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United Nations Development Programme

Emergency Education Rehabilitation Project  
BIH/97/045 -,

## **Report of the Evaluation Mission**

January, 2000

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civil engineer

## Table of Contents

Executive Summary	3
I / Introduction	4
II/ The Framework of the Project	6

### III / Assessment of the Project Performance

#### 8

A. The adequacy of the execution and the implementation arrangement;	8
B. The quality and cost efficiency of the rehabilitation work; 11 C. The quality of supervising services; 16 D. The project contribution to capacity building of the local building and construction market; 17 E. The quality of monitoring; 17 F. Impact on the beneficiaries; 17 G. The project contribution to BiH efforts to provide proper learning and teaching conditions in its primary schools;	19

IV/ Main Conclusions 20 V/ Lessons Learned 20 VI/ Recommendation	
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## **Executive Summary**

Bosnia and Herzegovina's infrastructure, including large number of schools' buildings, were devastated during the war. This fact, resulted with extremely poor working (teaching and learning) conditions in almost 70% of schools. The main objective of the project was to improve those conditions through physical rehabilitation of the buildings of nine schools all over the country. Thus, at the end of the project, thanks to adequate working environment, the quality of education has been improved, as well.

The Project has been successful in demonstrating that modalities for participatory planning can be developed and coordinated at the entity level (PIU-s) and that these modalities can be practically and effectively applied in terms of priority settings, project formulation and project monitoring where resources are available to support identified activities.

The UNDP provided US\$ 2,000,000 of its resources (the Government of Japan contribution) for education rehabilitation project in BiH. These resources have proven adequate for the support of nine Project schools rehabilitation. The UNDP was appointed to serve as executing agent for the Project and to coordinate works and then responsibilities of the all counterparts involved in the Project implementation (World Bank, Ministries for Education, IMG, Primary Schools).

The UNDP Country Office Sarajevo took care of preparation of the assessments of needs for the schools, transparent bidding procedure, preparation and signature of the contracts for works and contracts for services.

All of these efforts have been performed completely in accordance with valid standards and norms, usually applied in Bosnia and Herzegovina.

Rehabilitation works, performed by selected contractors, have been completed in accordance with the assessments of needs and bill of quantities, as well as in accordance with the Beneficiary needs. The quality of works was, in generally, on a satisfactory level, and met all required standards and norms relating to the building business.

The Project gave its contribution to the building of capacity for planning and implementation of educational programs at the all levels in both, Federation of BiH and Republika Srpska.

The participating local actors have developed and made use of these skills to develop project proposals and help monitoring their successful execution. The Project management has performed competently, as well as contracted supervisors.

Uniformly, representatives of the contractors, as well as the schools principals and employees indicated how helpful the technical advice and support of the supervisors and the UNDP Project Officer has been.

The evaluation conductor would encourage a follow-on programme to the EERP that would be expanded to other schools situated in other B&H municipalities.

United Nation Development Programme  
Report of the Evaluation Mission - EERP BiH/97/45

4

## **I / Introduction**

The evaluation of the project BIH/97/045 - Emergency Education Rehabilitation Project have been conducted in two parts due to heavy weather conditions at that time. Namely, it was conducted from 13 - 22 December 1999 and from 17 - 23 January 2000. This Project provided assistance for the rehabilitation of nine wardamaged schools in Bosnia and Herzegovina. The evaluation was conducted by an independent local consultant.

The purposes of the evaluation were to:

- (1) assess the effectiveness, impact and the relevance of the project ;
- (2) assist the Government of the BiH, the Donor and the UNDP to assess the achievements of the project against its stated objectives;
- (3) identify lessons learned from the experience gained for the future planning of the activities in this field;

### Evaluation Approach and Methodology.

Given the relatively short duration of the evaluation mission, the geographical reach of the project sites, my findings are as much relevant and objective, as it was possible. They are, however, based on a thorough review of all relevant project documents, discussions with Project Officer and other supervisory actors at UNDP, meeting and interviewing with MoE/ PIU - Federation BiH and RS representatives, meeting with World Bank and IMG representatives and other key individuals responsible for direct project execution in Bosnia-Herzegovina as well as with contractors, supervisors and beneficiaries involved with the project implementation. Due to adverse weather condition (snow blizzards) during the beginning of the Mission in December, I was unable to visit all of the schools, as it was scheduled, but I realized my visits to two of the schools - project sites. Continuing the Mission in January 2000, visits to the rest of seven schools have been successfully completed. Thus, all of nine schools included in the Project were inspected during the Evaluation Mission. In these I met school's principals and employees asking them a similar range of questions, in order to gather useful contextual background information regarding the environment in which the project has been implemented. Since the mission was supposed to review the technical aspects of the project, the questions related to the following issues were placed and discussed:

- condition of the school building before the war;
- circumstances and events which have caused destruction of the building during the war;
- their needs necessary for proper educational process;
- their cooperation with all parties involved with implementation: the UNDP, Contractor for works, Contractor for supervision;

- troubles and problems eventually occurred during performing the works;

- their opinion of the quality of works;

United Nation Development Programme Report of the Evaluation Mission - EERP BiH/97/45

5

- their opinion of the present condition of the school building, one year after the works were completed;
- their opinion of the way the Project has been executed, the assessments, bidding procedure and selection of the contractors, supervising and monitoring;

Their answers, after an appropriate analysis and comparison, have helped me a lot to get a clear picture of the environment the Project has been implemented

I de-briefed and discussed with the Project-Programme Officer and UNDP on the evaluation's preliminary findings prior to finalizing the evaluation report. I'm grateful for the support, hospitality and openness, which were provided by the Programme Officer and UNDP CO Sarajevo.

