date of completion was set to June 1982. The scope of work was revised and became less comprehensive.

The scope of work for the BMR-project then remained unchanged. The time schedule, however, was changed because of delays occurring in 1982, 1983 and 1984. The project was completed in May 1985, and the total SIDA grant amounts to SEK 75.8 million.

RD & BE PROJECT

Swedforest Consulting AB has been the Consultants for the Road Development and Bamboo Extraction Project since 1976. Bangladesh Chemical Industries Corporation (BCIC) initiated this project, the objective of which is the delivery of bamboo (as a component of total fibrous raw material requirement) and its chips to Kamaphuli Paper Mill. Until June 1981, this was a SIDA project financed under project aid but has since been financed under commodity aid.

The second part of the project covers the building up of wood and bamboo handling equipment in Kaptai and Chandraghona, and units for transportation of chips between those areas. The main objective of the project was met on schedule in September 1984, but some additional work was added, and thus completion date was June 1985.

REHABILITATION OF KHULNA NEWSPRINT MILL (KNM)

The newsprint mill at Khulna was constructed in 1959, with a rated capacity of 40,000 tons of newsprint per year, to which 10,000 tons per year of mechanical printing paper was added in 1965. The mill, planned and designed by Canadian experts, was financed by Canadian credit and its equipment is mainly Canadian. KNM is the country's only newsprint mill.

The paper industry's output never reached more than 50% of its capacity, due mainly to poor operating conditions of the mill in the 1970s. The physical conditions of the older mill had deteriorated to such a point that considerable expenditure was necessary to rehabilitate it to achieve rated capacity.

In 1982, the Government of Bangladesh asked SIDA if there was any possibility of allocating funds for a rehabilitation programme for the mill. The rehabilitation programme, decided in 1978 but not launched until 1980, was mainly financed by Canada, with some funds being raised from the Federal Republic of Germany and the United Kingdom. The Swedish contribution was meant to cover a small part of the rehabilitation programme.

The proposed Swedish allocation, estimated to SEK 10 million over two fiscal years and tied to procurement in Sweden, was aimed at financing some equipment. The allocation was granted in 1982. The programme was finally completed in 1984.

PURPOSE OF THE EVALUATION

According to SIDA's rule, a project shall after completion be subject to a final evaluation. Such an evaluation should normally be of a comprehensive nature i.e. all aspects of the project - its planning and initiation, its implementation, its effects and impacts as well as its termination - will be evaluated from a technical, economic, social and organizational point of view. The project's contribution to the country's social and economic development in general and in relation to Sweden's four overall development goals will be at the centre of the analysis.

The present evaluation shall cover all these aspects and be of a comprehensive nature.

Design

In principle the evaluation should be designed in the following logical steps:

1. Define the objectives and targets originally set for the respective projects.
2. Analyse and discuss whether or not these objectives have undergone any change—explicitly or implicitly—during the project period. Given the evolution

from import support to a more regular project support that has characterized the BMR program this analysis merits particular attention.

Also the demarcation has to be drawn between the present project on the one hand and the project components belonging to the former forestry development program, which was terminated in 1980, on the other hand. It needs to be analysed whether some of the social objectives regarding target groups etc. that were explicitly defined for these projects, should implicitly be seen as valid also for the present ones to be evaluated now.

3. Based on the conclusions reached under 1. and 2. above define the relevant goal structure against which the program should be evaluated. The entire goal hierarchy should then, at least in principle, be included: inputs-->activities-->production goals-->effect-->impact.

4. Assess the achievements of targets and objectives as judged against the goal structure defined above under 3. What has been achieved in broad socio-economic terms? Has there been any impact, negative or positive on intended or unintended target groups?

5. *Cost-Benefit analysis.* How profitable is the programme for the national economy? An analysis should be made of the programme's costs and benefits on a regional as well as on a national level. Since the availability of quantitative data is limited, the cost benefit analysis will largely have to depend on qualitative data.

OTHER ASPECTS

Among the important aspects to be addressed by the evaluation can be mentioned the following:

- The format of cooperation, with contract signed between the Swedish consultant Celpap and BCIC. Was this a successful model? Or can other organizational designs, with the benefit of hindsight, be judged as more efficient?
- What are the future economic prospects of manufacturing paper and pulp in Bangladesh?
- What has been the effect/impact on various target groups of people in the project area? Was the programme beneficial in the long and/or short run?
- Previous studies have indicated that the progress of the programme was hampered by shortcomings in the administrative handling. Were these shortcomings present in both the donor and the recipient side? What can be learned for future development cooperation?