## **11 / The Framework of the Project BIH/97/045 - EERP**

The Project BIH/97/045 - EERP was originally conceived by the UNDP CO BiH after the Ministry of Education BiH and World Bank had requested UNDP for help in rehabilitation of seven primary schools in BiH.

The 1994 Federation Constitution devolved responsibility for education to the canton level. However, within the Federation reconstruction of school facilities and delivery of educational materials is being co-ordinated at entity level, by the Ministry of Education. A Project Implementation Units (PIU) have been established in both entities to liase with international donors. The Federation Ministry of Education (MoE), as well as the MoE of Republika Srpska have placed great emphasis on encouraging communications and co-operation among canton- and municipalitylevel authorities, particularly to develop practical mechanisms for allocating investment financing and operating funds within the country. Preparation of the proposed Project for emergency reconstruction-funding of assessments for civil and other works-has helped to facilitate contacts between the Federation and the RS Ministries of Education and the cantons / municipalities. In April 1996 the World Bank instituted a major Emergency Education Reconstruction Project with a first phase designed to meet the two objectives:

- to make fully functional the maximum number of classrooms for the maximum number of children as fast as possible and at the least cost;
- to restore effective teaching capacity by providing minimal supplies of textbooks, supplementary readers and educational materials; to support the resumption of at least minimal salaries for teachers. ,

A secondary objective was to help build capacity for planning and implementation of education programmes through the creation of a Project Implementation Unit (PIU) at the Ministries of Education of the FBiH and the RS. Technical assessments for war damaged schools have been carried out by the International Management Group (IMG).

Architectural studies and designs for the priority schools financed from this project were prepared by IMG, with funding provided by UNDP under a separate project (BIH/96/011) for the FBiH and under this project, for the RS. This project was conceived as an emergency type initiative, designed to restore as many schools as possible to acceptable educational standards by the start of the 1997/98 school year with the relatively limited resources available. Priority has, therefore, been given to schools that have suffered only

moderate damage. The primary focus was on the reconstruction of primary schools. Resources for the Project were provided from the Government of Japan contributions to UNDP administered "Human Development Resource Fund", in total amount of US \$ 2,000, 000.

Project Document for the Project BiH/97/045 - EERP was formulated that set as its immediate objective:

"To restore the classrooms and other basic facilities in the schools included in the project to the physical state needed to ensure an effective teaching and learning environment."

United Nation Development Programme  
Report of the Evaluation Mission - EERP BiH/97/45 .  
Tanuarv\_ 2000

7

This objective was to contribute to the global development objective of supporting Bosnia and Herzegovina's efforts to restore the delivery of primary education of acceptable qualities during the 1997-98 school year. This was supposed to be achieved through the provision of financial resources and through building capacity for planning and implementation of education programs at the Entity, canton and municipality levels in both the Federation and Republika Srpska. The output to be produced by the Project included nine primary schools, repaired and rehabilitated to a satisfactory condition by the opening of the 1997-98 school year in September 1997. As a result, approximately 6,000 young students would be able to continue their education.

The Project Document also elaborated strategy of the Project, methodology and implementation arrangements including roles and responsibilities of each of the concerned parts.

The Project Document was signed between two respective Ministries of Education and UNDP, as follows:

1. with MoE Federation BiH on 19 June 1997; and
2. With MoE Republika Srpska on 1 July 1997.

### **III / Assessment of the Project Performance**

#### **A. The adequacy of the execution and the implementation arrangement**

The Project Document (formulated in 1996) defined project strategy, implementation arrangement and methodology.

Priority has been given to schools that have suffered moderate damages.

The primary focus was on the reconstruction of primary schools, due to the fact that more than 50% of those buildings were damaged during the war. Consequently, equal percent of the children of age 7-15 were attending lessons in extremely poor conditions. The World Bank in the Emergency Education Reconstruction Programme has also followed this basic strategy.

The country office of UNDP in Bosnia and Herzegovina was appointed to serve as Executing Agent for the project in both entities. The project was supposed to be executed in close collaboration with the Ministries of Education, the World Bank and the municipalities where the schools were located.

The role and activities of UNDP as Executing Agent were to:

- Attend opening of bids;
- Review and approve the bidding process;
- Sign construction contracts;
- Sign supervision contracts (1<sup>st</sup> level);
- Perform second level of supervision, regular monthly site inspections ;



- Make advance payment to contractors (not to exceed 15%);
- Review the implementation of construction works;
- Make progress and final payments to contractors;

The main responsibility for the implementation of the project was given to the Project Implementation Units (PIUs), established by the World Bank in each of the MOEs for implementation of the World Bank - funded Emergency Education Reconstruction Projects. Those PIUs were staffed by a Project Director; a professional Management and Procurement Advisor; and technical staff designated by the respective MOEs.

The PIU's responsibilities were:

- Review of the IMG bidding documentation;
- Tendering process (for construction and supervision): - launch of bidding
  - bid opening
  - evaluation of bids
- Preparation of construction and supervision contracts in consultation with the World Bank and UNDP;
- Signature of construction contracts;
- Signature of supervision contracts;
- Submission of monthly progress reports to the World Bank and UNDP;
- Preparation of the end certificate of completed works;

Project document formulated the roles and responsibilities of other concerned parties,

United Nation Development Programme  
Report of the Evaluation Mission - EERP BiH/97/45  
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9

The World Bank, the IMG, the Ministry of Education, Contractors.

Collection of information on damaged schools in both Entities was undertaken by respective Ministries of Education in conjunction with the World Bank in order to identify priorities.

The respective Ministries of Education and the PIUs Education in accordance with the WB selection criteria had selected primary schools, rehabilitated under this project. The WB criteria targeted schools that had been damaged directly by shelling or by use as temporary accommodation for refugees and/or soldiers. The priority lists were finalized and submitted to UNDP on the following dates:

- 27 June 1997, list of five schools in Federation BiH which included:
  - PS Crnici, Stolac, FBiH;
  - PS Gracac, Prozor/Rama, FBiH;
  - PS Gata-Ilidza, Bihac, FBiH;
  - PS Dzakule, Gracanica, FBiH;
  - PS Breza, FBiH;;
- 10 December 1997, list of six schools in Republika Srpska to be assessed and later

rehabilitated in accordance with availability of funds. Based on this initial list the following schools were selected:

- PS Brestovo-Stanari, Dobojski, RS;
- PS Bronzani Majdan, Banja Luka, RS; and
- PS Bratunac, RS;

The implementation of the project started in second half of the 1997. Activities in the Federation BiH followed the established work-plan, which was not the case with its implementation in RS. This slow start was caused by the difficulties encountered in the establishment of the priority primary schools for rehabilitation. In addition to this, due to the very bad security situation in Republika Srpska in 1997, a further delay was occurred. In addition to this it is important to notice that it was impossible to meet the originally deadline to finish rehabilitation of the schools before beginning of 1997/98 school year. This is namely because the Project Document was written in 1996 and signed only in the middle of 1997. Thus, since the project implementation (in FBiH) started in the second half of the year and since the construction contracts were signed at the end of the building it was not realistic to expect its completion within six months.

The International Management Group prepared the needs assessments for the schools in the following manner:

- The Assessments for schools in the Federation of Bosnia and Herzegovina were made under the UNDP former funded project BIH/96/011 and used for the preparation of tender documentation;
- The assessments for schools in the Republika Srpska for the five schools were made under this project. The preparation of the five assessments was ordered aiming to identify three schools to be rehabilitated within the available funds. The assessments were prepared and submitted to UNDP on 24 March 1998;

Assessments were made as bill of quantities for rehabilitation works. The technical documentation approved for construction did not include drawings and calculations. This is due to the fact that needed rehabilitation works were not structure construction

works. Namely, rehabilitation foresaw reparation of damages caused by pieces of shelves and/or lack of maintain ing, mostly.

In that light, I the IMG's assessments were sufficient to serve as a basis for preparation of the Technical documentation approved for construction. The assessments have been made by a qualified engineers, after a detailed inspection and analysis of the conditions of the school buildings.

Based on my experience I would recommend that in future technical documentation should contain all drawings and calculations and sealed by corresponding municipal city planning department. This would assist supervisors and contractors in rehabilitation process, mainly related to specific technical issues

that can not be provided by the bill of quantities.

However, the assessments were prepared well enough to be used as a part of tender documentation and for the bidding procedure, due to the fact that offered technical solutions adequately and suitably met the needs of the Beneficiaries.

At the beginning of the project implementation it was concluded that the project document needs to be revised in order to reflect the actual roles of the parties concerned in the implementation of the project objectives. This, namely, refers to the roles and responsibilities of the UNDP, WB, MoE, IMG, PIU, and subcontractors. Namely, although the PIUs were technically experienced, the fact that they were overloaded with numerous other projects and understaffed, they could not accept the roles and responsibilities as it was originally designed. It was well recognized that the UNDP as an Executing Agent, had to take over a major role of co-ordination among the parties and major responsibility for the implementation of the project. The revised implementation arrangement foresaw the following roles of the concerned parties:

### 1. UNDP

*Activities:* Review of technical documentation  
Preparation of bidding documents  
Tendering process (for construction and supervision):  
- launch of bidding  
- bid opening  
- evaluation of bids  
Preparation of construction and supervision contracts  
Sign construction contracts  
Sign supervision contracts (1<sup>st</sup> level)  
Perform second level of supervision  
Make advance payment to contractors  
Review the implementation of construction works  
Perform interim and final payments to contractors

### 2. World Bank as part of its over-all responsibility for the "Emergency Education Rehabilitation Programme" in BiH will provide assistance in the:

*Activities:* Identification of priorities (in conjunction with Ministries of Education)

United Nation Development Programme  
Report of the Evaluation Mission - EERP BiH/  
97/45 January\_ 2000

11

### 3. IMG Activities:

Overall advisory role for the bidding process  
Overall advisory role at implementation of construction works

Assessment of schools\*

Preparation of technical documentation (design + bill of quantities)\*

*\* those activities are completed for the Federation under project BIH/96/101, for Republika Srpska it will be done under this project*

#### 4. PIU

*Location:* Sarajevo/Federation BiH  
Banja Luka/Republika  
Srpska

*Activities:* Review IMG technical documentation  
Assist the bidding process  
Assist construction works implementation  
Assistance to the supervisors in preparing final reports

#### 5. Construction Contractors

*Participants:* National companies (private or public) selected in the bidding process

*Location:* Target municipalities in which selected schools are located

*Activities:* Construction works as defined in the technical documentation and contracts

#### 6. Supervision Contractors

*Participants:* National firms registered for consulting and supervision services

*Activities:* Daily supervision of construction works  
Weekly reporting to the UNDP  
Final reports  
Preparation end certification of completed works

#### 7. Ministry of Education

*Activities:* Identification of priorities (in conjunction with the World Bank).