Further examples of issues to be considered by the evaluation mission are enumerated in a Follow-up Mission document dated October, 1984.

The evaluation mission

The evaluation will be carried out by a three member mission, which will spend three weeks in the field and an additional two weeks preparing a report.

ANNEX 2

List of Persons met

BCIC, DHAKA

Mosharraf Hossain, Chairman: A.K.M.
A.R. Bhuiyan, Director, Planning and Implementation
K. Rabiul Haq, Senior General Manager, Implementation
Dr. S.Y. Farooq, Senior General Manager, Planning

KPRC, CHANDRAGONA AND KAPTAI

Shahidollah Majumder, Executive Director, Karnaphuli Paper & Rayon Complex

A.E.M. Eshaque, General Manager, KPM
A. Rashid Khan, Chief Operation Manager, KPM
A. Baten Khan, Chief Engineer, KPM
Enamul Hoque, Deputy Chief Engineer
Mir Hedayetullah, General Manager, RD&BE
Hemayet Alam Chowdhury, Deputy Chief Engineer
Azizur Rahman Chowdhury, Manager Administration
Md. Mujibar Rahman, Chief Accountant, KRC

KNM, KHULNA

A Lateef, Executive Director
Latiful Hossain, Chief Engineer
Mozammed Hossain, Addl. Chief Engineer

OTHERS

Dr. M. Idris Ali, Chemical & Engineering Consultants, Dhaka
Göran Skarner, Vice President Forestry, Dhaka Match
Khan Mohd Eqbal, Managing Director, Sonali Paper & Board Mills
M.A. Matin, Finance Director, Lever Brothers Bangladesh, Chittagong
M.A. Baten, Representative of E. Ameen & Associates, Dhaka
Gunnar Ohlsson, Dhaka Match

ANNEX 3

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ANNEX 4

Abbreviations and units

Lbs	Pound weight
M/Ton, MT	Metric Ton (2.204 Lbs)
Maund	82.2857 Lbs
Seer	2.0573 Lbs
Hali	4 pieces
Lakh/Lac	100.000
Crore	10.000.000
LT	Long ton (2.240 Lbs)
Chatak	1/16 th of a seer
BCIC	Bangladesh Chemical Industries Corporation
BMR	Balancing, Modernization and Rehabilitation
CIDA	Canadian International Development Agency
CHT	Chittagong Hill Tracts
EBCM	Eagle Box & Carton Manufacturing Co.
EIP	Early Implementation Project
ERD	External Resources Division, Ministry of Finance and Planning
FRM	Fibrous raw materials
IRWP	Intensive Rural Works Programme
KHBM	Khulna Hardboard Mill
KNM	Khulna Newsprint Mill
KPM	Karnaphuli Paper Mill
KPRC	Karnaphuli Paper & Rayon Complex (KPM, KRC, RD&BE, KSL)
KRC	Karnaphuli Rayon and Chemicals Industries Ltd.
KSL	Karnaphuli Shipping Line
MSEK	Million Swedish Kronor
MTK	Million Bangladeshi Taka
MUSD	Million US Dollars
NBPM	North Bengali Paper Mill
PDB	Power Development Board

RD&BE	Road Development and Bamboo Extraction Project
SEK	Swedish Kronor
SIDA	Swedish International Development Authority
SPPM	Sylhet Pulp and Paper Mill

ANNEX 5

Financial and economic returns

In this annex the financial and economic calculations justifying the figures and conclusions given in the main report are presented. Each estimate of financial returns and economic costs and benefits for the respective projects is shown to the extent that it has been useful to carry it out.

1. RD&BE PROJECT

The total cost of the project has been estimated at MSEK 41 in terms of foreign exchange only. This is just a guess in its real sense, as there is no way to establish how much out of MSEK 47 recorded as cost of equipment that actually went to the project – and not to earlier forestry programmes. The mission has settled for the figure of MSEK 20.

Further, the total contribution from BCIC/KPM has not been established. It was not possible for the mission to extract such data from any of our sources, as the project itself has no records to this effect.

Before the project 10.000 to 15.000 tons were produced annually. The first project target was to increase to 100.000 ton, but this was later reduced to 42.000 tons/year.

As actual production is down at 8.000 tons/year, there is no way to calculate any financial returns from the project. In fact, the produce of the project is around three times more costly than purchased bamboo, i.e. it is a financial loss to operate the project.

There are no major economic benefits that could compensate for the financial losses and justify the investment or further operations.