Respecting the above indicated arrangement, the bidding procedures were prepared by the UNDP Bosnia and Herzegovina in close consultation with the PIU Education technical team and the World Bank. The bidding procedure was transparent and realised by a public Invitation to Bid. Contractors were invited to pre-qualify by a visit of the site and presentation of documentation regarding technical qualifications, before receiving the tender documentation. The Invitations for Bids were published in local newspapers, FBiH and RS entity.

Tender documentation was distributed to 84 building companies, which showed their interest for the project. 80 companies submitted their offers to the UNDP CO BiH. The bidding procedures were limited to the national contractors, in order to encourage them to get involved in well being of the country, to improve the involvement of the local community as well as to choose the most qualified building company. The bids

were evaluated by the UNDP Programme Officer in close consultation with PIU and WB, (whose officials were involved in an advisory role in the rating of

United Nation Development Programme  
Report of the Evaluation Mission - EERP BiH/97/45  
January\_2000

12

contractor proposals and their input was taken into account) taking into the consideration the evaluation criteria established:

1. Offered price;
2. Proposed building time;
3. Technical qualifications.

Going through the documentation and reports, it has been found that bidding and evaluation process carried out by the UNDP was satisfactory and completely in accordance with international bidding process standards for building contracting, which is usually applied in BiH.

The proposal for contract awards was approved by the UNDP Local Contracts Committee, and, on request, submitted to and approved by the UNDP Headquarters Contracts Committee. Local Contracts Committees were organised as follow:

- For the approval of five schools from FBiH - on 12 September 1997;
- For the approval of three schools from RS - on 17 June 1998;
- For the approval of the sixth school from FBiH - on 5 August 1998.

Construction contracts were signed by the UNDP Bosnia and Herzegovina and selected contractors upon the UNDP Resident Representative's approval. In total, 12 contracts were signed. Contracts have been signed on the basis of contractor's proposal, for the fixed price of the contract, what was a very good option. This is because of the nature of the construction work that is composed of numerous different works that have to be done simultaneously. Such approach is first off all much more time and cost effective, but it is also very preferable in terms of providing the best quality for invested money. Based on BiH experience after the war, for rehabilitation works, when a lot of unexpected and unforeseen works can occur while performing construction works, the fixed price contract is the best option as well. Especially, having in mind that Contractor is supposed to be introduced with the building condition and to inspect it before signature of the contract. Some of contracted works can happen to be unnecessary and can be compensated for some other, unexpected and not contracted works, inside the "fixed price" frame. If the amount of unexpected and unforeseen works exceed the "fixed price" frame, those works can be contracted as an Amendment to the existing contract, or as a new contract for amended works.

The numerous international, as well as the local organizations involved in the rehabilitation processes in BiH recognized this fixed price type of the contract as the best option.

Contracts for this project were prepared properly and were signed respecting the completion time offered by the Contractors in their respective offers. The proposed building time as per contractors' offers was realistically estimated. However, the fact that the construction contracts were in the most cases signed at the end of the building season,

weather conditions did not allowed contractors to respect the proposed deadlines. Regardless the mentioned, time extensions did not harmed the education processes, and what is very important, it provided needed conditions for quality completion of works.

B. The quality and cost efficiency of the rehabilitation work:

Due to the fact that rehabilitation works in generally are very difficult to assess 100 % correctly, a significant difference between real quantities and assessment can always be expected. That difference, according the global building practice, is considered as 10 - 30 % of assessed works and bill of quantities. In addition, some kind of unexpected but urgent and necessary works can occur performing rehabilitation works.

These works happened to be necessary for eight schools (out of nine) included in this project, too. I have found that all of amended works were really needed and well estimated by contractor for supervision. And, what was very important, the prices of these works were less than 10% of contract's price (Sarajevo school had 15 % only - due to the fact that one complete school wall and the installations inside had suffered much more damage than it has been assessed). Anyway, those amendments were properly estimated, analyzed and finally approved by the UNDP office. Considering the fact that assessment were made almost a year before the bidding process, a decrease of the building prices on the market, as well as competitive bidding procedures, caused some significant savings in the original budget. Those savings were in total amount:

- US\$ 247,000 for schools in Federation BiH
- US\$ 76,000 for schools in Republika Srpska

Therefore, the FBiH and RS Ministries of Education and PIUs Education were consulted in defining use of surplus that occurred.

Their proposals were as follows:

1. To rehabilitate and furnish a sixth school in FBiH, i.e. the Hasan Kikic Primary School (PS) in Sarajevo;
2. To repair the central heating system in the Primary School in Prozor/Rama, FBiH (the school was rehabilitated under this project in the first phase);
3. To complete the water-supply and sewage system at the school in Stolac, FBiH (the school was rehabilitated under this project in the first phase);
4. To provide three schools from the RS that were rehabilitated under this project with basic school furniture and gymnasium equipment;
5. To repair the gymnasium floor in the school in Bronzani Majdan, RS (the school was rehabilitated under this project in the first phase).

Taking into account a various level of damage each of the schools, the prices of rehabilitation were very difficult to compare. The price per 1 m<sup>2</sup> of rehabilitated area went

from 45 US\$ (interior works mostly) to more than 300 US\$ (heavy structural damages). Average price for all of nine school is 107 US\$/m2. But, looking at the bill of quantities and its prices, having in mind recently seen and inspected works and results, cost efficiency is more than on a satisfactory level. Especially, having in mind that the price of regular maintenance for more than 20 years old school buildings (without mechanical damages caused by war activities), would have been almost the same (approx. 100 US \$/m2). I have analyzed the prices offered in the bidding procedure and found that there were no significant differences among all of them - approx. 10 % - 15 % between the lowest and highest offer.

United Nation Development Programme  
Report of the Evaluation Mission - EERP BiH/97/45  
7anuarv\_ 2000

14

Original budget was US \$ 2,000,000 and final costs of the project's building and furnishing activities were US\$ 1,769,069.

The project received a good value for invested money. All contracts have been completed within budget allocations.

(Breakdown of costs for each school - attached as ANNEX 1).

The quality of rehabilitation works was in accordance with the agreed technical standards. All of building materials, used and installed, were in accordance with bill of quantities and met the agreed technical standards.

The fact that rehabilitation works were performed out of the building season, during the wintertime and low temperature, had much less influence to the quality of works than it could have been anticipated.

Ministry officials and school principals informed me of their high level of satisfaction with these rehabilitation projects that were perceived as having met priority needs.

Here is a survey of rehabilitation works and my findings for each of the schools, as follows:

#### 1. Primary school "Enver Colakovic" Breza

The school is situated in the Municipality of Breza, Canton No. 4, Federation BiH. The school building is a pretty big one, originally built in year 1960, total area is 2,390 m2. It has ground floor, 1<sup>st</sup> and 2<sup>nd</sup> floors containing 15 classrooms, hall, office premises, school gym and corridors.

The school suffered a lot of damages during the war, since the front line was very close. The assessment and the bill of quantities formerly prepared by IMG was detailed, but it didn't contain technical solutions and drawings related to the repair of some structural damages. So, it had to be made by the contractor for supervision. Performing the works, contractor was faced with some of unforeseen and unexpected but for a proper rehabilitation necessary works.

Contractor completed all of works on January 20, 1998.

The works, performed by contractor, were in accordance with the bill of quantities and with pre-war conditions.

The price of reconstruction works was US\$ 264,524 or 110 US\$/m2.

Total invested amount of money was US\$ 271,508.

Inspecting the works, during the evaluation (two years later) I noticed a lot of small cracks on the interior walls (appeared after the defects liability period has been expired, as I have been informed by the school Principal). The reason for that can be humidity in the walls.

## 2. Primary school "Hasan Kikic" Sarajevo

The school is situated in Sarajevo, Federation BiH.

The school building was made as a three-story building with ground floor. It has 12 classrooms, kindergarten, dining room, gym and office premises. Total area of the building is 2,440 m2.

The school was damaged during the war by numerous direct artillery hits.

Rehabilitation of the school was realized as a joint funded [project](#) by UNDP and by the Municipality of Centar.

United Nation Development Programme  
Report of the Evaluation Mission - EERP BiH/97/45  
January, 2000

15

IMG made the assessment for the UNDP part of rehabilitation, which included interior works and windows. The Municipality Centar funded repair of the façade and gym.

Performing works, coordination between two contractors could have been better, related to some damage to the interior, caused by roofing works.

But on the end, all of works were completed in accordance with the assessment and prewar condition, on a really satisfactory level, meeting all standards and norms, as well as the Beneficiary needs.

I didn't have any objections to the quality of works.

Contractor for supervision gave a lot of his contribution to the final achievement.

Works were completed on October 14, 1998.

The school was furnished with the basic school furniture under this project. The price of reconstruction works was US\$ 118,229 or 48 US\$/m2. Total invested money is US\$ 155,930

## 3. Primary school "Gata-Ilidza" Bihac

The school is situated in the village Gata, Municipality of Bihac, Canton No.1 Federation BiH. The school building is made as two-story, containing 8 classrooms, office premises, halls. Total area of the building is 1,080 m2.

The school was very close to the former front line and it was damaged by many direct artillery hits. The building was in a really poor condition before the rehabilitation works.

IMG made assessment and bill of quantities taking into account prewar condition of the building. On my opinion, related to this degree of damage, the assessment was not good enough for a proper rehabilitation works. Complete technical documentation with drawings, better, description of works and calculation would be much more appropriate to the building in that condition. Especially, having in mind that some structure solutions could have been considered once again and maybe, have been changed. I think on the upper slab construction, made of wooden beams. Of course, it would be more expensive, but, on the other hand, much better. The installation of the central heating system was done under this



project. Inspecting the works completed on April 9, 1998 I have found the following defects that occurred after defects liability period:

- PVC floor has been lifted on many places;
- cracks and holes in the interior wall plaster as well as big holes on the southern façade wall;
- humidity on the walls; and

- broken windows.

All mentioned can be considered as lack of maintenance and care after rehabilitation works were finished and after the building was given to the Beneficiary. Interviewing the contractor for supervision I was informed about an accident happened a year ago at the school, when interruption in the electricity power supplying caused freezing of water in the installations (sewerage and water supplying).