2. KNM

This mission had decided not to measure the effects of the Swedish contribution to the BMR at KNM separated from the rest of the measures. Such an exercise would be completely irrelevant for any practical purpose. Instead we present a calculation of the effects of the total BMR.

The total project cost has been estimated to be 449 MTK, out of which 276 MTK was foreign exchange.

The investment analysis made by KNM (in 1980 and revised in 1984) uses the total cost of production (including capital cost) and the total revenue of projected output over twenty years (1984 prices). The benefit cost ratio (BCR), then is, 1.01 for financial analysis and 1.12 for economic (only considering tax and depreciation, i.e. no externalities) with a discount factor of 15%.

According to BCIC 15% is the discount factor to be used for analysis in BCIC enterprises. In this report we use the same factor. As decision criteria BCIC uses that the investment is approved if BCR is greater than one or the internal rate of return (IRR) is greater than 15%.

From a technical point of view the mission is of the opinion that the increased production capacity and the other benefits of the investment will only be sustained for another five years until further investments will be needed.

If the same method of calculation as used by KNM is applied with five years of sustained result, the financial BCR is 0.90, i.e. insufficient to justify an investment, while the economic BCR is 1.01, i.e. barely greater than one. This means that the smallest external cost, such as increased pollution when production increases by two thirds (from 30.000 to 48-50.000 tons), will bring BCR below one.

As has been observed in the main report KNM is presently making losses. Financially, this means that production in the mill is not justified. It was also pointed out that domestic prices are administered. This makes an economic analysis based on those prices irrelevant. At the same time there is a government subsidy to newsprint production of 3000 Taka/ton (or 2500 Taka/ton where gas is used for power and steam)

In 1987 newsprint was exported at 496 USD per ton. Assuming that the annual production increase of 18000 tons could be exported, the marginal increase of revenues due to the programme would be around 8.93 MUSD/year. This would give a straight pay-back period of 4.2 years. Unfortunately, this analysis remains theoretical for the future, as the projected domestic demand will require that all newsprint stays in the country.

As it has not been possible for the mission to assign values to external effects such as the increased pollution or employment effects and while the great uncertainties and arbitrariness in assumptions render any detailed shadow price analysis academic, the analysis is not carried further. We conclude that the investment in the BMR at Khulna cannot, or just barely, be justified in financial terms.

3. KPM

The KPM project has not been financially or economically accounted for by the mill itself. On the other hand, there are very good cost and revenue accounts available since 1969/70.

From those figures the mission has calculated the net difference between average paper price and average total cost for each year. In the sixteen fiscal years from 1969/70 to 1985/86 there has been a net surplus only on two occasions. In 1969/70 the surplus was 126 Taka per ton and in 1985/86 it was 70 Taka.

Again, it should be noted that prices of both the final product and of labour are administered.

As pointed out in the main report the two main objectives of the BMR programme (raise annual production to 30,000 ton and reduce the costs per ton by 2000 Taka) were reached. But the reduction of costs were mainly achieved by conversions to gas. Our estimate of financial benefits of the programme will therefore only consider the increase of production.

Judging from production figures over the past years, the KPM may be said to have produced around 20,000 ton/year before BMR. By increasing to 30,000 the programme has added 10,000 tons annually.

The total cost of the programme has been estimated to be Lac Taka 1000 in domestic costs and around 71 MSEK in foreign exchange. This gives a total of around 336 MTK.

An additional 10,000 tons of paper per year increases revenues (1987 prices) by 257.6 MTK per year, while at the same time increasing costs in such a way that the average surplus per ton is 70 Taka. The net surplus from 10,000 tons is consequently 700,000 Taka.

The straight payback period is then 480 years. Knowing that there are no major external benefits of the BMR, we need no further calculations in order to conclude that the investment was not financially or economically justified.

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The performance in securing benefits for women and for tribal minorities has been disappointing, and the security situation in the Chitragong Hill Tracts prevents the mill from procuring enough timber.

These are some of the findings of this evaluation report written by the team consisting of the two consultants Hans Nordlin and Jan Vakkelin; and of Karlis Goppers from SIDA.

Sweden's bilateral development co-operation, handled by SIDA since 1965, comprises 17 program countries: Angola, Bangladesh, Botswana, Cape Verde, Ethiopia, Guinea-Bissau, India, Kenya, Laos, Lesotho, Mozambique, Nicaragua, Sri Lanka, Tanzania, Vietnam, Zambia and Zimbabwe.

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