It must be noticed that Contractor had repaired all defects a month prior expiration of the defects liability period of one year. The noticed defects at the occasion of my visit, occurred latter on, due to the lack of a proper care, as it was mentioned above. The price of reconstruction works was US\$ 264,524 or 243 US\$/m<sup>2</sup>. Total invested amount of money was US\$ 269,262.

United Nation Development Programme  
Report of the Evaluation Mission - EERP BiH/97/45  
Tannarv 7nnn

16

#### 4. Primary school "Dr. Mladen Stojanovic" Bronzani Majdan

The school is situated in the village Bronzani Majdan, Municipality of Banja Luka, RS entity. The school building is made of a few two-story blocks. It contains 13 classrooms, halls, gym, and office premises. Total area is 2550 m<sup>2</sup>.

The school building was not heavily damaged during the war, since there were not direct fights in the area. But, refugees and soldiers, using the building for their needs during the war period, as well as lack of maintenance, caused damages on the interior and made it unacceptable for educational process.

Works were completed on October 8, 1998 in accordance with the assessment and needs of beneficiaries, respecting necessary standards and norms. At the occasion of my visit to the school, 15 months after official hand-over, the building is in very good condition. So far no defects has been noticed. The school was provided with basic school furniture under this project. The price of reconstruction works was US\$ 117,343 or 46 US\$/m<sup>2</sup>. Total invested amount of money was US\$141,021.

#### 5. Primary school "Desanka Maksimovic" Brestovo

The school is situated in the village Brestovo, Dobojski Municipality, RS entity.

The building is made as typically small two-story country school, with 4 classrooms and three apartments for teachers. Total school area is 550 m<sup>2</sup>. The school was built in 1947 on a traditional way - brick walls and wooden floors. During the war, the school was accommodating soldiers and refugees, what caused a lot of interior damage.

Contractor completed works on November 4, 1998.

Rehabilitation work was done in accordance with the assessment and contract for works,

façade was repaired and repainted, doors and windows were replaced with new ones, complete electrical and water installation was changed, new inside toilet was built, new school entrance was made, school roof was repaired. My only objection to the quality of works would be made to the new built corridor floor, there are some big cracks on the concrete. The reason is probably latter stabilization of soil below it, what means that basic course compaction was not made properly. But, due to the fact that it appeared after the inauguration and the expiration of defects liability period, it culdn't be considered as Contractor's fault. The school has been furnished with basic furniture under this project. The price of reconstruction works was US\$ 105,222 or 191 US\$/m2. Total invested amount of money was US\$ 116,486.

#### 6. Primary school "Dzakule" Gracanica

The school is situated in the village Dzakule, Gracenica Municipality, Canton No.3 Federation BiH.

The school has been built as a two-story building, containing 8 classrooms, office premises, school gym. Total area of the building is 1,670 m2. The school was not heavily damaged by war activities, but serving as a temporary accommodation for refugees, its entire interior suffered a lot of damages, as well as central heating system.

Rehabilitation work was performed in accordance with the assessment (formerly made by IMG), and contract. Complete interior was repaired, as well as the central

United Nation Development Programme  
Report of the Evaluation Mission - EERP BiH/97/45  
7annarv\_ 2000

17

heating system and façade. Quality of works was on a higher level then usually, as well as quality of supervision work.

Contractor completed rehabilitation works on February 13,1998. During the defects liability period, no defects occurred. Even after almost two years after completion of rehabilitation works, building is in very good state.

The school building has recently been covered with asbestos-cement roof tiles (not under this project, but it is necessary to be said), what is not recommendable, especially not for the schools.

The price of reconstruction works was US\$ 87,186 or 52 US\$/m2.

Total invested amount of money was US\$ 91,680.

#### 7. Primary school "Branko Radicevic" Bratunac

The school is situated in the Municipality of Bratunac, RS entity.

The school was built as a big three-story building, with 15 classrooms, halls, school gym and office premises. Total area is 2,070 m2.

The school building is thirty years old, but damaged by refugees and soldiers during the war.

IMG made assessment and bill of quantities to repair the school in accordance with prewar condition.

Contracting works were performed in accordance with standards and norms and on a satisfactory quality level. Some assessment solution were changed while performing the

works and compensated with others (consulting involved parties), in order to get better performance, for instance moving boiler room from the basement to first floor, because of humidity and underground water.

Contractor completed works on March 1999.

The defects liability period (DLP) related to the works performed on this school did not yet expired. However, due to the fact that no defects were noticed at the occasion of my visit, it is most likely that no defects will occur prior expiration of the DLP, i.e. 8 April 2000.

The school was provided with basic school furniture under this project.

The price of reconstruction works was US\$ 260,975 or 126 US\$/m2. Total invested amount of money was US\$ 289,684.

#### 8. Primary school "Ivan Mazuranic" Gracac

The school was situated in the village Gracac, Municipality of Prozor-Rama, Canton No. 7, Federation BiH.

The school was built as a two-story building, with 9 classrooms, office premises, halls, school gym. Total area of the school is 2,230 m2. The school was exposed to direct bomb hits, what caused a lot of damages. IMG prepared assessments and bill of quantities for rehabilitation, in accordance with the beneficiary's needs and prewar condition.

Selected contractor completed rehabilitation works on February 11, 1998.

Contractor completed rehabilitation works on February 13, 1998. During the defects liability period, no defects occurred. Even after almost two years after completion of rehabilitation works, building is in very good state.

Works were performed on a satisfactory level and in accordance with the assessment and contracts (civil works and central heating installation). The price of reconstruction works was US\$ 227,924 or 102 US\$/m2. Total invested amount of money was US\$ 234,234.

United Nation Development Programme Report of  
the Evaluation Mission - EERP BiH/97/45  
January 2000

18

#### 9. Primary school "Crnici" Stolac

The school was situated in the village Crnici, Stolac Municipality, Canton No. 7, Federation BiH.

The school was built as a two-story building. One, older part of the building was built 50 years ago and another one was built 25 years ago. The building was damaged by direct bombs hits during the war. The old part of the building has suffered even some structural damages, beside the interior devastation.

The newer part has recently been rehabilitated under some other project.

This project provided rehabilitation for the old part.

IMG prepared the assessment in accordance with the beneficiary's needs respecting the prewar condition.

Rehabilitation works were completed on April 14, 1998.

As an amendment, the second contract included building of a new inside toilet facility and the septic.

Rehabilitation works were in accordance with the assessments and contracts. The quality of those works was on a standard, satisfactory level.

So far no defects occurred, thus it could be stated that works were done on very satisfactory

level.

The interior connection between two parts, which were originally built in 20 year time distance, could have been better solved. Actually, there is a big crack in the wall now, it needed some plastic or metal covering.

The price of reconstruction works was US\$ 208,924 or 379 US\$/m2.

Total invested amount of money was US\$ 214,860.

### C. The quality of supervising services

Project document formulated the roles and activities to be performed by contractor for supervision. In accordance with that, contractor was responsible for:

- Daily supervision of contracted works;
- Weekly reporting to the UNDP;
- Final reports;
- Preparation and certification of completed works;

Selection of consulting firms for supervision of the rehabilitation was done through requests for proposal. Nine local consulting firms were contracted. When requested by the supervisor, site meetings were held to discuss additional or unexpected work and to find the best solution for completion of the building. In generally, supervisors did a good job. In some cases they had to act very quickly in order to find the best solution for the problem occurred on the building site, and to fill holes in assessments. I would make only one remark regarding their work: regularly reporting to the UNDP, (not to all of contracted supervisors but to a few of them), for instance, companies DP"Project" Banja Luka and "Dobojprojekt" Doboj, working as contractors for supervision, performed their jobs properly, but didn't write reports regularly. All of them were supposed to give a detailed report relating works on the building sites on a weekly basis.

Due to that, a delay in the UNDP procedure of the approval of unexpected works has been occurred.

United Nation Development Programme Report of  
the Evaluation Mission - EERP BiH/97/45  
January. 2000

19

### D. The project contribution to capacity building of the local building and construction market

The implementation arrangement, strategy and methodology of this project, involving different counterparts with the project implementation, have brought a significant contribution to the capacity building of the local building market, through a few phases:

- Serious planning and organization of the project, formulating projects objectives and expectations;
- Transparent and public, bidding and contracting procedure for rehabilitation works, for supervising works and for furnishing as well;
- General correspondence with all parties during the implementation;

The Project contributions to the mentioned capacity building have been successful. Since it has strengthened local capacities in planning and priority setting, project management and implementation, it has also met another goal - the establishment of professional relationships on the local building market. In general, the project involved local actors into Project management and it contributed to a decrease of the prices on the market through its bidding procedures. Due to the fact that bidding procedures were public, open and transparent, the companies - potential contractors had to offer their lowest prices in order to be competitive and to win.

#### E — The quality of monitoring

The project was coordinated and monitored by the UNDP Programme Officer.

The Project management officer, provided by the UNDP, has been an experienced professional and have brought the skills to the Project that have been appropriate to its stage of development. The UNDP Programme Officer, acting as Project manager get high marks from its client school's principals and the Ministry officials, who were very satisfied with the whole project, especially with the UNDP management and transparency.

However, there have been nine schools geographically situated and spread up in different Bosnia's regions and much distanced from each other as well as from the UNDP CO Sarajevo.

Beside a very good correspondence and communication that has been established with contractors and supervisors, it is still very important to have, regular, often and continuous field visits.

Even the UNDP role was to perform the second level of supervision through periodic site visits (as it was foreseen in the Project Document), I still think that its presence, as an Executing Agent (and investor, in this case) on the building site should have been more often.

In addition to above, the entities' Governments, through its Ministries of Education and the PIUs, couldn't have a significant involvement in the monitoring. This is mainly due to the fact that PIUs were understaffed. Namely, PIU - FBiH has only

United Nation Development Programme  
Report of the Evaluation Mission - EERP BiF1/97/45 I,n,,  
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20

three engineers, while in the PIU- RS only one engineer is employed. However, the PIU's representatives were present during the final technical inspections and handingover the buildings.

#### F. Impact on the beneficiaries

The Project immediate objective was formulated as:

"to restore classrooms and other basic facilities in the schools included in the project to the physical condition needed to ensure an effective teaching and learning environment".

War damage to the school infrastructure in Bosnia and Herzegovina has been extensive.

The Ministry of Energy and Industry has prepared a general assessment that showed that over 50% of both primary and secondary schools had sustained damage during the war and that over 30% of all schools had sustained significant damage (more than 15% needing refurbishment).

Finally, adequate physical facilities are needed not only to accommodate the number of young people who need to be educated, but to ensure the appropriate quality of education. It is a well-documented fact that the physical environment in which education takes place has a significant impact on scholastic achievement. Damaged, run-down and over-crowded classrooms depress teachers and students alike and reduce learning motivation. The situation is greatly aggravated when schools lack adequate libraries, laboratories and other educational support facilities, as is now the case with a large number of schools in the Federation and Republika Srpska.

Rehabilitation of nine schools in Bosnia and Herzegovina under this Project had a great direct impact on the children's education. This is thanks to the improvement of working and learning environment, which can be justified as follows:

- the school's buildings reached at least the standards and conditions for teachers and pupils that were required by law;
- they were furnished with brand new furniture;
- the central heating was provided for some schools that did not have it before the rehabilitation;

- sanitary and hygienic conditions were improved.

The project has provided direct benefits to the children, to the teachers and other school employees, as well as to the municipalities and to the entire educational process in BiH.

G. The project contribution to BiH efforts to provide proper learning and teaching conditions in its primary schools

The global objective of the Project was to support Bosnia and Herzegovina's efforts to restore the delivery of primary education of acceptable qualities during the 1997-98 school year.

This Project, as a part of the World Bank's First Emergency Education Reconstruction Programme which has been followed by a second EERP, as well as several similar initiatives by various organisations do not cover the very extensive needs for reconstruction of educational infrastructure in BiH and need to be supplemented and followed by additional funding from all possible sources.

Rehabilitating nine primary schools, this project gave its contribution through the provision of desired proper learning and teaching conditions in those schools, situated in both the Federation and Republika Srpska.



#### **IV/ Main Conclusions**

My overall assessments of the EERP Project is positive, based on the improvements the Project supported in educational department in war torn municipalities.

1. The initial formulation of the Project implementation arrangement was over ambitious in the very beginning, relating to roles and activities of each counterpart involved and responsibilities of local subjects, as well as the time schedule, duration of the Project and deadlines.
2. The Project did make effective adjustments to the duties and practical realities, on time and properly. Bidding procedure and contractors selection processes were worked out properly, on a public and transparent way, as well as preparation of the contracts.
3. Rehabilitation works were done on a satisfactory level and within the budget allocations. The project received very good value for invested money.  
Average price per 1m2 of rehabilitated area for all nine schools included in the Project was 106 US\$, what is a really good price comparing prices of rehabilitation of similar buildings in BiH, in the passed period.
4. Contractors for supervising performed their part of work on a high level, taking care of building sites and acting always on time, every time it was needed.
5. The Project gave its great contribution to the building capacity of the local building and construction market, decreasing the prices for works due to the competition realized through transparent bidding procedure, as well as involving different counterparts with the project implementation.
6. The UNDP CO monitored the implementation of the Project through a permanent communication with contractors and through a few site visits by the Programme officer.  
Contractors for supervision were continuously present on the building sites and properly guided construction works.
7. The Project achieved completely its global objective to support Bosnia's efforts to restore the delivery of primary education to some of acceptable qualities. It provided proper learning and teaching conditions in rehabilitated schools.



**V/ Lessons learned**

1. Preparation of the Technical documentation approved for construction is very Important part of rehabilitation work. It needs to be in accordance with Beneficiary needs, present and real condition of the building and available resources.  
A complete and detailed technical documentation, prepared for one rehabilitation project, would ensure better performance of works and its higher quality, as well as minimum of unexpected and unforeseen works. Namely, as main architectural design contains all technical details, all misunderstandings and misinterpretations would be avoided. This refers to quality, timelines and quantity of works, as well.
2. Contracts for works based on a "fixed price" basis are much better option for the rehabilitation project like this one, due to the fact that selected contractor has main responsibility for all kind of works (otherwise it would be very difficult to establish and determine responsibility relating to the work plan). It allows some freedom and possibility to act depending of the situation on the building site and to compensate some works.
3. The "fix price" contracts for rehabilitation of any kind of public building have proven to be the best choice and the most efficient and effective in post-war rehabilitation in BiH.
4. Duration of contracts always depends on quantity and complexity of works to be done. However, deadline for completion of works can not be respected if the contracts are signed at the end of building season. As the building season in BiH is May-October, starting projects at the end of this period must have implications on completion dates. Thus, signature of the building contracts should be planned to happen at the beginning of the building season (if possible), in order to have the best weather condition for construction works and to have minimum modifications to the general work plan.

## **VI/ Recommendation**

The evaluation conductor would encourage a follow-on programme to the EERP that would be expanded to other schools situated in other B&H municipalities, respecting the following conditions:

- An assessments of needs in the Municipalities for assistance for the improvement of primary education,
- The establishment of criteria for participation in an expanded programme,
- The establishment of appropriate relationship with municipality authorities, as well as with the entity and cantonal level,
- Preparation of the technical documentation approved for construction, after a detailed analysis of Beneficiary's needs, applied standards, level of damage and available resources, specifying designer's obligation to monitor construction works periodically,
- Regular monitoring on the building site by the Executing Agent, beside contractor for supervision,
- Involvement of local authorities' departments in the process of final certification,
- Preparation of an official hand over note, signed by all counterparts involved,
- Following-up, by a few periodic visits during one year (defects liability period) after the final certification.